

**IALA S-201**

**Product Specification**

**Edition 1.1.0 – October 2022**

IALA AtoN Product Specification

**ANNEX B2**

Schema **S201.xsd**

|  |  |  |
| --- | --- | --- |
| Elements | Complex types | Simple types |
| [**Aggregation**](#Link1) | [**Aggregation**](#Link2) | [**beaconShape**](#Link3) |
| [**AidsToNavigation**](#Link4) | [**AidsToNavigation**](#Link5) | [**buildingShape**](#Link6) |
| [**Association**](#Link7) | [**Association**](#Link8) | [**buoyShape**](#Link9) |
| [**BeaconCardinal**](#LinkA) | [**BeaconCardinal**](#LinkB) | [**categoryOfCardinalMark**](#LinkC) |
| [**BeaconIsolatedDanger**](#LinkD) | [**BeaconIsolatedDanger**](#LinkE) | [**categoryOfFogSignal**](#LinkF) |
| [**BeaconLateral**](#Link10) | [**BeaconLateral**](#Link11) | [**categoryOfInstallationBuoy**](#Link12) |
| [**BeaconSafeWater**](#Link13) | [**BeaconSafeWater**](#Link14) | [**categoryOfLandmark**](#Link15) |
| [**BeaconSpecialPurposeGeneral**](#Link16) | [**BeaconSpecialPurposeGeneral**](#Link17) | [**categoryOfLateralMark**](#Link18) |
| [**BuoyCardinal**](#Link19) | [**BuoyCardinal**](#Link1A) | [**categoryOfLight**](#Link1B) |
| [**BuoyInstallation**](#Link1C) | [**BuoyInstallation**](#Link1D) | [**categoryOfNavigationLine**](#Link1E) |
| [**BuoyIsolatedDanger**](#Link1F) | [**BuoyIsolatedDanger**](#Link20) | [**categoryOfOffshorePlatform**](#Link21) |
| [**BuoyLateral**](#Link22) | [**BuoyLateral**](#Link23) | [**categoryOfPile**](#Link24) |
| [**BuoySafeWater**](#Link25) | [**BuoySafeWater**](#Link26) | [**categoryOfRadarTransponderBeacon**](#Link27) |
| [**BuoySpecialPurposeGeneral**](#Link28) | [**BuoySpecialPurposeGeneral**](#Link29) | [**categoryOfRecommendedTrack**](#Link2A) |
| [**DataCoverage**](#Link2B) | [**contactAddress**](#Link2C) | [**categoryOfSiloTank**](#Link2D) |
| [**DataSet**](#Link2E) | [**DataCoverage**](#Link2F) | [**categoryOfSpecialPurposeMark**](#Link30) |
| [**Daymark**](#Link31) | [**DatasetType**](#Link32) | [**categoryOfTemporalVariation**](#Link33) |
| [**Equipment**](#Link34) | [**Daymark**](#Link35) | [**colour**](#Link36) |
| [**FeatureType**](#Link37) | [**Equipment**](#Link38) | [**colourPattern**](#Link39) |
| [**FogSignal**](#Link3A) | [**FeatureType**](#Link3B) | [**condition**](#Link3C) |
| [**GenericBeacon**](#Link3D) | [**FogSignal**](#Link3E) | [**Decimal0.0To360.0**](#Link3F) |
| [**GenericBuoy**](#Link40) | [**GenericBeacon**](#Link41) | [**exhibitionConditionOfLight**](#Link42) |
| [**IALA\_EnvironmentObservationEquipment**](#Link43) | [**GenericBuoy**](#Link44) | [**function**](#Link45) |
| [**IALA\_Lighthouse**](#Link46) | [**IALA\_EnvironmentObservationEquipment**](#Link47) | [**IALA\_aidAvailabilityCategory**](#Link48) |
| [**InformationType**](#Link49) | [**IALA\_Lighthouse**](#Link4A) | [**IALA\_categoryOfAggregation**](#Link4B) |
| [**Landmark**](#Link4C) | [**IMemberType**](#Link4D) | [**IALA\_categoryOfAssociation**](#Link4E) |
| [**Light**](#Link4F) | [**InformationTypeType**](#Link50) | [**ISO3166-alpha2**](#Link51) |
| [**LightFloat**](#Link52) | [**Landmark**](#Link53) | [**ISO639-2**](#Link54) |
| [**LightVessel**](#Link55) | [**Light**](#Link56) | [**ISO639-3**](#Link57) |
| [**LocalDirectionOfBuoyage**](#Link58) | [**LightFloat**](#Link59) | [**lightCharacteristic**](#Link5A) |
| [**MetaFeatureType**](#Link5B) | [**LightVessel**](#Link5C) | [**lightVisibility**](#Link5D) |
| [**NavigationalSystemOfMarks**](#Link5E) | [**LocalDirectionOfBuoyage**](#Link5F) | [**marksNavigationalSystemOf**](#Link60) |
| [**NavigationLine**](#Link61) | [**MemberType**](#Link62) | [**multiplicityOfLightsType**](#Link63) |
| [**OffshorePlatform**](#Link64) | [**MetaFeatureType**](#Link65) | [**natureOfConstruction**](#Link66) |
| [**Pile**](#Link67) | [**NavigationalSystemOfMarks**](#Link68) | [**NonNegativeDecimal**](#Link69) |
| [**QualityOfNonBathymetricData**](#Link6A) | [**NavigationLine**](#Link6B) | [**NonNegativeDecimal.1**](#Link6C) |
| [**RadarReflector**](#Link6D) | [**OffshorePlatform**](#Link6E) | [**product**](#Link6F) |
| [**RadarTransponderBeacon**](#Link70) | [**Pile**](#Link71) | [**qualityOfPosition**](#Link72) |
| [**RecommendedTrack**](#Link73) | [**QualityOfNonBathymetricData**](#Link74) | [**qualityOfSoundingMeasurement**](#Link75) |
| [**RetroReflector**](#Link76) | [**RadarReflector**](#Link77) | [**radarConspicuous**](#Link78) |
| [**SiloTank**](#Link79) | [**RadarTransponderBeacon**](#Link7A) | [**signalGeneration**](#Link7B) |
| [**SoundingDatum**](#Link7C) | [**RecommendedTrack**](#Link7D) | [**status**](#Link7E) |
| [**SpatialUncertainty**](#Link7F) | [**RetroReflector**](#Link80) | [**techniqueOfSoundingMeasurement**](#Link81) |
| [**StructureObject**](#Link82) | [**S100\_TruncatedDate**](#Link83) | [**topmarkDaymarkShape**](#Link84) |
| [**Topmark**](#Link85) | [**SiloTank**](#Link86) | [**trafficFlow**](#Link87) |
| [**VerticalDatum**](#Link88) | [**SoundingDatum**](#Link89) | [**verticalDatum**](#Link8A) |
|  | [**SpatialUncertainty**](#Link8B) | [**visuallyConspicuous**](#Link8C) |
|  | [**StructureObject**](#Link8D) |  |
|  | [**surveyDateRange**](#Link8E) |  |
|  | [**Topmark**](#Link8F) |  |
|  | [**VerticalDatum**](#Link90) |  |

element **Aggregation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Aggregation**](#Link2) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**IALA\_categoryOfAggregation**](#Link91)[**peer**](#Link92) |
| annotation | |  | | --- | | documentation | | An implementation that uses the named role method for associations might not use the featureAssociation and informationAssociation content tags because they duplicate the link. | |

element **AidsToNavigation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**AidsToNavigation**](#Link5) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4) |
| annotation | |  | | --- | | documentation | | A visual, acoustical, or radio device, external to a ship, designed to assist in determining a safe course or a vessel's position, or to warn of dangers and/or obstructions. Aids to navigation usually include buoys, beacons, fog signals, lights, radio beacons, leading marks, radio position fixing systems and GNSS which are chart-related and assist safe navigation. | |

element **Association**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Association**](#Link8) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**IALA\_categoryOfAssociation**](#LinkA5)[**peer**](#LinkA6) |
| annotation | |  | | --- | | documentation | | An implementation that uses the named role method for associations might not use the featureAssociation and informationAssociation content tags because they duplicate the link. | |

element **BeaconCardinal**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BeaconCardinal**](#LinkB) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9)[**categoryOfCardinalMark**](#LinkBA) |

element **BeaconIsolatedDanger**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BeaconIsolatedDanger**](#LinkE) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9) |

element **BeaconLateral**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BeaconLateral**](#Link11) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9)[**categoryOfLateralMark**](#LinkBB) |

element **BeaconSafeWater**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BeaconSafeWater**](#Link14) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9) |

element **BeaconSpecialPurposeGeneral**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BeaconSpecialPurposeGeneral**](#Link17) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9)[**categoryOfSpecialPurposeMark**](#LinkBC) |

element **BuoyCardinal**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BuoyCardinal**](#Link1A) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9)[**categoryOfCardinalMark**](#LinkCA) |

element **BuoyInstallation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BuoyInstallation**](#Link1D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9)[**categoryOfInstallationBuoy**](#LinkCB) |

element **BuoyIsolatedDanger**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BuoyIsolatedDanger**](#Link20) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9) |

element **BuoyLateral**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BuoyLateral**](#Link23) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9)[**categoryOfLateralMark**](#LinkCC) |

element **BuoySafeWater**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BuoySafeWater**](#Link26) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9) |

element **BuoySpecialPurposeGeneral**

|  |  |
| --- | --- |
| diagram |  |
| type | [**BuoySpecialPurposeGeneral**](#Link29) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9)[**categoryOfSpecialPurposeMark**](#LinkCD) |

element **DataCoverage**

|  |  |
| --- | --- |
| diagram |  |
| type | [**DataCoverage**](#Link2F) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**maximumDisplayScale**](#LinkCE)[**minimumDisplayScale**](#LinkCF)[**geometry**](#LinkD0) |

element **DataSet**

|  |  |
| --- | --- |
| diagram |  |
| type | [**DatasetType**](#Link32) |
| children | **gml:boundedBy** [**DatasetIdentificationInformation**](#LinkD1)[**DatasetStructureInformation**](#LinkD2) **Point MultiPoint Curve CompositeCurve OrientableCurve Surface Polygon** [**imember**](#LinkD3)[**member**](#LinkD4) |
| identity constraints | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Name | Refer | Selector | Field(s) | Annotation | | unique | UNIQUE\_FOID |  | ./member/\*/S100:featureObjectIdentifier | S100:agency  S100:featureIdentificationNumber  S100:featureIdentificationSubdivision | |  | | --- | | documentation | | each FOID must be unique | | |

element **Daymark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Daymark**](#Link35) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**categoryOfSpecialPurposeMark**](#LinkD9)[**colour**](#LinkDA)[**colourPattern**](#LinkDB)[**elevation**](#LinkDC)[**height**](#LinkDD)[**natureOfConstruction**](#LinkDE)[**objectNameInNationalLanguage**](#LinkDF)[**objectName**](#LinkE0)[**status**](#LinkE1)[**topmarkDaymarkShape**](#LinkE2)[**verticalAccuracy**](#LinkE3)[**verticalDatum**](#LinkE4)[**verticalLength**](#LinkE5) |

element **Equipment**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Equipment**](#Link38) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8) |
| annotation | |  | | --- | | documentation | | An implementation that uses the named role method for associations might not use the featureAssociation and informationAssociation content tags because they duplicate the link. | |

element **FeatureType**

|  |  |
| --- | --- |
| diagram |  |
| type | [**FeatureType**](#Link3B) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** |

element **FogSignal**

|  |  |
| --- | --- |
| diagram |  |
| type | [**FogSignal**](#Link3E) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**categoryOfFogSignal**](#LinkE6)[**signalFrequency**](#LinkE7)[**signalGeneration**](#LinkE8)[**signalGroup**](#LinkE9)[**signalPeriod**](#LinkEA)[**signalSequence**](#LinkEB)[**status**](#LinkEC)[**valueOfMaximumRange**](#LinkED)[**IALA\_signalOutput**](#LinkEE)[**IALA\_typeOfBattery**](#LinkEF) |

element **GenericBeacon**

|  |  |
| --- | --- |
| diagram |  |
| type | [**GenericBeacon**](#Link41) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9) |

element **GenericBuoy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**GenericBuoy**](#Link44) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9) |

element **IALA\_EnvironmentObservationEquipment**

|  |  |
| --- | --- |
| diagram |  |
| type | [**IALA\_EnvironmentObservationEquipment**](#Link47) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**status**](#LinkF0)[**height**](#LinkF1)[**IALA\_typeOfEnvironmentObservationEquipment**](#LinkF2)[**IALA\_typeOfBattery**](#LinkF3) |

element **IALA\_Lighthouse**

|  |  |
| --- | --- |
| diagram |  |
| type | [**IALA\_Lighthouse**](#Link4A) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**categoryOfLandmark**](#LinkF4)[**colour**](#LinkF5)[**colourPattern**](#LinkF6)[**condition**](#LinkF7)[**radarConspicuous**](#LinkF8)[**visuallyConspicuous**](#LinkF9)[**elevation**](#LinkFA)[**function**](#LinkFB)[**height**](#LinkFC)[**natureOfConstruction**](#LinkFD)[**objectNameInNationalLanguage**](#LinkFE)[**objectName**](#LinkFF)[**status**](#Link100)[**verticalAccuracy**](#Link101)[**verticalDatum**](#Link102)[**verticalLength**](#Link103)[**IALA\_mannedStructure**](#Link104)[**geometry**](#Link105) |
| annotation | |  | | --- | | documentation | | Restriction of geometry compared to super-type (Landmark) is enforced by a Schematron rule | |

element **InformationType**

|  |  |
| --- | --- |
| diagram |  |
| type | [**InformationTypeType**](#Link50) |
| children | **informationAssociation invInformationAssociation** |
| used by | |  |  | | --- | --- | | complexType | [**IMemberType**](#Link4D) | |

element **Landmark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Landmark**](#Link53) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**categoryOfLandmark**](#LinkF4)[**colour**](#LinkF5)[**colourPattern**](#LinkF6)[**condition**](#LinkF7)[**radarConspicuous**](#LinkF8)[**visuallyConspicuous**](#LinkF9)[**elevation**](#LinkFA)[**function**](#LinkFB)[**height**](#LinkFC)[**natureOfConstruction**](#LinkFD)[**objectNameInNationalLanguage**](#LinkFE)[**objectName**](#LinkFF)[**status**](#Link100)[**verticalAccuracy**](#Link101)[**verticalDatum**](#Link102)[**verticalLength**](#Link103)[**IALA\_mannedStructure**](#Link104)[**geometry**](#Link105) |

element **Light**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Light**](#Link56) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**categoryOfLight**](#Link106)[**colour**](#Link107)[**exhibitionConditionOfLight**](#Link108)[**height**](#Link109)[**lightCharacteristic**](#Link10A)[**lightVisibility**](#Link10B)[**marksNavigationalSystemOf**](#Link10C)[**multiplicityOfLights**](#Link10D)[**objectNameInNationalLanguage**](#Link10E)[**objectName**](#Link10F)[**orientation**](#Link110)[**sectorLimitOne**](#Link111)[**sectorLimitTwo**](#Link112)[**signalGroup**](#Link113)[**signalPeriod**](#Link114)[**signalSequence**](#Link115)[**status**](#Link116)[**verticalAccuracy**](#Link117)[**valueOfNominalRange**](#Link118)[**verticalDatum**](#Link119)[**IALA\_typeOfLight**](#Link11A)[**IALA\_typeOfBattery**](#Link11B)[**IALA\_valueOfGeographicalRange**](#Link11C)[**IALA\_valueOfLuminousRange**](#Link11D) |

element **LightFloat**

|  |  |
| --- | --- |
| diagram |  |
| type | [**LightFloat**](#Link59) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**colour**](#Link11E)[**colourPattern**](#Link11F)[**radarConspicuous**](#Link120)[**visuallyConspicuous**](#Link121)[**horizontalAccuracy**](#Link122)[**horizontalLength**](#Link123)[**horizontalWidth**](#Link124)[**natureOfConstruction**](#Link125)[**objectNameInNationalLanguage**](#Link126)[**objectName**](#Link127)[**status**](#Link128)[**verticalAccuracy**](#Link129)[**verticalLength**](#Link12A)[**IALA\_mannedStructure**](#Link12B)[**geometry**](#Link12C) |

element **LightVessel**

|  |  |
| --- | --- |
| diagram |  |
| type | [**LightVessel**](#Link5C) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**colour**](#Link12D)[**colourPattern**](#Link12E)[**radarConspicuous**](#Link12F)[**visuallyConspicuous**](#Link130)[**horizontalAccuracy**](#Link131)[**horizontalLength**](#Link132)[**horizontalWidth**](#Link133)[**natureOfConstruction**](#Link134)[**objectNameInNationalLanguage**](#Link135)[**objectName**](#Link136)[**status**](#Link137)[**verticalAccuracy**](#Link138)[**verticalLength**](#Link139)[**IALA\_mannedStructure**](#Link13A)[**geometry**](#Link13B) |

element **LocalDirectionOfBuoyage**

|  |  |
| --- | --- |
| diagram |  |
| type | [**LocalDirectionOfBuoyage**](#Link5F) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**orientation**](#Link13C)[**geometry**](#Link13D) |

element **MetaFeatureType**

|  |  |
| --- | --- |
| diagram |  |
| type | [**MetaFeatureType**](#Link65) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** |

element **NavigationalSystemOfMarks**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NavigationalSystemOfMarks**](#Link68) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**marksNavigationalSystemOf**](#Link13E)[**geometry**](#Link13F) |

element **NavigationLine**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NavigationLine**](#Link6B) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**categoryOfNavigationLine**](#Link140)[**orientation**](#Link141)[**status**](#Link142)[**navigableTrack**](#Link143)[**geometry**](#Link144) |
| annotation | |  | | --- | | documentation | | An implementation that uses the named role method for associations might not use the featureAssociation and informationAssociation content tags because they duplicate the link. | |

element **OffshorePlatform**

|  |  |
| --- | --- |
| diagram |  |
| type | [**OffshorePlatform**](#Link6E) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**categoryOfOffshorePlatform**](#Link145)[**colour**](#Link146)[**colourPattern**](#Link147)[**condition**](#Link148)[**radarConspicuous**](#Link149)[**visuallyConspicuous**](#Link14A)[**height**](#Link14B)[**natureOfConstruction**](#Link14C)[**objectNameInNationalLanguage**](#Link14D)[**product**](#Link14E)[**objectName**](#Link14F)[**status**](#Link150)[**verticalAccuracy**](#Link151)[**verticalDatum**](#Link152)[**verticalLength**](#Link153)[**IALA\_mannedStructure**](#Link154)[**geometry**](#Link155) |

element **Pile**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Pile**](#Link71) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**categoryOfPile**](#Link156)[**colour**](#Link157)[**colourPattern**](#Link158)[**condition**](#Link159)[**visuallyConspicuous**](#Link15A)[**height**](#Link15B)[**verticalAccuracy**](#Link15C)[**verticalDatum**](#Link15D)[**verticalLength**](#Link15E)[**geometry**](#Link15F) |

element **QualityOfNonBathymetricData**

|  |  |
| --- | --- |
| diagram |  |
| type | [**QualityOfNonBathymetricData**](#Link74) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**categoryOfTemporalVariation**](#Link160)[**directionUncertainty**](#Link161)[**horizontalDistanceUncertainty**](#Link162)[**horizontalPositionUncertainty**](#Link163)[**information**](#Link164)[**informationInNationalLanguage**](#Link165)[**textualDescription**](#Link166)[**textualDescriptionInNationalLanguage**](#Link167)[**verticalUncertainty**](#Link168)[**surveyDateRange**](#Link169)[**geometry**](#Link16A) |

element **RadarReflector**

|  |  |
| --- | --- |
| diagram |  |
| type | [**RadarReflector**](#Link77) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**height**](#Link16B)[**status**](#Link16C)[**verticalAccuracy**](#Link16D)[**verticalDatum**](#Link16E) |

element **RadarTransponderBeacon**

|  |  |
| --- | --- |
| diagram |  |
| type | [**RadarTransponderBeacon**](#Link7A) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**categoryOfRadarTransponderBeacon**](#Link16F)[**objectNameInNationalLanguage**](#Link170)[**objectName**](#Link171)[**radarWaveLength**](#Link172)[**sectorLimitOne**](#Link173)[**sectorLimitTwo**](#Link174)[**signalGroup**](#Link175)[**signalSequence**](#Link176)[**status**](#Link177)[**valueOfNominalRange**](#Link178)[**IALA\_typeOfBattery**](#Link179) |

element **RecommendedTrack**

|  |  |
| --- | --- |
| diagram |  |
| type | [**RecommendedTrack**](#Link7D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**categoryOfRecommendedTrack**](#Link17A)[**depthRangeMinimumValue**](#Link17B)[**depthRangeMaximumValue**](#Link17C)[**objectNameInNationalLanguage**](#Link17D)[**objectName**](#Link17E)[**orientation**](#Link17F)[**qualityOfSoundingMeasurement**](#Link180)[**soundingAccuracy**](#Link181)[**status**](#Link182)[**techniqueOfSoundingMeasurement**](#Link183)[**trafficFlow**](#Link184)[**verticalDatum**](#Link185)[**navigationLine**](#Link186)[**geometry**](#Link187) |
| annotation | |  | | --- | | documentation | | An implementation that uses the named role method for associations might not use the featureAssociation and informationAssociation content tags because they duplicate the link. | |

element **RetroReflector**

|  |  |
| --- | --- |
| diagram |  |
| type | [**RetroReflector**](#Link80) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**colour**](#Link188)[**colourPattern**](#Link189)[**height**](#Link18A)[**marksNavigationalSystemOf**](#Link18B)[**status**](#Link18C)[**verticalAccuracy**](#Link18D)[**verticalDatum**](#Link18E) |

element **SiloTank**

|  |  |
| --- | --- |
| diagram |  |
| type | [**SiloTank**](#Link86) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buildingShape**](#Link18F)[**categoryOfSiloTank**](#Link190)[**colour**](#Link191)[**colourPattern**](#Link192)[**condition**](#Link193)[**radarConspicuous**](#Link194)[**visuallyConspicuous**](#Link195)[**elevation**](#Link196)[**height**](#Link197)[**natureOfConstruction**](#Link198)[**objectNameInNationalLanguage**](#Link199)[**objectName**](#Link19A)[**product**](#Link19B)[**status**](#Link19C)[**verticalAccuracy**](#Link19D)[**verticalDatum**](#Link19E)[**verticalLength**](#Link19F)[**geometry**](#Link1A0) |

element **SoundingDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**SoundingDatum**](#Link89) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**verticalDatum**](#Link1A1)[**geometry**](#Link1A2) |

element **SpatialUncertainty**

|  |  |
| --- | --- |
| diagram |  |
| type | [**SpatialUncertainty**](#Link8B) |
| children | **informationAssociation invInformationAssociation** [**qualityOfPosition**](#Link1A3)[**positionalAccuracy**](#Link1A4) |

element **StructureObject**

|  |  |
| --- | --- |
| diagram |  |
| type | [**StructureObject**](#Link8D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9) |
| annotation | |  | | --- | | documentation | | An implementation that uses the named role method for associations might not use the featureAssociation and informationAssociation content tags because they duplicate the link. | |

element **Topmark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Topmark**](#Link8F) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**colour**](#Link1A5)[**colourPattern**](#Link1A6)[**height**](#Link1A7)[**marksNavigationalSystemOf**](#Link1A8)[**status**](#Link1A9)[**topmarkDaymarkShape**](#Link1AA)[**verticalAccuracy**](#Link1AB)[**verticalDatum**](#Link1AC)[**verticalLength**](#Link1AD) |

element **VerticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**VerticalDatum**](#Link90) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**verticalDatum**](#Link1AE)[**geometry**](#Link1AF) |

complexType **Aggregation**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**FeatureType**](#Link3B) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**IALA\_categoryOfAggregation**](#Link91)[**peer**](#Link92) |
| used by | |  |  | | --- | --- | | element | [**Aggregation**](#Link1) | |
| annotation | |  | | --- | | documentation | | Used to identify an aggregation of two or more objects. This aggregation may be named. | | documentation | | content of categoryOfAggregation should be put in information attribute when converting to S-57. | |

element **Aggregation/IALA\_categoryOfAggregation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**IALA\_categoryOfAggregation**](#Link4B) |

element **Aggregation/peer**

|  |  |
| --- | --- |
| diagram |  |
| type | **gml:ReferenceType** |
| annotation | |  | | --- | | documentation | | The role given to an object of equal status in the relationship. | |

complexType **AidsToNavigation**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**FeatureType**](#Link3B) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4) |
| used by | |  |  | | --- | --- | | element | [**AidsToNavigation**](#Link4) | | complexTypes | [**Equipment**](#Link38)[**NavigationLine**](#Link6B)[**RecommendedTrack**](#Link7D)[**StructureObject**](#Link8D) | |
| annotation | |  | | --- | | documentation | | A visual, acoustical, or radio device, external to a ship, designed to assist in determining a safe course or a vessel's position, or to warn of dangers and/or obstructions. Aids to navigation usually include buoys, beacons, fog signals, lights, radio beacons, leading marks, radio position fixing systems and GNSS which are chart-related and assist safe navigation. | |

element **AidsToNavigation/idCode**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Definition required | |

element **AidsToNavigation/dateEnd**

|  |  |
| --- | --- |
| diagram |  |
| type | [**S100\_TruncatedDate**](#Link83) |
| children | [**gDay**](#Link1B0)[**gMonth**](#Link1B1)[**gYear**](#Link1B2)[**gMonthDay**](#Link1B3)[**gYearMonth**](#Link1B4)[**date**](#Link1B5) |
| annotation | |  | | --- | | documentation | | The latest date on which an object (e.g., a buoy) will be present. | |

element **AidsToNavigation/dateStart**

|  |  |
| --- | --- |
| diagram |  |
| type | [**S100\_TruncatedDate**](#Link83) |
| children | [**gDay**](#Link1B0)[**gMonth**](#Link1B1)[**gYear**](#Link1B2)[**gMonthDay**](#Link1B3)[**gYearMonth**](#Link1B4)[**date**](#Link1B5) |
| annotation | |  | | --- | | documentation | | The earliest date on which an object (e.g., a buoy) will be present. | |

element **AidsToNavigation/periodEnd**

|  |  |
| --- | --- |
| diagram |  |
| type | [**S100\_TruncatedDate**](#Link83) |
| children | [**gDay**](#Link1B0)[**gMonth**](#Link1B1)[**gYear**](#Link1B2)[**gMonthDay**](#Link1B3)[**gYearMonth**](#Link1B4)[**date**](#Link1B5) |
| annotation | |  | | --- | | documentation | | The end of the active period for a seasonal object (e.g., a buoy). | |

element **AidsToNavigation/periodStart**

|  |  |
| --- | --- |
| diagram |  |
| type | [**S100\_TruncatedDate**](#Link83) |
| children | [**gDay**](#Link1B0)[**gMonth**](#Link1B1)[**gYear**](#Link1B2)[**gMonthDay**](#Link1B3)[**gYearMonth**](#Link1B4)[**date**](#Link1B5) |
| annotation | |  | | --- | | documentation | | The start of the active period for a seasonal object (e.g., a buoy). | |

element **AidsToNavigation/information**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Textual information about the object. (max 300 characters) | |

element **AidsToNavigation/informationInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Textual information in national language characters. (max 300 characters) | |

element **AidsToNavigation/textualDescriptionInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The file name of an external text file that contains the text in a national language. | |

element **AidsToNavigation/textualDescription**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | file reference to text file | |

element **AidsToNavigation/scaleMinimum**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:positiveInteger** |
| annotation | |  | | --- | | documentation | | The minimum scale at which the object may be used, e.g., for ECDIS presentation. | |

element **AidsToNavigation/sourceDate**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:dateTime** |
| annotation | |  | | --- | | documentation | | The production date of the source, e.g., the date of measurement. | |

element **AidsToNavigation/sourceIndication**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Information about the source of the object. | | documentation | | Indication:  country (c2): Two letter code according to ISO 3166 (refer to Annex A to S-57 Appendix A)  authority (c2): A string of two alphanumeric characters (refer to Annex A to S-57 Appendix A), e.g. German Bundesamt für Seeschiffahrt und Hydrographie = DE; US National Imagery and Mapping Agency = U1.  procedure (c4): digitized = digi  scanned = scan  alpha/numeric input = alph  Format: c2,c2,c4 (mandatory)  Example: DK,D1,digi | |

element **AidsToNavigation/pictorialRepresentation**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | file reference to text file | |

element **AidsToNavigation/IALA\_inspectionFrequency**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Definition required | |

element **AidsToNavigation/IALA\_inspectionRequirements**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Definition required | |

element **AidsToNavigation/IALA\_AtoNMaintenanceRecord**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:anyURI** |
| annotation | |  | | --- | | documentation | | Definition required | |

element **AidsToNavigation/IALA\_installationDate**

|  |  |
| --- | --- |
| diagram |  |
| type | [**S100\_TruncatedDate**](#Link83) |
| children | [**gDay**](#Link1B0)[**gMonth**](#Link1B1)[**gYear**](#Link1B2)[**gMonthDay**](#Link1B3)[**gYearMonth**](#Link1B4)[**date**](#Link1B5) |
| annotation | |  | | --- | | documentation | | Definition required | |

element **AidsToNavigation/peer**

|  |  |
| --- | --- |
| diagram |  |
| type | **gml:ReferenceType** |
| annotation | |  | | --- | | documentation | | Encodes the association to Aggregation AND Association. In principle the role names for the two target classes should be different as should the names at the two ends of each, but they are all currently (September 2015) "peer" in the application schema. | |

complexType **Association**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**FeatureType**](#Link3B) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**IALA\_categoryOfAssociation**](#LinkA5)[**peer**](#LinkA6) |
| used by | |  |  | | --- | --- | | element | [**Association**](#Link7) | |
| annotation | |  | | --- | | documentation | | Used to identify an association between two or more objects. The association may be named | | documentation | | content of categoryOfAssociation should be put in information attribute when converting to S-57. | |

element **Association/IALA\_categoryOfAssociation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**IALA\_categoryOfAssociation**](#Link4E) |

element **Association/peer**

|  |  |
| --- | --- |
| diagram |  |
| type | **gml:ReferenceType** |
| annotation | |  | | --- | | documentation | | The role given to an object of equal status in the relationship. | |

complexType **BeaconCardinal**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBeacon**](#Link41) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9)[**categoryOfCardinalMark**](#LinkBA) |
| used by | |  |  | | --- | --- | | element | [**BeaconCardinal**](#LinkA) | |
| annotation | |  | | --- | | documentation | | A beacon is a prominent, specially constructed object forming a conspicuous mark as a fixed aid to navigation or for use in hydrographic survey (IHO Dictionary, S-32, 5th Edition, 420). | | documentation | | A cardinal beacon is used in conjunction with the compass to indicate where the mariner may find the best navigable water. It is placed in one of the four quadrants (North, East, South and West), bounded by inter-cardinal bearings from the point marked. (UKHO NP 735, 5th Edition) | |

element **BeaconCardinal/categoryOfCardinalMark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfCardinalMark**](#LinkC) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | north cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing NW-NE taken from the point of interest it should be passed to the north side of the mark. | | | enumeration | east cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing NE-SE taken from the point of interest it should be passed to the east side of the mark. | | | enumeration | south cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing SE-SW taken from the point of interest it should be passed to the south side of the mark. | | | enumeration | west cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing SW-NW taken from the point of interest it should be passed to the west side of the mark. | | |

complexType **BeaconIsolatedDanger**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBeacon**](#Link41) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9) |
| used by | |  |  | | --- | --- | | element | [**BeaconIsolatedDanger**](#LinkD) | |
| annotation | |  | | --- | | documentation | | A beacon is a prominent specially constructed object forming a conspicuous mark as a fixed aid to navigation or for use in hydrographic survey (IHO Dictionary, S-32, 5th Edition, 420). | | documentation | | An isolated danger beacon is a beacon erected on an isolated danger of limited extent, which has navigable water all around it. (UKHO NP735, 5th Edition) | |

complexType **BeaconLateral**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBeacon**](#Link41) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9)[**categoryOfLateralMark**](#LinkBB) |
| used by | |  |  | | --- | --- | | element | [**BeaconLateral**](#Link10) | |
| annotation | |  | | --- | | documentation | | A beacon is a prominent specially constructed object forming a conspicuous mark as a fixed aid to navigation or for use in hydrographic survey (IHO Dictionary, S-32, 5th Edition, 420). | | documentation | | A lateral beacon is used to indicate the port or starboard hand side of the route to be followed. They are generally used for well defined channels and are used in conjunction with a conventional direction of buoyage. (UKHO NP 735, 5th Edition) | |

element **BeaconLateral/categoryOfLateralMark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfLateralMark**](#Link18) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | port-hand lateral mark | |  | | --- | | documentation | | indicates the port boundary of a navigational channel or suggested route when proceeding in the 'conventional direction of buoyage'. | | | enumeration | starboard-hand lateral mark | |  | | --- | | documentation | | indicates the starboard boundary of a navigational channel or suggested route when proceeding in the 'conventional direction of buoyage'. | | | enumeration | preferred channel to starboard lateral mark | |  | | --- | | documentation | | at a point where a channel divides, when proceeding in the 'conventional direction of buoyage', the preferred channel (or primary route) is indicated by a modified port-hand lateral mark. | | | enumeration | preferred channel to port lateral mark | |  | | --- | | documentation | | at a point where a channel divides, when proceeding in the 'conventional direction of buoyage', the preferred channel (or primary route) is indicated by a modified starboard-hand lateral mark. | | |

complexType **BeaconSafeWater**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBeacon**](#Link41) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9) |
| used by | |  |  | | --- | --- | | element | [**BeaconSafeWater**](#Link13) | |
| annotation | |  | | --- | | documentation | | A safe water beacon is a prominent specially constructed object forming a conspicuous mark as a fixed aid to navigation or for use in hydrographic survey (IHO Dictionary, S-32, 5th Edition, 420). A safe water beacon may be used to indicate that there is navigable water around the mark. (UKHO NP735, 5th Edition) | |

complexType **BeaconSpecialPurposeGeneral**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBeacon**](#Link41) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9)[**categoryOfSpecialPurposeMark**](#LinkBC) |
| used by | |  |  | | --- | --- | | element | [**BeaconSpecialPurposeGeneral**](#Link16) | |
| annotation | |  | | --- | | documentation | | A beacon is a prominent specially constructed object forming a conspicuous mark as a fixed aid to navigation or for use in hydrographic survey (IHO Dictionary, S-32, 5th Edition, 420). | | documentation | | A special purpose beacon is primarily used to indicate an area or feature, the nature of which is apparent from reference to a chart, Sailing Directions or Notices to Mariners. (UKHO NP 735, 5th Edition) Beacon in general: A beacon whose appearance or purpose is not adequately known. | |

element **BeaconSpecialPurposeGeneral/categoryOfSpecialPurposeMark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfSpecialPurposeMark**](#Link30) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | firing danger area mark | |  | | --- | | documentation | | a mark used to indicate a firing danger area, usually at sea. | | | enumeration | target mark | |  | | --- | | documentation | | any object toward which something is directed. The distinctive marking or instrumentation of a ground point to aid its identification on a photograph. | | | enumeration | marker ship mark | |  | | --- | | documentation | | a mark marking the position of a ship which is used as a target during some military exercise. | | | enumeration | degaussing range mark | |  | | --- | | documentation | | a mark used to indicate a degaussing range. | | | enumeration | barge mark | |  | | --- | | documentation | | a mark of relevance to barges. | | | enumeration | cable mark | |  | | --- | | documentation | | a mark used to indicate the position of submarine cables or the point at which they run on to the land. | | | enumeration | spoil ground mark | |  | | --- | | documentation | | a mark used to indicate the limit of a spoil ground | | | enumeration | outfall mark | |  | | --- | | documentation | | a mark used to indicate the position of an outfall or the point at which it leaves the land. | | | enumeration | ODAS (Ocean-Data-Acquisition-System) | |  | | --- | | documentation | | Ocean Data Acquisition System | | | enumeration | recording mark | |  | | --- | | documentation | | a mark used to record data for scientific purposes. | | | enumeration | seaplane anchorage mark | |  | | --- | | documentation | | a mark used to indicate a seaplane anchorage. | | | enumeration | recreation zone mark | |  | | --- | | documentation | | a mark used to indicate a recreation zone. | | | enumeration | private mark | |  | | --- | | documentation | | a privately maintained mark. | | | enumeration | mooring mark | |  | | --- | | documentation | | a mark indicating a mooring or moorings. | | | enumeration | LANBY (Large Automatic Navigational Buoy) | |  | | --- | | documentation | | a large buoy designed to take the place of a lightship where construction of an offshore light station is not feasible. | | | enumeration | leading mark | |  | | --- | | documentation | | aids to navigation or other indicators so located as to indicate the path to be followed. Leading marks identify a leading line when they are in transit. | | | enumeration | measured distance mark | |  | | --- | | documentation | | a mark forming part of a transit indicating one end of a measured distance. | | | enumeration | notice mark | |  | | --- | | documentation | | a notice board or sign indicating information to the mariner. | | | enumeration | TSS mark (Traffic Separation Scheme) | |  | | --- | | documentation | | a mark indicating a traffic separation scheme. | | | enumeration | anchoring prohibited mark | |  | | --- | | documentation | | a mark indicating an anchoring prohibited area. | | | enumeration | berthing prohibited mark | |  | | --- | | documentation | | a mark indicating that berthing is prohibited. | | | enumeration | overtaking prohibited mark | |  | | --- | | documentation | | a mark indicating that overtaking is prohibited. | | | enumeration | two-way traffic prohibited mark | |  | | --- | | documentation | | a mark indicating a one-way route. | | | enumeration | reduced wake mark | |  | | --- | | documentation | | a mark indicating that vessels must not generate excessive wake. | | | enumeration | speed limit mark | |  | | --- | | documentation | | a mark indicating that a speed limit applies. | | | enumeration | stop mark | |  | | --- | | documentation | | a mark indicating the place where the bow of a ship must stop when traffic lights show red. | | | enumeration | general warning mark | |  | | --- | | documentation | | a mark indicating that special caution must be exercised in the vicinity of the mark. | | | enumeration | sound ship's siren mark | |  | | --- | | documentation | | a mark indicating that a ship should sound its siren or horn. | | | enumeration | restricted vertical clearance mark | |  | | --- | | documentation | | a mark indicating the minimum vertical space available for passage. | | | enumeration | maximum vessel's draught mark | |  | | --- | | documentation | | a mark indicating the maximum draught of vessel permitted. | | | enumeration | restricted horizontal clearance mark | |  | | --- | | documentation | | a mark indicating the minimum horizontal space available for passage. | | | enumeration | strong current warning mark | |  | | --- | | documentation | | a mark warning of strong currents. | | | enumeration | berthing permitted mark | |  | | --- | | documentation | | a mark indicating that berthing is allowed. | | | enumeration | overhead power cable mark | |  | | --- | | documentation | | a mark indicating an overhead power cable. | | | enumeration | channel edge gradient mark | |  | | --- | | documentation | | a mark indicating the gradient of the slope of a dredge channel edge. | | | enumeration | telephone mark | |  | | --- | | documentation | | a mark indicating the presence of a telephone. | | | enumeration | ferry crossing mark | |  | | --- | | documentation | | a mark indicating that a ferry route crosses the ship route often used with a 'sound ship's siren' mark. | | | enumeration | pipeline mark | |  | | --- | | documentation | | a mark used to indicate the position of submarine pipelines or the point at which they run on to the land. | | | enumeration | anchorage mark | |  | | --- | | documentation | | a mark indicating an anchorage area. | | | enumeration | clearing mark | |  | | --- | | documentation | | a mark used to indicate a clearing line. | | | enumeration | control mark | |  | | --- | | documentation | | a mark indicating the location at which a restriction or requirement exists. | | | enumeration | diving mark | |  | | --- | | documentation | | a mark indicating that diving may take place in the vicinity. | | | enumeration | refuge beacon | |  | | --- | | documentation | | a mark providing or indicating a place of safety. | | | enumeration | foul ground mark | |  | | --- | | documentation | | a mark indicating a foul ground. | | | enumeration | yachting mark | |  | | --- | | documentation | | a mark installed for use by yachtsmen. | | | enumeration | heliport mark | |  | | --- | | documentation | | a mark indicating an area where helicopters may land. | | | enumeration | GPS mark | |  | | --- | | documentation | | a mark indicating a location at which a GNSS position has been accurately determined. | | | enumeration | seaplane landing mark | |  | | --- | | documentation | | a mark indicating an area where sea-planes land. | | | enumeration | entry prohibited mark | |  | | --- | | documentation | | a mark indicating that entry is prohibited. | | | enumeration | work in progress mark | |  | | --- | | documentation | | a mark indicating that work (generally construction) is in progress. | | | enumeration | mark with unknown purpose | |  | | --- | | documentation | | a mark whose detailed characteristics are unknown. | | | enumeration | wellhead mark | |  | | --- | | documentation | | a mark indicating a borehole that produces or is capable of producing oil or natural gas. | | | enumeration | channel separation mark | |  | | --- | | documentation | | a mark indicating the point at which a channel divides separately into two channels. | | | enumeration | marine farm mark | |  | | --- | | documentation | | a mark indicating the existence of a fish, mussel, oyster or pearl farm/ culture. | | | enumeration | artificial reef mark | |  | | --- | | documentation | | a mark indicating the existence or the extent of an artificial reef. | | | enumeration | IALA\_jetski prohibited | |  | | --- | | documentation | | A mark indicating a jetski prohibited area | | |

complexType **BuoyCardinal**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBuoy**](#Link44) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9)[**categoryOfCardinalMark**](#LinkCA) |
| used by | |  |  | | --- | --- | | element | [**BuoyCardinal**](#Link19) | |
| annotation | |  | | --- | | documentation | | A cardinal buoy is used in conjunction with the compass to indicate where the mariner may find the best navigable water. It is placed in one of the four quadrants (North, East, South and West), bounded by inter-cardinal bearings from the point marked. | |

element **BuoyCardinal/categoryOfCardinalMark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfCardinalMark**](#LinkC) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | north cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing NW-NE taken from the point of interest it should be passed to the north side of the mark. | | | enumeration | east cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing NE-SE taken from the point of interest it should be passed to the east side of the mark. | | | enumeration | south cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing SE-SW taken from the point of interest it should be passed to the south side of the mark. | | | enumeration | west cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing SW-NW taken from the point of interest it should be passed to the west side of the mark. | | |

complexType **BuoyInstallation**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBuoy**](#Link44) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9)[**categoryOfInstallationBuoy**](#LinkCB) |
| used by | |  |  | | --- | --- | | element | [**BuoyInstallation**](#Link1C) | |
| annotation | |  | | --- | | documentation | | A buoy is a floating object moored to the bottom in a particular place, as an aid to navigation or for other specific purposes. (IHO Dictionary, S-32, 5th Edition, 565). | | documentation | | An installation buoy is a buoy used for loading tankers with gas or oil. (IHO Chart Specifications, M-4) | |

element **BuoyInstallation/categoryOfInstallationBuoy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfInstallationBuoy**](#Link12) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | catenary anchor leg mooring (CALM) | |  | | --- | | documentation | | incorporates a large buoy which remains on the surface at all times and is moored by 4 or more anchors. Mooring hawsers and cargo hoses lead from a turntable on top of the buoy, so that the buoy does not turn as the ship swings to wind and stream. | | | enumeration | single buoy mooring (SBM or SPM) | |  | | --- | | documentation | | a mooring structure used by tankers to load and unload in port approaches or in offshore oil and gas fields. The size of the structure can vary between a large mooring buoy and a manned floating structure. Also known as single point mooring (SPM) | | |

complexType **BuoyIsolatedDanger**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBuoy**](#Link44) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9) |
| used by | |  |  | | --- | --- | | element | [**BuoyIsolatedDanger**](#Link1F) | |
| annotation | |  | | --- | | documentation | | A buoy is a floating object moored to the bottom in a particular place, as an aid to navigation or for other specific purposes. (IHO Dictionary, S-32, 5th Edition, 565). | | documentation | | A isolated danger buoy is a buoy moored on or above an isolated danger of limited extent, which has navigable water all around it. (UKHO NP735, 5th Edition) | |

complexType **BuoyLateral**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBuoy**](#Link44) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9)[**categoryOfLateralMark**](#LinkCC) |
| used by | |  |  | | --- | --- | | element | [**BuoyLateral**](#Link22) | |
| annotation | |  | | --- | | documentation | | A buoy is a floating object moored to the bottom in a particular place, as an aid to navigation or for other specific purposes. (IHO Dictionary, S-32, 5th Edition, 565). | | documentation | | A lateral buoy is used to indicate the port or starboard hand side of the route to be followed. They are generally used for well defined channels and are used in conjunction with a conventional direction of buoyage. (UKHO NP 735, 5th Edition) | |

element **BuoyLateral/categoryOfLateralMark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfLateralMark**](#Link18) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | port-hand lateral mark | |  | | --- | | documentation | | indicates the port boundary of a navigational channel or suggested route when proceeding in the 'conventional direction of buoyage'. | | | enumeration | starboard-hand lateral mark | |  | | --- | | documentation | | indicates the starboard boundary of a navigational channel or suggested route when proceeding in the 'conventional direction of buoyage'. | | | enumeration | preferred channel to starboard lateral mark | |  | | --- | | documentation | | at a point where a channel divides, when proceeding in the 'conventional direction of buoyage', the preferred channel (or primary route) is indicated by a modified port-hand lateral mark. | | | enumeration | preferred channel to port lateral mark | |  | | --- | | documentation | | at a point where a channel divides, when proceeding in the 'conventional direction of buoyage', the preferred channel (or primary route) is indicated by a modified starboard-hand lateral mark. | | |

complexType **BuoySafeWater**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBuoy**](#Link44) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9) |
| used by | |  |  | | --- | --- | | element | [**BuoySafeWater**](#Link25) | |
| annotation | |  | | --- | | documentation | | A buoy is a floating object moored to the bottom in a particular place, as an aid to navigation or for other specific purposes. (IHO Dictionary, S-32, 5th Edition, 565). | | documentation | | A safe water buoy is used to indicate that there is navigable water around the mark. (UKHO NP735, 5th Edition) | |

complexType **BuoySpecialPurposeGeneral**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**GenericBuoy**](#Link44) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9)[**categoryOfSpecialPurposeMark**](#LinkCD) |
| used by | |  |  | | --- | --- | | element | [**BuoySpecialPurposeGeneral**](#Link28) | |
| annotation | |  | | --- | | documentation | | A buoy is a floating object moored to the bottom in a particular place, as an aid to navigation or for other specific purposes. (IHO Dictionary, S-32, 5th Edition, 565). | | documentation | | A special purpose buoy is primarily used to indicate an area or feature, the nature of which is apparent from reference to a chart, Sailing Directions or Notices to Mariners (UKHO NP 735, 5th Edition). Buoy in general: A buoy whose appearance or purpose is not adequately known. | |

element **BuoySpecialPurposeGeneral/categoryOfSpecialPurposeMark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfSpecialPurposeMark**](#Link30) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | firing danger area mark | |  | | --- | | documentation | | a mark used to indicate a firing danger area, usually at sea. | | | enumeration | target mark | |  | | --- | | documentation | | any object toward which something is directed. The distinctive marking or instrumentation of a ground point to aid its identification on a photograph. | | | enumeration | marker ship mark | |  | | --- | | documentation | | a mark marking the position of a ship which is used as a target during some military exercise. | | | enumeration | degaussing range mark | |  | | --- | | documentation | | a mark used to indicate a degaussing range. | | | enumeration | barge mark | |  | | --- | | documentation | | a mark of relevance to barges. | | | enumeration | cable mark | |  | | --- | | documentation | | a mark used to indicate the position of submarine cables or the point at which they run on to the land. | | | enumeration | spoil ground mark | |  | | --- | | documentation | | a mark used to indicate the limit of a spoil ground | | | enumeration | outfall mark | |  | | --- | | documentation | | a mark used to indicate the position of an outfall or the point at which it leaves the land. | | | enumeration | ODAS (Ocean-Data-Acquisition-System) | |  | | --- | | documentation | | Ocean Data Acquisition System | | | enumeration | recording mark | |  | | --- | | documentation | | a mark used to record data for scientific purposes. | | | enumeration | seaplane anchorage mark | |  | | --- | | documentation | | a mark used to indicate a seaplane anchorage. | | | enumeration | recreation zone mark | |  | | --- | | documentation | | a mark used to indicate a recreation zone. | | | enumeration | private mark | |  | | --- | | documentation | | a privately maintained mark. | | | enumeration | mooring mark | |  | | --- | | documentation | | a mark indicating a mooring or moorings. | | | enumeration | LANBY (Large Automatic Navigational Buoy) | |  | | --- | | documentation | | a large buoy designed to take the place of a lightship where construction of an offshore light station is not feasible. | | | enumeration | leading mark | |  | | --- | | documentation | | aids to navigation or other indicators so located as to indicate the path to be followed. Leading marks identify a leading line when they are in transit. | | | enumeration | measured distance mark | |  | | --- | | documentation | | a mark forming part of a transit indicating one end of a measured distance. | | | enumeration | notice mark | |  | | --- | | documentation | | a notice board or sign indicating information to the mariner. | | | enumeration | TSS mark (Traffic Separation Scheme) | |  | | --- | | documentation | | a mark indicating a traffic separation scheme. | | | enumeration | anchoring prohibited mark | |  | | --- | | documentation | | a mark indicating an anchoring prohibited area. | | | enumeration | berthing prohibited mark | |  | | --- | | documentation | | a mark indicating that berthing is prohibited. | | | enumeration | overtaking prohibited mark | |  | | --- | | documentation | | a mark indicating that overtaking is prohibited. | | | enumeration | two-way traffic prohibited mark | |  | | --- | | documentation | | a mark indicating a one-way route. | | | enumeration | reduced wake mark | |  | | --- | | documentation | | a mark indicating that vessels must not generate excessive wake. | | | enumeration | speed limit mark | |  | | --- | | documentation | | a mark indicating that a speed limit applies. | | | enumeration | stop mark | |  | | --- | | documentation | | a mark indicating the place where the bow of a ship must stop when traffic lights show red. | | | enumeration | general warning mark | |  | | --- | | documentation | | a mark indicating that special caution must be exercised in the vicinity of the mark. | | | enumeration | sound ship's siren mark | |  | | --- | | documentation | | a mark indicating that a ship should sound its siren or horn. | | | enumeration | restricted vertical clearance mark | |  | | --- | | documentation | | a mark indicating the minimum vertical space available for passage. | | | enumeration | maximum vessel's draught mark | |  | | --- | | documentation | | a mark indicating the maximum draught of vessel permitted. | | | enumeration | restricted horizontal clearance mark | |  | | --- | | documentation | | a mark indicating the minimum horizontal space available for passage. | | | enumeration | strong current warning mark | |  | | --- | | documentation | | a mark warning of strong currents. | | | enumeration | berthing permitted mark | |  | | --- | | documentation | | a mark indicating that berthing is allowed. | | | enumeration | overhead power cable mark | |  | | --- | | documentation | | a mark indicating an overhead power cable. | | | enumeration | channel edge gradient mark | |  | | --- | | documentation | | a mark indicating the gradient of the slope of a dredge channel edge. | | | enumeration | telephone mark | |  | | --- | | documentation | | a mark indicating the presence of a telephone. | | | enumeration | ferry crossing mark | |  | | --- | | documentation | | a mark indicating that a ferry route crosses the ship route often used with a 'sound ship's siren' mark. | | | enumeration | pipeline mark | |  | | --- | | documentation | | a mark used to indicate the position of submarine pipelines or the point at which they run on to the land. | | | enumeration | anchorage mark | |  | | --- | | documentation | | a mark indicating an anchorage area. | | | enumeration | clearing mark | |  | | --- | | documentation | | a mark used to indicate a clearing line. | | | enumeration | control mark | |  | | --- | | documentation | | a mark indicating the location at which a restriction or requirement exists. | | | enumeration | diving mark | |  | | --- | | documentation | | a mark indicating that diving may take place in the vicinity. | | | enumeration | refuge beacon | |  | | --- | | documentation | | a mark providing or indicating a place of safety. | | | enumeration | foul ground mark | |  | | --- | | documentation | | a mark indicating a foul ground. | | | enumeration | yachting mark | |  | | --- | | documentation | | a mark installed for use by yachtsmen. | | | enumeration | heliport mark | |  | | --- | | documentation | | a mark indicating an area where helicopters may land. | | | enumeration | GPS mark | |  | | --- | | documentation | | a mark indicating a location at which a GNSS position has been accurately determined. | | | enumeration | seaplane landing mark | |  | | --- | | documentation | | a mark indicating an area where sea-planes land. | | | enumeration | entry prohibited mark | |  | | --- | | documentation | | a mark indicating that entry is prohibited. | | | enumeration | work in progress mark | |  | | --- | | documentation | | a mark indicating that work (generally construction) is in progress. | | | enumeration | mark with unknown purpose | |  | | --- | | documentation | | a mark whose detailed characteristics are unknown. | | | enumeration | wellhead mark | |  | | --- | | documentation | | a mark indicating a borehole that produces or is capable of producing oil or natural gas. | | | enumeration | channel separation mark | |  | | --- | | documentation | | a mark indicating the point at which a channel divides separately into two channels. | | | enumeration | marine farm mark | |  | | --- | | documentation | | a mark indicating the existence of a fish, mussel, oyster or pearl farm/ culture. | | | enumeration | artificial reef mark | |  | | --- | | documentation | | a mark indicating the existence or the extent of an artificial reef. | | | enumeration | IALA\_jetski prohibited | |  | | --- | | documentation | | A mark indicating a jetski prohibited area | | |

complexType **contactAddress**

|  |  |
| --- | --- |
| diagram |  |
| children | [**deliveryPoint**](#Link1B6)[**cityName**](#Link1B7)[**administrativeDivision**](#Link1B8)[**country**](#Link1B9)[**postalCode**](#Link1BA) |
| used by | |  |  | | --- | --- | | element | [**StructureObject/contactAddress**](#LinkA8) | |
| annotation | |  | | --- | | documentation | | Direction or superscription of a letter, package, etc., specifying the name of the place to which it is directed, and optionally a contact person or organisation who should receive it. (Oxford English Dictionary, 2nd Ed., adapted). | |

element **contactAddress/deliveryPoint**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Details of where post can be delivered such as the apartment, name and/or number of a street, building or PO Box. | |

element **contactAddress/cityName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The name of a town or city. | |

element **contactAddress/administrativeDivision**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Administrative division is a generic term for an administrative region within a country at a level below that of the sovereign state. | |

element **contactAddress/country**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The name of a nation. (Adapted from The American Heritage Dictionaries) | |

element **contactAddress/postalCode**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Known in various countries as a postcode, or ZIP code, the postal code is a series of letters and/or digits that identifies each postal delivery area. | |

complexType **DataCoverage**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**MetaFeatureType**](#Link65) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**maximumDisplayScale**](#LinkCE)[**minimumDisplayScale**](#LinkCF)[**geometry**](#LinkD0) |
| used by | |  |  | | --- | --- | | element | [**DataCoverage**](#Link2B) | |
| annotation | |  | | --- | | documentation | | A geographical area that describes the coverage and extent of spatial types. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.210, November 2000). | |

element **DataCoverage/maximumDisplayScale**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:positiveInteger** |
| annotation | |  | | --- | | documentation | | The largest intended viewing scale for the data. | |

element **DataCoverage/minimumDisplayScale**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:positiveInteger** |
| annotation | |  | | --- | | documentation | | The smallest intended viewing scale for the data. | |

element **DataCoverage/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **SurfacePropertyType** |
| children | **surfaceProperty** |

complexType **DatasetType**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of **gml:AbstractFeatureType** |
| children | **gml:boundedBy** [**DatasetIdentificationInformation**](#LinkD1)[**DatasetStructureInformation**](#LinkD2) **Point MultiPoint Curve CompositeCurve OrientableCurve Surface Polygon** [**imember**](#LinkD3)[**member**](#LinkD4) |
| used by | |  |  | | --- | --- | | element | [**DataSet**](#Link2E) | |
| annotation | |  | | --- | | documentation | | Dataset element for dataset as "GML document" | |

element **DatasetType/DatasetIdentificationInformation**

|  |  |
| --- | --- |
| diagram |  |
| type | **DataSetIdentificationType** |
| children | **encodingSpecification encodingSpecificationEdition productIdentifier productEdition applicationProfile datasetFileIdentifier datasetTitle datasetReferenceDate datasetLanguage datasetAbstract datasetTopicCategory** |
| annotation | |  | | --- | | documentation | | Dataset identification information | |

element **DatasetType/DatasetStructureInformation**

|  |  |
| --- | --- |
| diagram |  |
| type | **DataSetStructureInformationType** |
| children | **datasetCoordOriginX datasetCoordOriginY datasetCoordOriginZ coordMultFactorX coordMultFactorY coordMultFactorZ nInfoRec nPointRec nMultiPointRec nCurveRec nCompositeCurveRec nSurfaceRec nFeatureRec** |
| annotation | |  | | --- | | documentation | | Dataset structure information | |

element **DatasetType/imember**

|  |  |
| --- | --- |
| diagram |  |
| type | [**IMemberType**](#Link4D) |
| children | [**InformationType**](#Link49) |
| annotation | |  | | --- | | documentation | | intended for S100 information types. Extension of GML practice, not addressed by ISO 19136. | |

element **DatasetType/member**

|  |  |
| --- | --- |
| diagram |  |
| type | [**MemberType**](#Link62) |
| children | **gml:AbstractFeature** |
| annotation | |  | | --- | | documentation | | intended for technical GML 3.2 requirement for making the dataset a "GML document" and clause 21.3 of the OGC GML standard | |

complexType **Daymark**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**Equipment**](#Link38) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**categoryOfSpecialPurposeMark**](#LinkD9)[**colour**](#LinkDA)[**colourPattern**](#LinkDB)[**elevation**](#LinkDC)[**height**](#LinkDD)[**natureOfConstruction**](#LinkDE)[**objectNameInNationalLanguage**](#LinkDF)[**objectName**](#LinkE0)[**status**](#LinkE1)[**topmarkDaymarkShape**](#LinkE2)[**verticalAccuracy**](#LinkE3)[**verticalDatum**](#LinkE4)[**verticalLength**](#LinkE5) |
| used by | |  |  | | --- | --- | | element | [**Daymark**](#Link31) | |
| annotation | |  | | --- | | documentation | | The identifying characteristics of an aid to navigation which serve to facilitate its recognition against a daylight viewing background. On those structures that do not by themselves present an adequate viewing area to be seen at the required distance, the aid is made more visible by affixing a daymark to the structure. A daymark so affixed has a distinctive colour and shape depending on the purpose of the aid. (IHO Dictionary, S-32, 5th Edition, 1248) | |

element **Daymark/categoryOfSpecialPurposeMark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfSpecialPurposeMark**](#Link30) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | firing danger area mark | |  | | --- | | documentation | | a mark used to indicate a firing danger area, usually at sea. | | | enumeration | target mark | |  | | --- | | documentation | | any object toward which something is directed. The distinctive marking or instrumentation of a ground point to aid its identification on a photograph. | | | enumeration | marker ship mark | |  | | --- | | documentation | | a mark marking the position of a ship which is used as a target during some military exercise. | | | enumeration | degaussing range mark | |  | | --- | | documentation | | a mark used to indicate a degaussing range. | | | enumeration | barge mark | |  | | --- | | documentation | | a mark of relevance to barges. | | | enumeration | cable mark | |  | | --- | | documentation | | a mark used to indicate the position of submarine cables or the point at which they run on to the land. | | | enumeration | spoil ground mark | |  | | --- | | documentation | | a mark used to indicate the limit of a spoil ground | | | enumeration | outfall mark | |  | | --- | | documentation | | a mark used to indicate the position of an outfall or the point at which it leaves the land. | | | enumeration | ODAS (Ocean-Data-Acquisition-System) | |  | | --- | | documentation | | Ocean Data Acquisition System | | | enumeration | recording mark | |  | | --- | | documentation | | a mark used to record data for scientific purposes. | | | enumeration | seaplane anchorage mark | |  | | --- | | documentation | | a mark used to indicate a seaplane anchorage. | | | enumeration | recreation zone mark | |  | | --- | | documentation | | a mark used to indicate a recreation zone. | | | enumeration | private mark | |  | | --- | | documentation | | a privately maintained mark. | | | enumeration | mooring mark | |  | | --- | | documentation | | a mark indicating a mooring or moorings. | | | enumeration | LANBY (Large Automatic Navigational Buoy) | |  | | --- | | documentation | | a large buoy designed to take the place of a lightship where construction of an offshore light station is not feasible. | | | enumeration | leading mark | |  | | --- | | documentation | | aids to navigation or other indicators so located as to indicate the path to be followed. Leading marks identify a leading line when they are in transit. | | | enumeration | measured distance mark | |  | | --- | | documentation | | a mark forming part of a transit indicating one end of a measured distance. | | | enumeration | notice mark | |  | | --- | | documentation | | a notice board or sign indicating information to the mariner. | | | enumeration | TSS mark (Traffic Separation Scheme) | |  | | --- | | documentation | | a mark indicating a traffic separation scheme. | | | enumeration | anchoring prohibited mark | |  | | --- | | documentation | | a mark indicating an anchoring prohibited area. | | | enumeration | berthing prohibited mark | |  | | --- | | documentation | | a mark indicating that berthing is prohibited. | | | enumeration | overtaking prohibited mark | |  | | --- | | documentation | | a mark indicating that overtaking is prohibited. | | | enumeration | two-way traffic prohibited mark | |  | | --- | | documentation | | a mark indicating a one-way route. | | | enumeration | reduced wake mark | |  | | --- | | documentation | | a mark indicating that vessels must not generate excessive wake. | | | enumeration | speed limit mark | |  | | --- | | documentation | | a mark indicating that a speed limit applies. | | | enumeration | stop mark | |  | | --- | | documentation | | a mark indicating the place where the bow of a ship must stop when traffic lights show red. | | | enumeration | general warning mark | |  | | --- | | documentation | | a mark indicating that special caution must be exercised in the vicinity of the mark. | | | enumeration | sound ship's siren mark | |  | | --- | | documentation | | a mark indicating that a ship should sound its siren or horn. | | | enumeration | restricted vertical clearance mark | |  | | --- | | documentation | | a mark indicating the minimum vertical space available for passage. | | | enumeration | maximum vessel's draught mark | |  | | --- | | documentation | | a mark indicating the maximum draught of vessel permitted. | | | enumeration | restricted horizontal clearance mark | |  | | --- | | documentation | | a mark indicating the minimum horizontal space available for passage. | | | enumeration | strong current warning mark | |  | | --- | | documentation | | a mark warning of strong currents. | | | enumeration | berthing permitted mark | |  | | --- | | documentation | | a mark indicating that berthing is allowed. | | | enumeration | overhead power cable mark | |  | | --- | | documentation | | a mark indicating an overhead power cable. | | | enumeration | channel edge gradient mark | |  | | --- | | documentation | | a mark indicating the gradient of the slope of a dredge channel edge. | | | enumeration | telephone mark | |  | | --- | | documentation | | a mark indicating the presence of a telephone. | | | enumeration | ferry crossing mark | |  | | --- | | documentation | | a mark indicating that a ferry route crosses the ship route often used with a 'sound ship's siren' mark. | | | enumeration | pipeline mark | |  | | --- | | documentation | | a mark used to indicate the position of submarine pipelines or the point at which they run on to the land. | | | enumeration | anchorage mark | |  | | --- | | documentation | | a mark indicating an anchorage area. | | | enumeration | clearing mark | |  | | --- | | documentation | | a mark used to indicate a clearing line. | | | enumeration | control mark | |  | | --- | | documentation | | a mark indicating the location at which a restriction or requirement exists. | | | enumeration | diving mark | |  | | --- | | documentation | | a mark indicating that diving may take place in the vicinity. | | | enumeration | refuge beacon | |  | | --- | | documentation | | a mark providing or indicating a place of safety. | | | enumeration | foul ground mark | |  | | --- | | documentation | | a mark indicating a foul ground. | | | enumeration | yachting mark | |  | | --- | | documentation | | a mark installed for use by yachtsmen. | | | enumeration | heliport mark | |  | | --- | | documentation | | a mark indicating an area where helicopters may land. | | | enumeration | GPS mark | |  | | --- | | documentation | | a mark indicating a location at which a GNSS position has been accurately determined. | | | enumeration | seaplane landing mark | |  | | --- | | documentation | | a mark indicating an area where sea-planes land. | | | enumeration | entry prohibited mark | |  | | --- | | documentation | | a mark indicating that entry is prohibited. | | | enumeration | work in progress mark | |  | | --- | | documentation | | a mark indicating that work (generally construction) is in progress. | | | enumeration | mark with unknown purpose | |  | | --- | | documentation | | a mark whose detailed characteristics are unknown. | | | enumeration | wellhead mark | |  | | --- | | documentation | | a mark indicating a borehole that produces or is capable of producing oil or natural gas. | | | enumeration | channel separation mark | |  | | --- | | documentation | | a mark indicating the point at which a channel divides separately into two channels. | | | enumeration | marine farm mark | |  | | --- | | documentation | | a mark indicating the existence of a fish, mussel, oyster or pearl farm/ culture. | | | enumeration | artificial reef mark | |  | | --- | | documentation | | a mark indicating the existence or the extent of an artificial reef. | | | enumeration | IALA\_jetski prohibited | |  | | --- | | documentation | | A mark indicating a jetski prohibited area | | |

element **Daymark/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **Daymark/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **Daymark/elevation**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:decimal** |
| annotation | |  | | --- | | documentation | | The altitude of the ground level of an object, measured from a specified vertical datum. | |

element **Daymark/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **Daymark/natureOfConstruction**

|  |  |
| --- | --- |
| diagram |  |
| type | [**natureOfConstruction**](#Link66) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | masonry |  | | enumeration | concreted |  | | enumeration | loose boulders |  | | enumeration | hard surfaced |  | | enumeration | unsurfaced |  | | enumeration | wooden |  | | enumeration | metal |  | | enumeration | glass reinforced plastic (GRP) |  | | enumeration | painted |  | | enumeration | IALA\_fiberglass | |  | | --- | | documentation | | Constructed from fiberglass | | | enumeration | IALA\_plastic | |  | | --- | | documentation | | Constructed from plastic | | |

element **Daymark/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **Daymark/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **Daymark/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **Daymark/topmarkDaymarkShape**

|  |  |
| --- | --- |
| diagram |  |
| type | [**topmarkDaymarkShape**](#Link84) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | cone, point up |  | | enumeration | cone, point down |  | | enumeration | sphere |  | | enumeration | 2 spheres |  | | enumeration | cylinder (can) |  | | enumeration | board |  | | enumeration | x-shape (St. Andrew's cross) |  | | enumeration | upright cross (St George's cross) |  | | enumeration | cube, point up |  | | enumeration | 2 cones, point to point |  | | enumeration | 2 cones, base to base |  | | enumeration | rhombus (diamond) |  | | enumeration | 2 cones (points upward) |  | | enumeration | 2 cones (points downward) |  | | enumeration | besom, point up (broom or perch) |  | | enumeration | besom, point down (broom or perch) |  | | enumeration | flag |  | | enumeration | sphere over rhombus |  | | enumeration | square |  | | enumeration | rectangle, horizontal | |  | | --- | | documentation | | where the two longer opposite sides are standing horizontally. A rectangle is a plane figure with four right angles and four straight sides, opposite sides being parallel and equal in length | | | enumeration | rectangle, vertical | |  | | --- | | documentation | | where the two longer opposite sides are standing vertically. A rectangle is a plane figure with four right angles and four straight sides, opposite sides being parallel and equal in length | | | enumeration | trapezium, up |  | | enumeration | trapezium, down |  | | enumeration | triangle, point up |  | | enumeration | triangle, point down |  | | enumeration | circle |  | | enumeration | two upright crosses (one over the other) |  | | enumeration | T-shape |  | | enumeration | triangle pointing up over a circle |  | | enumeration | upright cross over a circle |  | | enumeration | rhombus over a circle |  | | enumeration | circle over a triangle pointing up |  | | enumeration | other shape |  | | enumeration | IALA\_tubular |  | |

element **Daymark/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. | | documentation | | Expected input: The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. Minimum value: 0 Indication: Unit: defined in the HUNI subfield of the DSPM record or in the HUNITS attribute of the M\_UNIT meta object class, e.g. metre (m) Resolution: 0.1 m or 0.1 ft Format: xx.x Example: 1.2 for an error of 1.2 metres. | |

element **Daymark/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **Daymark/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The total vertical length of an object. | | documentation | | References: INT 1: IE 5; IL 21.3; M-4: 303; Minimum Value: 0 Indication: Unit:defined in the data set metadata, e.g. metre (m) Resolution: 0.1 m or 0.1 ft Format: xxx.x Example: 24.5 for a vertical length of 24.5 metres. | | documentation | | Remarks: For floating objects: the vertical distance from the surface of water to the highest point of that object. For fixed objects: the vertical distance from seabed or ground to the highest point of that object. For objects on top of other objects: the vertical distance from the lowest to the highest point of that object. Vertical length measurements do not require a datum. | |

complexType **Equipment**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**AidsToNavigation**](#Link5) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8) |
| used by | |  |  | | --- | --- | | element | [**Equipment**](#Link34) | | complexTypes | [**Daymark**](#Link35)[**FogSignal**](#Link3E)[**IALA\_EnvironmentObservationEquipment**](#Link47)[**Light**](#Link56)[**RadarReflector**](#Link77)[**RadarTransponderBeacon**](#Link7A)[**RetroReflector**](#Link80)[**Topmark**](#Link8F) | |
| annotation | |  | | --- | | documentation | | The implements used in an operation or activity. | |

element **Equipment/IALA\_remoteMonitoringSystem**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Definition required | |

element **Equipment/IALA\_remotelyMonitored**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:boolean** |
| annotation | |  | | --- | | documentation | | Definition required | |

element **Equipment/parent**

|  |  |
| --- | --- |
| diagram |  |
| type | **gml:ReferenceType** |
| annotation | |  | | --- | | documentation | | For association to StructureObject specializations. Note that multiplicity in this XML schema is 0 rather than 1 compared to the UML model because this schema offers an alternative means of encoding the association. For strict conformance to the UML model, the existence should be checked with a constraint rule. | |

element **Equipment/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **PointPropertyType** |
| children | **pointProperty** |

complexType **FeatureType**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of **AbstractFeatureType** |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** |
| used by | |  |  | | --- | --- | | element | [**FeatureType**](#Link37) | | complexTypes | [**Aggregation**](#Link2)[**AidsToNavigation**](#Link5)[**Association**](#Link8)[**MetaFeatureType**](#Link65) | |
| annotation | |  | | --- | | documentation | | Generalized feature type which carry all the common attributes | |

complexType **FogSignal**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**Equipment**](#Link38) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**categoryOfFogSignal**](#LinkE6)[**signalFrequency**](#LinkE7)[**signalGeneration**](#LinkE8)[**signalGroup**](#LinkE9)[**signalPeriod**](#LinkEA)[**signalSequence**](#LinkEB)[**status**](#LinkEC)[**valueOfMaximumRange**](#LinkED)[**IALA\_signalOutput**](#LinkEE)[**IALA\_typeOfBattery**](#LinkEF) |
| used by | |  |  | | --- | --- | | element | [**FogSignal**](#Link3A) | |
| annotation | |  | | --- | | documentation | | A warning signal transmitted by a vessel, or aid to navigation, during periods of low visibility. Also, the device producing such a signal. | | documentation | | (IHO Dictionary, S-32, 5th Edition, 1890) | |

element **FogSignal/categoryOfFogSignal**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfFogSignal**](#LinkF) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | explosive | |  | | --- | | documentation | | a signal produced by the firing of explosive charges. | | | enumeration | diaphone | |  | | --- | | documentation | | a diaphone uses compressed air and generally emits a powerful low-pitched sound, which often concludes with a brief sound of suddenly lowered pitch, termed the 'grunt'. | | | enumeration | siren | |  | | --- | | documentation | | a siren uses compressed air and exists in a variety of types which differ considerably in their sound and power. | | | enumeration | nautophone | |  | | --- | | documentation | | a horn having a diaphragm oscillated by electricity | | | enumeration | reed | |  | | --- | | documentation | | a reed uses compressed air and emits a weak, high pitched sound. | | | enumeration | tyfon | |  | | --- | | documentation | | a diaphragm horn which operates under the influence of compressed air or steam | | | enumeration | bell | |  | | --- | | documentation | | a ringing sound with a short range. | | | enumeration | whistle | |  | | --- | | documentation | | a distinctive sound made by a jet of air passing through an orifice. | | | enumeration | gong | |  | | --- | | documentation | | a sound produced by vibration of a disc when struck. | | | enumeration | horn | |  | | --- | | documentation | | a horn uses compressed air or electricity to vibrate a diaphragm and exists in a variety of types which differ greatly in their sound and power. | | |

element **FogSignal/signalFrequency**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:int** |
| annotation | |  | | --- | | documentation | | The frequency of a signal. | |

element **FogSignal/signalGeneration**

|  |  |
| --- | --- |
| diagram |  |
| type | [**signalGeneration**](#Link7B) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | automatically |  | | enumeration | by wave action |  | | enumeration | by hand |  | | enumeration | by wind |  | |

element **FogSignal/signalGroup**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The number of signals, the combination of signals or the morse character(s) within one period of full sequence. | |

element **FogSignal/signalPeriod**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:decimal** |
| annotation | |  | | --- | | documentation | | The time occupied by an entire cycle of intervals of light and eclipse. | |

element **FogSignal/signalSequence**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The sequence of times occupied by intervals of light and eclipse for all 'light characteristics' except for occulting where the sequence of times is occupied by intervals of eclipse and light. | |

element **FogSignal/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **FogSignal/valueOfMaximumRange**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The extreme distance at which an object can be seen or a signal detected. | |

element **FogSignal/IALA\_signalOutput**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:decimal** |
| annotation | |  | | --- | | documentation | | Given in dB | |

element **FogSignal/IALA\_typeOfBattery**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Types of storage battery for light e.g. Hi-Ca 100, PS-250E, LDA-400, VGS-350 | |

complexType **GenericBeacon**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**StructureObject**](#Link8D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**beaconShape**](#LinkAA)[**colour**](#LinkAB)[**colourPattern**](#LinkAC)[**condition**](#LinkAD)[**radarConspicuous**](#LinkAE)[**visuallyConspicuous**](#LinkAF)[**elevation**](#LinkB0)[**height**](#LinkB1)[**marksNavigationalSystemOf**](#LinkB2)[**natureOfConstruction**](#LinkB3)[**verticalLength**](#LinkB4)[**verticalAccuracy**](#LinkB5)[**objectNameInNationalLanguage**](#LinkB6)[**objectName**](#LinkB7)[**status**](#LinkB8)[**geometry**](#LinkB9) |
| used by | |  |  | | --- | --- | | element | [**GenericBeacon**](#Link3D) | | complexTypes | [**BeaconCardinal**](#LinkB)[**BeaconIsolatedDanger**](#LinkE)[**BeaconLateral**](#Link11)[**BeaconSafeWater**](#Link14)[**BeaconSpecialPurposeGeneral**](#Link17) | |
| annotation | |  | | --- | | documentation | | A fixed artificial navigation mark that can be recognised by its shape, colour, pattern, topmark or light character, or a combination of these. It may carry various additional aids to navigation. | |

element **GenericBeacon/beaconShape**

|  |  |
| --- | --- |
| diagram |  |
| type | [**beaconShape**](#Link3) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | stake, pole, perch, post | |  | | --- | | documentation | | an elongated wood or metal pole, embedded in the bottom to serve as a navigational aid or a support for a navigational aid. | | | enumeration | withy | |  | | --- | | documentation | | a tree without roots stuck or spoiled into the bottom of the sea to serve as a navigational aid. | | | enumeration | beacon tower | |  | | --- | | documentation | | a solid structure of the order of 10 metres in height used as a navigational aid. | | | enumeration | lattice beacon | |  | | --- | | documentation | | a structure consisting of strips of metal or wood crossed or interlaced to form a structure to serve as an aid to navigation or as a support for an aid to navigation. | | | enumeration | pile beacon | |  | | --- | | documentation | | a long heavy timber(s) or section(s) of steel, wood, concrete, etc., forced into the seabed to serve as an aid to navigation or as a support for an aid to navigation. | | | enumeration | cairn | |  | | --- | | documentation | | a mound of stones, usually conical or pyramidal, raised specifically for maritime navigation. | | | enumeration | buoyant beacon | |  | | --- | | documentation | | a tall spar-like beacon fitted with a permanently submerged buoyancy chamber, the lower end of the body is secured to seabed sinker either by a flexible joint or by a cable under tension. | | |

element **GenericBeacon/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **GenericBeacon/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **GenericBeacon/condition**

|  |  |
| --- | --- |
| diagram |  |
| type | [**condition**](#Link3C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | under construction |  | | enumeration | ruined |  | | enumeration | under reclamation |  | | enumeration | wingless |  | | enumeration | planned construction |  | |

element **GenericBeacon/radarConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**radarConspicuous**](#Link78) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | radar conspicuous |  | | enumeration | not radar conspicuous |  | | enumeration | radar conspicuous (has radar reflector) |  | |

element **GenericBeacon/visuallyConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**visuallyConspicuous**](#Link8C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | visually conspicuous |  | | enumeration | not visually conspicuous |  | |

element **GenericBeacon/elevation**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:decimal** |
| annotation | |  | | --- | | documentation | | The altitude of the ground level of an object, measured from a specified vertical datum. | |

element **GenericBeacon/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **GenericBeacon/marksNavigationalSystemOf**

|  |  |
| --- | --- |
| diagram |  |
| type | [**marksNavigationalSystemOf**](#Link60) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | IALA A |  | | enumeration | IALA B |  | | enumeration | no system |  | | enumeration | other system |  | |

element **GenericBeacon/natureOfConstruction**

|  |  |
| --- | --- |
| diagram |  |
| type | [**natureOfConstruction**](#Link66) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | masonry |  | | enumeration | concreted |  | | enumeration | loose boulders |  | | enumeration | hard surfaced |  | | enumeration | unsurfaced |  | | enumeration | wooden |  | | enumeration | metal |  | | enumeration | glass reinforced plastic (GRP) |  | | enumeration | painted |  | | enumeration | IALA\_fiberglass | |  | | --- | | documentation | | Constructed from fiberglass | | | enumeration | IALA\_plastic | |  | | --- | | documentation | | Constructed from plastic | | |

element **GenericBeacon/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The total vertical length of an object. | |

element **GenericBeacon/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **GenericBeacon/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **GenericBeacon/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **GenericBeacon/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **GenericBeacon/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **PointPropertyType** |
| children | **pointProperty** |

complexType **GenericBuoy**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**StructureObject**](#Link8D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buoyShape**](#LinkBD)[**colour**](#LinkBE)[**colourPattern**](#LinkBF)[**radarConspicious**](#LinkC0)[**marksNavigationalSystemOf**](#LinkC1)[**natureOfconstuction**](#LinkC2)[**objectNameInNationalLanguage**](#LinkC3)[**objectName**](#LinkC4)[**status**](#LinkC5)[**verticalAccuracy**](#LinkC6)[**verticalLength**](#LinkC7)[**IALA\_typeOfBuoy**](#LinkC8)[**geometry**](#LinkC9) |
| used by | |  |  | | --- | --- | | element | [**GenericBuoy**](#Link40) | | complexTypes | [**BuoyCardinal**](#Link1A)[**BuoyInstallation**](#Link1D)[**BuoyIsolatedDanger**](#Link20)[**BuoyLateral**](#Link23)[**BuoySafeWater**](#Link26)[**BuoySpecialPurposeGeneral**](#Link29) | |
| annotation | |  | | --- | | documentation | | A floating object moored to the bottom in a particular (charted) place, as an aid to navigation or for other specific purposes. | |

element **GenericBuoy/buoyShape**

|  |  |
| --- | --- |
| diagram |  |
| type | [**buoyShape**](#Link9) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | conical (nun, ogival) | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has approximately the shape or the appearance of a pointed cone with the point upwards. | | | enumeration | can (cylindrical) | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has the shape of a cylinder, or a truncated cone that approximates to a cylinder, with a flat end uppermost. | | | enumeration | spherical | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has the shape of a part of a sphere. | | | enumeration | pillar | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure is a narrow vertical structure, pillar or lattice tower. | | | enumeration | spar (spindle) | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has the form of a pole, or of a very long cylinder, floating upright. | | | enumeration | barrel (tun) | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has the form of a barrel or cylinder floating horizontally. | | | enumeration | super-buoy | |  | | --- | | documentation | | a very large buoy, generally more than 5m in diameter. | | | enumeration | ice buoy | |  | | --- | | documentation | | a specially constructed shuttle shaped buoy which is used in ice conditions. | | |

element **GenericBuoy/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **GenericBuoy/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **GenericBuoy/radarConspicious**

|  |  |
| --- | --- |
| diagram |  |
| type | [**radarConspicuous**](#Link78) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | radar conspicuous |  | | enumeration | not radar conspicuous |  | | enumeration | radar conspicuous (has radar reflector) |  | |

element **GenericBuoy/marksNavigationalSystemOf**

|  |  |
| --- | --- |
| diagram |  |
| type | [**marksNavigationalSystemOf**](#Link60) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | IALA A |  | | enumeration | IALA B |  | | enumeration | no system |  | | enumeration | other system |  | |

element **GenericBuoy/natureOfconstuction**

|  |  |
| --- | --- |
| diagram |  |
| type | [**natureOfConstruction**](#Link66) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | masonry |  | | enumeration | concreted |  | | enumeration | loose boulders |  | | enumeration | hard surfaced |  | | enumeration | unsurfaced |  | | enumeration | wooden |  | | enumeration | metal |  | | enumeration | glass reinforced plastic (GRP) |  | | enumeration | painted |  | | enumeration | IALA\_fiberglass | |  | | --- | | documentation | | Constructed from fiberglass | | | enumeration | IALA\_plastic | |  | | --- | | documentation | | Constructed from plastic | | |

element **GenericBuoy/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **GenericBuoy/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **GenericBuoy/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **GenericBuoy/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **GenericBuoy/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The total vertical length of an object. | |

element **GenericBuoy/IALA\_typeOfBuoy**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Types of light buoy e.g. LANBY-100, LS-35, LL-30, LL-28, LL-26, LL-26(M), LL-24, LS-24, LSP-24, LT-10  Types of buoy e.g. U-17C(P), U-17S(P), U-17C(S), U-17S(S), UR-17C(P), UR-17S(P), UR-17C(S), UR-17S(S) | |

element **GenericBuoy/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **PointPropertyType** |
| children | **pointProperty** |

complexType **IALA\_EnvironmentObservationEquipment**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**Equipment**](#Link38) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**status**](#LinkF0)[**height**](#LinkF1)[**IALA\_typeOfEnvironmentObservationEquipment**](#LinkF2)[**IALA\_typeOfBattery**](#LinkF3) |
| used by | |  |  | | --- | --- | | element | [**IALA\_EnvironmentObservationEquipment**](#Link43) | |
| annotation | |  | | --- | | documentation | | A sensor used to observe the environment. | |

element **IALA\_EnvironmentObservationEquipment/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **IALA\_EnvironmentObservationEquipment/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **IALA\_EnvironmentObservationEquipment/IALA\_typeOfEnvironmentObservationEquipment**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Type of sensor used to observe the environment. e.g. Anemometer, fog monitor, etc | |

element **IALA\_EnvironmentObservationEquipment/IALA\_typeOfBattery**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Types of storage battery for light e.g. Hi-Ca 100, PS-250E, LDA-400, VGS-350 | |

complexType **IALA\_Lighthouse**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**Landmark**](#Link53) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**categoryOfLandmark**](#LinkF4)[**colour**](#LinkF5)[**colourPattern**](#LinkF6)[**condition**](#LinkF7)[**radarConspicuous**](#LinkF8)[**visuallyConspicuous**](#LinkF9)[**elevation**](#LinkFA)[**function**](#LinkFB)[**height**](#LinkFC)[**natureOfConstruction**](#LinkFD)[**objectNameInNationalLanguage**](#LinkFE)[**objectName**](#LinkFF)[**status**](#Link100)[**verticalAccuracy**](#Link101)[**verticalDatum**](#Link102)[**verticalLength**](#Link103)[**IALA\_mannedStructure**](#Link104)[**geometry**](#Link105) |
| used by | |  |  | | --- | --- | | element | [**IALA\_Lighthouse**](#Link46) | |
| annotation | |  | | --- | | documentation | | A distinctive structure on or off a coast exhibiting a major light designed to serve as an aid to navigation. (IHO S-32 - 2822, 5th Edition, 1994). | |

complexType **IMemberType**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of **gml:AbstractFeatureMemberType** |
| children | [**InformationType**](#Link49) |
| used by | |  |  | | --- | --- | | element | [**DatasetType/imember**](#LinkD3) | |
| annotation | |  | | --- | | documentation | | data format construct for dataset member S-100 information types | |

complexType **InformationTypeType**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of **AbstractInformationType** |
| children | **informationAssociation invInformationAssociation** |
| used by | |  |  | | --- | --- | | element | [**InformationType**](#Link49) | | complexType | [**SpatialUncertainty**](#Link8B) | |
| annotation | |  | | --- | | documentation | | Generalized information type which carry all the common attributes | |

complexType **Landmark**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**StructureObject**](#Link8D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**categoryOfLandmark**](#LinkF4)[**colour**](#LinkF5)[**colourPattern**](#LinkF6)[**condition**](#LinkF7)[**radarConspicuous**](#LinkF8)[**visuallyConspicuous**](#LinkF9)[**elevation**](#LinkFA)[**function**](#LinkFB)[**height**](#LinkFC)[**natureOfConstruction**](#LinkFD)[**objectNameInNationalLanguage**](#LinkFE)[**objectName**](#LinkFF)[**status**](#Link100)[**verticalAccuracy**](#Link101)[**verticalDatum**](#Link102)[**verticalLength**](#Link103)[**IALA\_mannedStructure**](#Link104)[**geometry**](#Link105) |
| used by | |  |  | | --- | --- | | element | [**Landmark**](#Link4C) | | complexType | [**IALA\_Lighthouse**](#Link4A) | |
| annotation | |  | | --- | | documentation | | A prominent object at a fixed location which can be used in determining a location or a direction. | | documentation | | A relatively permanent structure, roofed and usually walled. It is designed for some particular use which it may be important to indicate. (Digital Geographic Information Working Group, Oct.87) | |

element **Landmark/categoryOfLandmark**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfLandmark**](#Link15) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | cairn | |  | | --- | | documentation | | a mound of stones, usually conical or pyramidal, raised as a landmark or to designate a point of importance in surveying. | | | enumeration | cemetery | |  | | --- | | documentation | | an area of land for burying the dead. | | | enumeration | chimney | |  | | --- | | documentation | | a vertical structure containing a passage or flue for discharging smoke and gases. | | | enumeration | dish aerial | |  | | --- | | documentation | | a parabolic aerial for the receipt and transmission of high frequency radio signals. | | | enumeration | flagstaff (flagpole) | |  | | --- | | documentation | | a staff or pole on which flags are raised. | | | enumeration | flare stack | |  | | --- | | documentation | | a tall structure used for burning-off waste oil or gas. Normally showing a flame and located at refineries. | | | enumeration | mast | |  | | --- | | documentation | | a straight vertical piece of timber or a hollow cylinder. | | | enumeration | windsock | |  | | --- | | documentation | | a tapered fabric sleeve mounted so as to catch and swing with the wind, thus indicating the wind direction. | | | enumeration | monument | |  | | --- | | documentation | | a structure erected or maintained as a memorial to a person or event. | | | enumeration | column (pillar) | |  | | --- | | documentation | | a cylindrical or slightly tapering body of considerably greater length than diameter erected vertically. | | | enumeration | memorial plaque | |  | | --- | | documentation | | a slab of metal, usually ornamented, erected as a memorial to a person or event. | | | enumeration | obelisk | |  | | --- | | documentation | | a tapering shaft usually of stone or concrete, square or rectangular in section, with a pyramidal apex. | | | enumeration | statue | |  | | --- | | documentation | | a representation of a human, animal or fantasy figure in marble, bronze, etc. | | | enumeration | cross | |  | | --- | | documentation | | a monument, or other structure in form of a cross. | | | enumeration | dome | |  | | --- | | documentation | | a landmark comprising a hemispherical or spheroidal shaped structure | | | enumeration | radar scanner | |  | | --- | | documentation | | a device used for directing a radar beam through a search pattern | | | enumeration | tower | |  | | --- | | documentation | | a relatively tall structure which may be used for observation, support, storage or communication etc. | | | enumeration | windmill | |  | | --- | | documentation | | a wind driven system of vanes attached to a tower like structure (excluding wind-generated power plants). | | | enumeration | windmotor | |  | | --- | | documentation | | a modern structure for the use of windpower. | | | enumeration | spire/minaret | |  | | --- | | documentation | | a tall conical or pyramid-shaped structure often built on the roof or tower of a building, especially a church or mosque. | | | enumeration | large rock or boulder on land | |  | | --- | | documentation | | an isolated rocky formation or a single large stone | | |

element **Landmark/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **Landmark/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **Landmark/condition**

|  |  |
| --- | --- |
| diagram |  |
| type | [**condition**](#Link3C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | under construction |  | | enumeration | ruined |  | | enumeration | under reclamation |  | | enumeration | wingless |  | | enumeration | planned construction |  | |

element **Landmark/radarConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**radarConspicuous**](#Link78) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | radar conspicuous |  | | enumeration | not radar conspicuous |  | | enumeration | radar conspicuous (has radar reflector) |  | |

element **Landmark/visuallyConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**visuallyConspicuous**](#Link8C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | visually conspicuous |  | | enumeration | not visually conspicuous |  | |

element **Landmark/elevation**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:decimal** |
| annotation | |  | | --- | | documentation | | The altitude of the ground level of an object, measured from a specified vertical datum. | |

element **Landmark/function**

|  |  |
| --- | --- |
| diagram |  |
| type | [**function**](#Link45) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | harbour-master's office |  | | enumeration | custom office |  | | enumeration | health office |  | | enumeration | hospital |  | | enumeration | post office |  | | enumeration | hotel |  | | enumeration | railway station |  | | enumeration | police station |  | | enumeration | water-police station |  | | enumeration | pilot office |  | | enumeration | pilot lookout |  | | enumeration | bank office |  | | enumeration | headquarters for district control |  | | enumeration | transit shed/warehouse |  | | enumeration | factory |  | | enumeration | power station |  | | enumeration | administrative |  | | enumeration | educational facility |  | | enumeration | church |  | | enumeration | chapel |  | | enumeration | temple |  | | enumeration | pagoda |  | | enumeration | shinto shrine |  | | enumeration | buddhist temple |  | | enumeration | mosque |  | | enumeration | marabout |  | | enumeration | lookout |  | | enumeration | communication |  | | enumeration | television |  | | enumeration | radio |  | | enumeration | radar |  | | enumeration | light support |  | | enumeration | microwave |  | | enumeration | cooling |  | | enumeration | observation |  | | enumeration | timeball |  | | enumeration | clock |  | | enumeration | control |  | | enumeration | airship mooring |  | | enumeration | stadium |  | | enumeration | bus station |  | |

element **Landmark/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **Landmark/natureOfConstruction**

|  |  |
| --- | --- |
| diagram |  |
| type | [**natureOfConstruction**](#Link66) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | masonry |  | | enumeration | concreted |  | | enumeration | loose boulders |  | | enumeration | hard surfaced |  | | enumeration | unsurfaced |  | | enumeration | wooden |  | | enumeration | metal |  | | enumeration | glass reinforced plastic (GRP) |  | | enumeration | painted |  | | enumeration | IALA\_fiberglass | |  | | --- | | documentation | | Constructed from fiberglass | | | enumeration | IALA\_plastic | |  | | --- | | documentation | | Constructed from plastic | | |

element **Landmark/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **Landmark/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **Landmark/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **Landmark/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **Landmark/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **Landmark/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The total vertical length of an object. | |

element **Landmark/IALA\_mannedStructure**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:boolean** |
| annotation | |  | | --- | | documentation | | An expression of the feature being permanently manned or not | |

element **Landmark/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **PointCurveSurfacePropertyType** |
| children | **pointProperty curveProperty surfaceProperty** |

complexType **Light**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**Equipment**](#Link38) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**categoryOfLight**](#Link106)[**colour**](#Link107)[**exhibitionConditionOfLight**](#Link108)[**height**](#Link109)[**lightCharacteristic**](#Link10A)[**lightVisibility**](#Link10B)[**marksNavigationalSystemOf**](#Link10C)[**multiplicityOfLights**](#Link10D)[**objectNameInNationalLanguage**](#Link10E)[**objectName**](#Link10F)[**orientation**](#Link110)[**sectorLimitOne**](#Link111)[**sectorLimitTwo**](#Link112)[**signalGroup**](#Link113)[**signalPeriod**](#Link114)[**signalSequence**](#Link115)[**status**](#Link116)[**verticalAccuracy**](#Link117)[**valueOfNominalRange**](#Link118)[**verticalDatum**](#Link119)[**IALA\_typeOfLight**](#Link11A)[**IALA\_typeOfBattery**](#Link11B)[**IALA\_valueOfGeographicalRange**](#Link11C)[**IALA\_valueOfLuminousRange**](#Link11D) |
| used by | |  |  | | --- | --- | | element | [**Light**](#Link4F) | |
| annotation | |  | | --- | | documentation | | A luminous or lighted aid to navigation. (adapted from IHO Dictionary, S-32, 5th Edition, 2766) | |

element **Light/categoryOfLight**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfLight**](#Link1B) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | directional function | |  | | --- | | documentation | | a light illuminating a sector of very narrow angle and intended to mark a direction to follow. | | | enumeration | leading light | |  | | --- | | documentation | | a light associated with other lights so as to form a leading line to be followed. | | | enumeration | aero light | |  | | --- | | documentation | | an aero light is established for aeronautical navigation and may be of higher power than marine lights and visible from well offshore. | | | enumeration | air obstruction light | |  | | --- | | documentation | | a light marking an obstacle which constitutes a danger to air navigation. | | | enumeration | fog detector light | |  | | --- | | documentation | | a light used to automatically determine conditions of visibility which warrant the turning on or off of a sound signal. | | | enumeration | flood light | |  | | --- | | documentation | | a broad beam light used to illuminate a structure or area. | | | enumeration | strip light | |  | | --- | | documentation | | a light whose source has a linear form generally horizontal, which can reach a length of several metres. | | | enumeration | subsidiary light | |  | | --- | | documentation | | a light placed on or near the support of a main light and having a special use in navigation. | | | enumeration | spotlight | |  | | --- | | documentation | | a powerful light focused so as to illuminate a small area. | | | enumeration | front | |  | | --- | | documentation | | term used with leading lights to describe the position of the light on the lead as viewed from seaward. | | | enumeration | rear | |  | | --- | | documentation | | term used with leading lights to describe the position of the light on the lead as viewed from seaward. | | | enumeration | lower | |  | | --- | | documentation | | term used with leading lights to describe the position of the light on the lead as viewed from seaward. | | | enumeration | upper | |  | | --- | | documentation | | term used with leading lights to describe the position of the light on the lead as viewed from seaward. | | | enumeration | moiré effect | |  | | --- | | documentation | | a short range (up to 2km) type of directional light. Sodium lighting gives a yellow background to a screen on which a vertical black line will be seen by an observer on the centre line. | | | enumeration | emergency | |  | | --- | | documentation | | a light available as a backup to a main light which will be illuminated should the main light fail. | | | enumeration | bearing light | |  | | --- | | documentation | | a light which enables its approximate bearing to be obtained without the use of a compass. | | | enumeration | horizontally disposed | |  | | --- | | documentation | | a group of lights of identical character and almost identical position, that are disposed horizontally. | | | enumeration | vertically disposed | |  | | --- | | documentation | | a group of lights of identical character and almost identical position, that are disposed vertically. | | |

element **Light/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **Light/exhibitionConditionOfLight**

|  |  |
| --- | --- |
| diagram |  |
| type | [**exhibitionConditionOfLight**](#Link42) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | light shown without change of character | |  | | --- | | documentation | | a light shown throughout the 24 hours without change of character. | | | enumeration | daytime light | |  | | --- | | documentation | | a light which is only exhibited by day. | | | enumeration | fog light | |  | | --- | | documentation | | a light which is exhibited in fog or conditions of reduced visibility. | | | enumeration | night light | |  | | --- | | documentation | | a light which is only exhibited at night. | | |

element **Light/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **Light/lightCharacteristic**

|  |  |
| --- | --- |
| diagram |  |
| type | [**lightCharacteristic**](#Link5A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | fixed |  | | enumeration | flashing |  | | enumeration | long-flashing |  | | enumeration | quick-flashing |  | | enumeration | very quick-flashing |  | | enumeration | ultra quick-flashing |  | | enumeration | isophased |  | | enumeration | occulting |  | | enumeration | interrupted quick-flashing |  | | enumeration | interrupted very quick-flashing |  | | enumeration | interrupted ultra quick-flashing |  | | enumeration | morse |  | | enumeration | fixed/flash |  | | enumeration | flash/long-flash |  | | enumeration | occulting/flash |  | | enumeration | fixed/long-flash |  | | enumeration | occulting alternating |  | | enumeration | long-flash alternating |  | | enumeration | flash alternating |  | | enumeration | group alternating |  | | enumeration | quick-flash plus long-flash |  | | enumeration | very quick-flash plus long-flash |  | | enumeration | ultra quick-flash plus long-flash |  | | enumeration | alternating |  | | enumeration | fixed and alternating flashing |  | |

element **Light/lightVisibility**

|  |  |
| --- | --- |
| diagram |  |
| type | [**lightVisibility**](#Link5D) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | high intensity |  | | enumeration | low intensity |  | | enumeration | faint |  | | enumeration | intensified |  | | enumeration | unintensified |  | | enumeration | visibility deliberately restricted |  | | enumeration | obscured |  | | enumeration | partially obscured |  | |

element **Light/marksNavigationalSystemOf**

|  |  |
| --- | --- |
| diagram |  |
| type | [**marksNavigationalSystemOf**](#Link60) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | IALA A |  | | enumeration | IALA B |  | | enumeration | no system |  | | enumeration | other system |  | |

element **Light/multiplicityOfLights**

|  |  |
| --- | --- |
| diagram |  |
| type | [**multiplicityOfLightsType**](#Link63) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 2 |  | |
| annotation | |  | | --- | | documentation | | The number of lights of identical character that exist as a co-located group. | | documentation | | Minimum Value: 2; Indication: Unit: none; Resolution: 1; Format: xx; Example: 5 | |

element **Light/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **Light/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **Light/orientation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Decimal0.0To360.0**](#Link3F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The angular distance measured from true north to the major axis of the object. | |

element **Light/sectorLimitOne**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Decimal0.0To360.0**](#Link3F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The sector limit 1 specifies the first limit of the sector. The order of sector limit 1 and sector limit 2 is clockwise around the central object (e.g., a light). | |

element **Light/sectorLimitTwo**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Decimal0.0To360.0**](#Link3F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The sector limit 2 specifies the second limit of the sector. The order of sector limit 1 and sector limit 2 is clockwise around the central object (e.g., a light). | |

element **Light/signalGroup**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The number of signals, the combination of signals or the morse character(s) within one period of full sequence. | |

element **Light/signalPeriod**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The time occupied by an entire cycle of intervals of light and eclipse. | |

element **Light/signalSequence**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The sequence of times occupied by intervals of light and eclipse for all 'light characteristics' except for occulting where the sequence of times is occupied by intervals of eclipse and light. | |

element **Light/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **Light/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **Light/valueOfNominalRange**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The nominal range at which an object can be seen or a signal detected. | |

element **Light/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **Light/IALA\_typeOfLight**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Types of Light : e.g. Bulb type(250mm, 300mm, 400mm), LED type(Integral type, 200, 200HI, 250, 300, 350) | |

element **Light/IALA\_typeOfBattery**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Types of storage battery for light e.g. Hi-Ca 100, PS-250E, LDA-400, VGS-350 | |

element **Light/IALA\_valueOfGeographicalRange**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | Definition required | |

element **Light/IALA\_valueOfLuminousRange**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | Definition required | |

complexType **LightFloat**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**StructureObject**](#Link8D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**colour**](#Link11E)[**colourPattern**](#Link11F)[**radarConspicuous**](#Link120)[**visuallyConspicuous**](#Link121)[**horizontalAccuracy**](#Link122)[**horizontalLength**](#Link123)[**horizontalWidth**](#Link124)[**natureOfConstruction**](#Link125)[**objectNameInNationalLanguage**](#Link126)[**objectName**](#Link127)[**status**](#Link128)[**verticalAccuracy**](#Link129)[**verticalLength**](#Link12A)[**IALA\_mannedStructure**](#Link12B)[**geometry**](#Link12C) |
| used by | |  |  | | --- | --- | | element | [**LightFloat**](#Link52) | |
| annotation | |  | | --- | | documentation | | A boat-like structure used instead of a light buoy in waters where strong streams or currents are experienced, or when a greater elevation than that of a light buoy is necessary. | |

element **LightFloat/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **LightFloat/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **LightFloat/radarConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**radarConspicuous**](#Link78) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | radar conspicuous |  | | enumeration | not radar conspicuous |  | | enumeration | radar conspicuous (has radar reflector) |  | |

element **LightFloat/visuallyConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**visuallyConspicuous**](#Link8C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | visually conspicuous |  | | enumeration | not visually conspicuous |  | |

element **LightFloat/horizontalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the horizontal accuracy of horizontal clearance and distances. | |

element **LightFloat/horizontalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | A measurement of the longer of two linear axis. | |

element **LightFloat/horizontalWidth**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | A measurement of the shorter of two linear axis. | |

element **LightFloat/natureOfConstruction**

|  |  |
| --- | --- |
| diagram |  |
| type | [**natureOfConstruction**](#Link66) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | masonry |  | | enumeration | concreted |  | | enumeration | loose boulders |  | | enumeration | hard surfaced |  | | enumeration | unsurfaced |  | | enumeration | wooden |  | | enumeration | metal |  | | enumeration | glass reinforced plastic (GRP) |  | | enumeration | painted |  | | enumeration | IALA\_fiberglass | |  | | --- | | documentation | | Constructed from fiberglass | | | enumeration | IALA\_plastic | |  | | --- | | documentation | | Constructed from plastic | | |

element **LightFloat/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **LightFloat/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **LightFloat/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **LightFloat/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **LightFloat/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The total vertical length of an object. | |

element **LightFloat/IALA\_mannedStructure**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:boolean** |

element **LightFloat/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **PointPropertyType** |
| children | **pointProperty** |

complexType **LightVessel**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**StructureObject**](#Link8D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**colour**](#Link12D)[**colourPattern**](#Link12E)[**radarConspicuous**](#Link12F)[**visuallyConspicuous**](#Link130)[**horizontalAccuracy**](#Link131)[**horizontalLength**](#Link132)[**horizontalWidth**](#Link133)[**natureOfConstruction**](#Link134)[**objectNameInNationalLanguage**](#Link135)[**objectName**](#Link136)[**status**](#Link137)[**verticalAccuracy**](#Link138)[**verticalLength**](#Link139)[**IALA\_mannedStructure**](#Link13A)[**geometry**](#Link13B) |
| used by | |  |  | | --- | --- | | element | [**LightVessel**](#Link55) | |
| annotation | |  | | --- | | documentation | | A distinctively marked vessel anchored or moored at a charted point, to serve as an aid to navigation. By night, it displays a characteristic light(s) and is usually equipped with other devices, such as fog signal, submarine sound signal, and radio-beacon, to assist navigation. Also called light ship. (IHO Dictionary, S-32, 5th Edition, 2828,2829) | |

element **LightVessel/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **LightVessel/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **LightVessel/radarConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**radarConspicuous**](#Link78) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | radar conspicuous |  | | enumeration | not radar conspicuous |  | | enumeration | radar conspicuous (has radar reflector) |  | |

element **LightVessel/visuallyConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**visuallyConspicuous**](#Link8C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | visually conspicuous |  | | enumeration | not visually conspicuous |  | |

element **LightVessel/horizontalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the horizontal accuracy of horizontal clearance and distances. | |

element **LightVessel/horizontalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | A measurement of the longer of two linear axis. | |

element **LightVessel/horizontalWidth**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | A measurement of the shorter of two linear axis. | |

element **LightVessel/natureOfConstruction**

|  |  |
| --- | --- |
| diagram |  |
| type | [**natureOfConstruction**](#Link66) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | masonry |  | | enumeration | concreted |  | | enumeration | loose boulders |  | | enumeration | hard surfaced |  | | enumeration | unsurfaced |  | | enumeration | wooden |  | | enumeration | metal |  | | enumeration | glass reinforced plastic (GRP) |  | | enumeration | painted |  | | enumeration | IALA\_fiberglass | |  | | --- | | documentation | | Constructed from fiberglass | | | enumeration | IALA\_plastic | |  | | --- | | documentation | | Constructed from plastic | | |

element **LightVessel/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **LightVessel/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **LightVessel/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **LightVessel/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **LightVessel/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The total vertical length of an object. | |

element **LightVessel/IALA\_mannedStructure**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:boolean** |

element **LightVessel/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **PointPropertyType** |
| children | **pointProperty** |

complexType **LocalDirectionOfBuoyage**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**MetaFeatureType**](#Link65) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**orientation**](#Link13C)[**geometry**](#Link13D) |
| used by | |  |  | | --- | --- | | element | [**LocalDirectionOfBuoyage**](#Link58) | |
| annotation | |  | | --- | | documentation | | An area within which the navigational system of marks has been established in relation to a specific direction. | |

element **LocalDirectionOfBuoyage/orientation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Decimal0.0To360.0**](#Link3F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The angular distance measured from true north to the major axis of the object. | |

element **LocalDirectionOfBuoyage/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **SurfacePropertyType** |
| children | **surfaceProperty** |
| annotation | |  | | --- | | documentation | | Permitted spatial primitives | |

complexType **MemberType**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of **gml:AbstractFeatureMemberType** |
| children | **gml:AbstractFeature** |
| used by | |  |  | | --- | --- | | element | [**DatasetType/member**](#LinkD4) | |
| annotation | |  | | --- | | documentation | | data format construct for dataset members | |

complexType **MetaFeatureType**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**FeatureType**](#Link3B) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** |
| used by | |  |  | | --- | --- | | element | [**MetaFeatureType**](#Link5B) | | complexTypes | [**DataCoverage**](#Link2F)[**LocalDirectionOfBuoyage**](#Link5F)[**NavigationalSystemOfMarks**](#Link68)[**QualityOfNonBathymetricData**](#Link74)[**SoundingDatum**](#Link89)[**VerticalDatum**](#Link90) | |
| annotation | |  | | --- | | documentation | | Generalized feature type which carry all the common attributes | |

complexType **NavigationalSystemOfMarks**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**MetaFeatureType**](#Link65) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**marksNavigationalSystemOf**](#Link13E)[**geometry**](#Link13F) |
| used by | |  |  | | --- | --- | | element | [**NavigationalSystemOfMarks**](#Link5E) | |
| annotation | |  | | --- | | documentation | | An area within which a specific system of navigational marks applies and/or a common direction of buoyage | |

element **NavigationalSystemOfMarks/marksNavigationalSystemOf**

|  |  |
| --- | --- |
| diagram |  |
| type | [**marksNavigationalSystemOf**](#Link60) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | IALA A |  | | enumeration | IALA B |  | | enumeration | no system |  | | enumeration | other system |  | |

element **NavigationalSystemOfMarks/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **SurfacePropertyType** |
| children | **surfaceProperty** |
| annotation | |  | | --- | | documentation | | Permitted spatial primitives | |

complexType **NavigationLine**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**AidsToNavigation**](#Link5) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**categoryOfNavigationLine**](#Link140)[**orientation**](#Link141)[**status**](#Link142)[**navigableTrack**](#Link143)[**geometry**](#Link144) |
| used by | |  |  | | --- | --- | | element | [**NavigationLine**](#Link61) | |
| annotation | |  | | --- | | documentation | | A navigation line is a straight line extending towards an area of navigational interest and generally generated by two navigational aids or one navigational aid and a bearing. (Service Hydrographique et Océanographique de la Marine, France) | |

element **NavigationLine/categoryOfNavigationLine**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfNavigationLine**](#Link1E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | clearing line | |  | | --- | | documentation | | a straight line that marks the boundary between a safe and a dangerous area or that passes clear of a navigational danger. | | | enumeration | transit line | |  | | --- | | documentation | | a line passing through one or more fixed marks. | | | enumeration | leading line bearing a recommended track | |  | | --- | | documentation | | a line passing through one or more clearly defined objects, along the path of which a vessel can approach safely up to a certain distance off. | | |

element **NavigationLine/orientation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Decimal0.0To360.0**](#Link3F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The angular distance measured from true north to the major axis of the object. | |

element **NavigationLine/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **NavigationLine/navigableTrack**

|  |  |
| --- | --- |
| diagram |  |
| type | **gml:ReferenceType** |
| annotation | |  | | --- | | documentation | | Encodes the RecommendedTrack/NavigationLine association | |

element **NavigationLine/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **CurvePropertyType** |
| children | **curveProperty** |

complexType **OffshorePlatform**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**StructureObject**](#Link8D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**categoryOfOffshorePlatform**](#Link145)[**colour**](#Link146)[**colourPattern**](#Link147)[**condition**](#Link148)[**radarConspicuous**](#Link149)[**visuallyConspicuous**](#Link14A)[**height**](#Link14B)[**natureOfConstruction**](#Link14C)[**objectNameInNationalLanguage**](#Link14D)[**product**](#Link14E)[**objectName**](#Link14F)[**status**](#Link150)[**verticalAccuracy**](#Link151)[**verticalDatum**](#Link152)[**verticalLength**](#Link153)[**IALA\_mannedStructure**](#Link154)[**geometry**](#Link155) |
| used by | |  |  | | --- | --- | | element | [**OffshorePlatform**](#Link64) | |
| annotation | |  | | --- | | documentation | | A permanent offshore structure, either fixed or floating, used in the production of oil or natural gas. (IHO Dictionary, S-32, 5th Edition, 3895) | |

element **OffshorePlatform/categoryOfOffshorePlatform**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfOffshorePlatform**](#Link21) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | oil derrick/rig | |  | | --- | | documentation | | a temporary mobile structure, either fixed or floating, used in the exploration stages of oil and gas fields. | | | enumeration | production platform | |  | | --- | | documentation | | a term used to indicate a permanent offshore structure equipped to control the flow of oil or gas. It does not include entirely submarine structures. | | | enumeration | observation/research platform | |  | | --- | | documentation | | a platform from which one's surroundings or events can be observed, noted or recorded such as for scientific study. | | | enumeration | articulated loading platform (ALP) | |  | | --- | | documentation | | a metal lattice tower, buoyant at one end and attached at the other by a universal joint to a concrete filled base on the sea bed. The platform may be fitted with a helicopter platform, emergency accommodation and hawser/hose retrieval. | | | enumeration | single anchor leg mooring (SALM) | |  | | --- | | documentation | | a rigid frame or tube with a buoyancy device at its upper end , secured at its lower end to a universal joint on a large steel or concrete base resting on the sea bed, and at its upper end to a mooring buoy by a chain or wire. | | | enumeration | mooring tower | |  | | --- | | documentation | | a platform secured to the sea bed and surmounted by a turntable to which ships moor. | | | enumeration | artificial island | |  | | --- | | documentation | | a man-made structure usually built for the exploration or exploitation of marine resources, marine scientific research, tidal observations, etc. | | | enumeration | floating production, storage and off-loading vessel (FPSO) | |  | | --- | | documentation | | an offshore oil/gas facility consisting of a moored tanker/barge by which the product is extracted, stored and exported. | | | enumeration | accommodation platform | |  | | --- | | documentation | | a platform used primarily for eating, sleeping and recreation purposes. | | | enumeration | navigation, communication and control buoy (NCCB) | |  | | --- | | documentation | | a floating structure with control room, power and storage facilities, attached to the sea bed by a flexible pipeline and cables. | | |

element **OffshorePlatform/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **OffshorePlatform/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **OffshorePlatform/condition**

|  |  |
| --- | --- |
| diagram |  |
| type | [**condition**](#Link3C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | under construction |  | | enumeration | ruined |  | | enumeration | under reclamation |  | | enumeration | wingless |  | | enumeration | planned construction |  | |

element **OffshorePlatform/radarConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**radarConspicuous**](#Link78) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | radar conspicuous |  | | enumeration | not radar conspicuous |  | | enumeration | radar conspicuous (has radar reflector) |  | |

element **OffshorePlatform/visuallyConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**visuallyConspicuous**](#Link8C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | visually conspicuous |  | | enumeration | not visually conspicuous |  | |

element **OffshorePlatform/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **OffshorePlatform/natureOfConstruction**

|  |  |
| --- | --- |
| diagram |  |
| type | [**natureOfConstruction**](#Link66) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | masonry |  | | enumeration | concreted |  | | enumeration | loose boulders |  | | enumeration | hard surfaced |  | | enumeration | unsurfaced |  | | enumeration | wooden |  | | enumeration | metal |  | | enumeration | glass reinforced plastic (GRP) |  | | enumeration | painted |  | | enumeration | IALA\_fiberglass | |  | | --- | | documentation | | Constructed from fiberglass | | | enumeration | IALA\_plastic | |  | | --- | | documentation | | Constructed from plastic | | |

element **OffshorePlatform/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **OffshorePlatform/product**

|  |  |
| --- | --- |
| diagram |  |
| type | [**product**](#Link6F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | oil |  | | enumeration | gas |  | | enumeration | water |  | | enumeration | stone |  | | enumeration | coal |  | | enumeration | ore |  | | enumeration | chemicals |  | | enumeration | drinking water |  | | enumeration | milk |  | | enumeration | bauxite |  | | enumeration | coke |  | | enumeration | iron ingots |  | | enumeration | salt |  | | enumeration | sand |  | | enumeration | timber |  | | enumeration | sawdust/wood chips |  | | enumeration | scrap metal |  | | enumeration | liquified natural gas (LNG) |  | | enumeration | liquified petroleum gas (LPG) |  | | enumeration | wine |  | | enumeration | cement |  | | enumeration | grain |  | |

element **OffshorePlatform/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **OffshorePlatform/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **OffshorePlatform/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **OffshorePlatform/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **OffshorePlatform/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The total vertical length of an object. | |

element **OffshorePlatform/IALA\_mannedStructure**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:boolean** |
| annotation | |  | | --- | | documentation | | Definition required | |

element **OffshorePlatform/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **PointOrSurfacePropertyType** |
| children | **pointProperty surfaceProperty** |

complexType **Pile**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**StructureObject**](#Link8D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**categoryOfPile**](#Link156)[**colour**](#Link157)[**colourPattern**](#Link158)[**condition**](#Link159)[**visuallyConspicuous**](#Link15A)[**height**](#Link15B)[**verticalAccuracy**](#Link15C)[**verticalDatum**](#Link15D)[**verticalLength**](#Link15E)[**geometry**](#Link15F) |
| used by | |  |  | | --- | --- | | element | [**Pile**](#Link67) | |
| annotation | |  | | --- | | documentation | | A long heavy timber or section of steel, wood, concrete, etc.. forced into the earth which may serve as a support, as for a pier, or a free standing pole within a marine environment. (Adapted from IHO Dictionary, S-32, 5th Edition, 3840) | |

element **Pile/categoryOfPile**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfPile**](#Link24) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | stake | |  | | --- | | documentation | | an elongated wood or metal pole embedded in the bottom to serve as a marker or support. | | | enumeration | post | |  | | --- | | documentation | | a vertical piece of timber, metal or concrete forced into the earth or sea bed. | | | enumeration | tripodal | |  | | --- | | documentation | | a single structure comprising 3 or more piles held together (sections of heavy timber, steel or concrete), and forced into the earth or sea bed. | | |

element **Pile/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **Pile/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **Pile/condition**

|  |  |
| --- | --- |
| diagram |  |
| type | [**condition**](#Link3C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | under construction |  | | enumeration | ruined |  | | enumeration | under reclamation |  | | enumeration | wingless |  | | enumeration | planned construction |  | |

element **Pile/visuallyConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**visuallyConspicuous**](#Link8C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | visually conspicuous |  | | enumeration | not visually conspicuous |  | |

element **Pile/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **Pile/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **Pile/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **Pile/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The total vertical length of an object. | |

element **Pile/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **PointPropertyType** |
| children | **pointProperty** |

complexType **QualityOfNonBathymetricData**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**MetaFeatureType**](#Link65) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**categoryOfTemporalVariation**](#Link160)[**directionUncertainty**](#Link161)[**horizontalDistanceUncertainty**](#Link162)[**horizontalPositionUncertainty**](#Link163)[**information**](#Link164)[**informationInNationalLanguage**](#Link165)[**textualDescription**](#Link166)[**textualDescriptionInNationalLanguage**](#Link167)[**verticalUncertainty**](#Link168)[**surveyDateRange**](#Link169)[**geometry**](#Link16A) |
| used by | |  |  | | --- | --- | | element | [**QualityOfNonBathymetricData**](#Link6A) | |
| annotation | |  | | --- | | documentation | | An area within which a uniform assessment of the quality of the non-bathymetric data exists. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.208, November 2000). | |

element **QualityOfNonBathymetricData/categoryOfTemporalVariation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfTemporalVariation**](#Link33) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | unassessed | |  | | --- | | documentation | | Temporal variation not assessed or cannot be determined | | | enumeration | event | |  | | --- | | documentation | | No new hydrographic survey conducted after an event (e.g. hurricane, earthquake, volcanic eruption, landslide, etc), which is considered likely to have changed the seafloor significantly. | | | enumeration | likely to change | |  | | --- | | documentation | | Continuous or frequent change (e.g. river siltation, sand waves, seasonal storms, ice bergs, etc). | | | enumeration | likely to change, but significant shoaling unlikely | |  | | --- | | documentation | | Likely to change but significant shoaling unlikely | | | enumeration | unlikely to change | |  | | --- | | documentation | | Significant change to the seafloor is not expected. | | |

element **QualityOfNonBathymetricData/directionUncertainty**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Decimal0.0To360.0**](#Link3F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the accuracy of a bearing. | |

element **QualityOfNonBathymetricData/horizontalDistanceUncertainty**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the horizontal accuracy of horizontal clearance and distances. The expected input is the radius of the two-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **QualityOfNonBathymetricData/horizontalPositionUncertainty**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the accuracy of a position. The expected input is the maximum of the two-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **QualityOfNonBathymetricData/information**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Textual information about the object. | | documentation | | (max 300 characters) | |

element **QualityOfNonBathymetricData/informationInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Textual information in national language characters. | | documentation | | (max 300 characters) | |

element **QualityOfNonBathymetricData/textualDescription**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | file reference to text file | |

element **QualityOfNonBathymetricData/textualDescriptionInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The file name of an external text file that contains the text in a national language. | |

element **QualityOfNonBathymetricData/verticalUncertainty**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical uncertainty of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **QualityOfNonBathymetricData/surveyDateRange**

|  |  |
| --- | --- |
| diagram |  |
| type | [**surveyDateRange**](#Link8E) |
| children | [**dateEnd**](#Link1BB)[**dateStart**](#Link1BC) |

element **QualityOfNonBathymetricData/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **SurfacePropertyType** |
| children | **surfaceProperty** |

complexType **RadarReflector**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**Equipment**](#Link38) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**height**](#Link16B)[**status**](#Link16C)[**verticalAccuracy**](#Link16D)[**verticalDatum**](#Link16E) |
| used by | |  |  | | --- | --- | | element | [**RadarReflector**](#Link6D) | |
| annotation | |  | | --- | | documentation | | A device capable of, or intended for, reflecting radar signals. (IHO Dictionary, S-32, 5th Edition, 4147) A radar reflector is usually a >tetrahedron or pentagonal corner reflector (...) to facilitate reflection towards the sender. (International Maritime Dictionary, 2nd Ed.) | |

element **RadarReflector/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **RadarReflector/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **RadarReflector/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **RadarReflector/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

complexType **RadarTransponderBeacon**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**Equipment**](#Link38) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**categoryOfRadarTransponderBeacon**](#Link16F)[**objectNameInNationalLanguage**](#Link170)[**objectName**](#Link171)[**radarWaveLength**](#Link172)[**sectorLimitOne**](#Link173)[**sectorLimitTwo**](#Link174)[**signalGroup**](#Link175)[**signalSequence**](#Link176)[**status**](#Link177)[**valueOfNominalRange**](#Link178)[**IALA\_typeOfBattery**](#Link179) |
| used by | |  |  | | --- | --- | | element | [**RadarTransponderBeacon**](#Link70) | |
| annotation | |  | | --- | | documentation | | A transponder beacon transmitting a coded signal on radar frequency, permitting an interrogating craft to determine the bearing and range of the transponder. Also called racon. (IHO Dictionary, S-32, 5th Edition, 4137) | |

element **RadarTransponderBeacon/categoryOfRadarTransponderBeacon**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfRadarTransponderBeacon**](#Link27) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | ramark, radar beacon transmitting continuously | |  | | --- | | documentation | | a radar marker beacon which continuously transmits a signal appearing as a radial line on a radar screen, the line indicating the direction of the beacon. Ramarks are intended primarily for marine use. The name 'ramark' is derived from the words radar marker. | | | enumeration | racon, radar transponder beacon | |  | | --- | | documentation | | a radar beacon which returns a coded signal which provides identification of the beacon, as well as range and bearing. The range and bearing are indicated by the location of the first character received on the radar screen. The name 'racon' is derived from the words radar beacon. | | | enumeration | leading racon/radar transponder beacon | |  | | --- | | documentation | | a radar beacon that may be used (in conjunction with at least one other radar beacon) to indicate a leading line. | | |

element **RadarTransponderBeacon/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **RadarTransponderBeacon/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **RadarTransponderBeacon/radarWaveLength**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The distance between two successive peaks (or other points of identical phase) on an electromagnetic wave in the radar band of the electromagnetic spectrum. | |

element **RadarTransponderBeacon/sectorLimitOne**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Decimal0.0To360.0**](#Link3F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The sector limit 1 specifies the first limit of the sector. The order of sector limit 1 and sector limit 2 is clockwise around the central object (e.g., a light). | |

element **RadarTransponderBeacon/sectorLimitTwo**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Decimal0.0To360.0**](#Link3F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The sector limit 2 specifies the second limit of the sector. The order of sector limit 1 and sector limit 2 is clockwise around the central object (e.g., a light). | |

element **RadarTransponderBeacon/signalGroup**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The number of signals, the combination of signals or the morse character(s) within one period of full sequence. | |

element **RadarTransponderBeacon/signalSequence**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The sequence of times occupied by intervals of light and eclipse for all 'light characteristics' except for occulting where the sequence of times is occupied by intervals of eclipse and light. | |

element **RadarTransponderBeacon/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **RadarTransponderBeacon/valueOfNominalRange**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The nominal range at which an object can be seen or a signal detected. | |

element **RadarTransponderBeacon/IALA\_typeOfBattery**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Definition required | |

complexType **RecommendedTrack**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**AidsToNavigation**](#Link5) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**categoryOfRecommendedTrack**](#Link17A)[**depthRangeMinimumValue**](#Link17B)[**depthRangeMaximumValue**](#Link17C)[**objectNameInNationalLanguage**](#Link17D)[**objectName**](#Link17E)[**orientation**](#Link17F)[**qualityOfSoundingMeasurement**](#Link180)[**soundingAccuracy**](#Link181)[**status**](#Link182)[**techniqueOfSoundingMeasurement**](#Link183)[**trafficFlow**](#Link184)[**verticalDatum**](#Link185)[**navigationLine**](#Link186)[**geometry**](#Link187) |
| used by | |  |  | | --- | --- | | element | [**RecommendedTrack**](#Link73) | |
| annotation | |  | | --- | | documentation | | A track recommended to all or only certain vessels. (IHO Dictionary, S-32, 5th Edition, 5576) | |

element **RecommendedTrack/categoryOfRecommendedTrack**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfRecommendedTrack**](#Link2A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | based on a system of fixed marks | |  | | --- | | documentation | | a straight route (known as a recommended track, range or leading line), which comprises at least two structures (usually beacons or daymarks) and/or natural features, which may carry lights and/or top-marks. The structures/features are positioned so that when observed to be in line, a vessel can follow a known bearing with safety. | | | enumeration | not based on a system of fixed marks | |  | | --- | | documentation | | a route (known as a recommended track or preferred route) which is not based on a series of structures or features in line. | | |

element **RecommendedTrack/depthRangeMinimumValue**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:decimal** |
| annotation | |  | | --- | | documentation | | The minimum (shoalest) value of a depth range. Where the area dries, the value is negative. | |

element **RecommendedTrack/depthRangeMaximumValue**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:decimal** |
| annotation | |  | | --- | | documentation | | The maximum (deepest) value of a depth range. Where the area dries, the value is negative. | |

element **RecommendedTrack/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **RecommendedTrack/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **RecommendedTrack/orientation**

|  |  |
| --- | --- |
| diagram |  |
| type | [**Decimal0.0To360.0**](#Link3F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The angular distance measured from true north to the major axis of the object. | |

element **RecommendedTrack/qualityOfSoundingMeasurement**

|  |  |
| --- | --- |
| diagram |  |
| type | [**qualityOfSoundingMeasurement**](#Link75) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | depth known |  | | enumeration | depth unknown |  | | enumeration | doubtful sounding |  | | enumeration | unreliable sounding |  | | enumeration | no bottom found at value shown |  | | enumeration | least depth known |  | | enumeration | least depth unknown, safe clearance at value shown |  | | enumeration | value reported (not surveyed) |  | | enumeration | value reported (not confirmed) |  | | enumeration | maintained depth |  | | enumeration | not regularly maintained |  | |

element **RecommendedTrack/soundingAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the accuracy of the sounding data. The maximum of the one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **RecommendedTrack/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **RecommendedTrack/techniqueOfSoundingMeasurement**

|  |  |
| --- | --- |
| diagram |  |
| type | [**techniqueOfSoundingMeasurement**](#Link81) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | found by echo-sounder |  | | enumeration | found by side scan sonar |  | | enumeration | found by multi-beam |  | | enumeration | found by diver |  | | enumeration | found by lead-line |  | | enumeration | swept by wire-drag |  | | enumeration | found by laser |  | | enumeration | swept by vertical acoustic system |  | | enumeration | found by electromagnetic sensor |  | | enumeration | photogrammetry |  | | enumeration | satellite imagery |  | | enumeration | found by levelling |  | | enumeration | swept by side-scan sonar |  | | enumeration | computer generated |  | |

element **RecommendedTrack/trafficFlow**

|  |  |
| --- | --- |
| diagram |  |
| type | [**trafficFlow**](#Link87) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | inbound |  | | enumeration | outbound |  | | enumeration | one-way |  | | enumeration | two-way |  | |

element **RecommendedTrack/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **RecommendedTrack/navigationLine**

|  |  |
| --- | --- |
| diagram |  |
| type | **gml:ReferenceType** |
| annotation | |  | | --- | | documentation | | The role given to the navigation line(s) that is generally formed between two or more objects, or by one object and a bearing. | |

element **RecommendedTrack/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **CurvePropertyType** |
| children | **curveProperty** |

complexType **RetroReflector**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**Equipment**](#Link38) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**colour**](#Link188)[**colourPattern**](#Link189)[**height**](#Link18A)[**marksNavigationalSystemOf**](#Link18B)[**status**](#Link18C)[**verticalAccuracy**](#Link18D)[**verticalDatum**](#Link18E) |
| used by | |  |  | | --- | --- | | element | [**RetroReflector**](#Link76) | |
| annotation | |  | | --- | | documentation | | A means of distinguishing unlighted marks at night. Retro-reflective material is secured to the mark in a particular pattern to reflect back light. (Adapted from the UKHO NP735, 5th Edition). | |

element **RetroReflector/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **RetroReflector/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **RetroReflector/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **RetroReflector/marksNavigationalSystemOf**

|  |  |
| --- | --- |
| diagram |  |
| type | [**marksNavigationalSystemOf**](#Link60) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | IALA A |  | | enumeration | IALA B |  | | enumeration | no system |  | | enumeration | other system |  | |

element **RetroReflector/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **RetroReflector/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **RetroReflector/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

complexType **S100\_TruncatedDate**

|  |  |
| --- | --- |
| diagram |  |
| children | [**gDay**](#Link1B0)[**gMonth**](#Link1B1)[**gYear**](#Link1B2)[**gMonthDay**](#Link1B3)[**gYearMonth**](#Link1B4)[**date**](#Link1B5) |
| used by | |  |  | | --- | --- | | elements | [**surveyDateRange/dateEnd**](#Link1BB)[**AidsToNavigation/dateEnd**](#Link94)[**surveyDateRange/dateStart**](#Link1BC)[**AidsToNavigation/dateStart**](#Link95)[**AidsToNavigation/IALA\_installationDate**](#LinkA3)[**AidsToNavigation/periodEnd**](#Link96)[**AidsToNavigation/periodStart**](#Link97) | |
| annotation | |  | | --- | | documentation | | built in date types from W3C XML schema, implementing S-100 truncated date | |

element **S100\_TruncatedDate/gDay**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:gDay** |

element **S100\_TruncatedDate/gMonth**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:gMonth** |

element **S100\_TruncatedDate/gYear**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:gYear** |

element **S100\_TruncatedDate/gMonthDay**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:gMonthDay** |

element **S100\_TruncatedDate/gYearMonth**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:gYearMonth** |

element **S100\_TruncatedDate/date**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:date** |

complexType **SiloTank**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**StructureObject**](#Link8D) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9)[**buildingShape**](#Link18F)[**categoryOfSiloTank**](#Link190)[**colour**](#Link191)[**colourPattern**](#Link192)[**condition**](#Link193)[**radarConspicuous**](#Link194)[**visuallyConspicuous**](#Link195)[**elevation**](#Link196)[**height**](#Link197)[**natureOfConstruction**](#Link198)[**objectNameInNationalLanguage**](#Link199)[**objectName**](#Link19A)[**product**](#Link19B)[**status**](#Link19C)[**verticalAccuracy**](#Link19D)[**verticalDatum**](#Link19E)[**verticalLength**](#Link19F)[**geometry**](#Link1A0) |
| used by | |  |  | | --- | --- | | element | [**SiloTank**](#Link79) | |
| annotation | |  | | --- | | documentation | | An enclosed container, used for storage (Digital Geographic Information Working Group, Oct.87) | |

element **SiloTank/buildingShape**

|  |  |
| --- | --- |
| diagram |  |
| type | [**buildingShape**](#Link6) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | high-rise building | |  | | --- | | documentation | | a building having many storeys. | | | enumeration | pyramid | |  | | --- | | documentation | | a polyhedron of which one face is a polygon of any number of sides, and the other faces are triangles with a common vertex. | | | enumeration | cylindrical | |  | | --- | | documentation | | shaped like a cylinder, which is a solid geometrical figure generated by straight lines fixed in direction and describing with one of its points a closed curve, especially a circle. | | | enumeration | spherical | |  | | --- | | documentation | | shaped like a sphere, which is a body the surface of which is at all points equidistant from the centre. | | | enumeration | cubic | |  | | --- | | documentation | | a shape the sides of which are six equal squares a regular hexahedron. | | |

element **SiloTank/categoryOfSiloTank**

|  |  |
| --- | --- |
| diagram |  |
| type | [**categoryOfSiloTank**](#Link2D) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | silo in general | |  | | --- | | documentation | | a generally cylindrical tower used for storing fodder or grain. | | | enumeration | tank in general | |  | | --- | | documentation | | a fixed structure for storing liquids. | | | enumeration | grain elevator | |  | | --- | | documentation | | a storage building for grain. Usually a tall frame, metal or concrete structure with an especially compartmented interior. | | | enumeration | water tower | |  | | --- | | documentation | | a tower with an elevated container used to hold water. | | |

element **SiloTank/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **SiloTank/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **SiloTank/condition**

|  |  |
| --- | --- |
| diagram |  |
| type | [**condition**](#Link3C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | under construction |  | | enumeration | ruined |  | | enumeration | under reclamation |  | | enumeration | wingless |  | | enumeration | planned construction |  | |

element **SiloTank/radarConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**radarConspicuous**](#Link78) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | radar conspicuous |  | | enumeration | not radar conspicuous |  | | enumeration | radar conspicuous (has radar reflector) |  | |

element **SiloTank/visuallyConspicuous**

|  |  |
| --- | --- |
| diagram |  |
| type | [**visuallyConspicuous**](#Link8C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | visually conspicuous |  | | enumeration | not visually conspicuous |  | |

element **SiloTank/elevation**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:decimal** |
| annotation | |  | | --- | | documentation | | The altitude of the ground level of an object, measured from a specified vertical datum. | |

element **SiloTank/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **SiloTank/natureOfConstruction**

|  |  |
| --- | --- |
| diagram |  |
| type | [**natureOfConstruction**](#Link66) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | masonry |  | | enumeration | concreted |  | | enumeration | loose boulders |  | | enumeration | hard surfaced |  | | enumeration | unsurfaced |  | | enumeration | wooden |  | | enumeration | metal |  | | enumeration | glass reinforced plastic (GRP) |  | | enumeration | painted |  | | enumeration | IALA\_fiberglass | |  | | --- | | documentation | | Constructed from fiberglass | | | enumeration | IALA\_plastic | |  | | --- | | documentation | | Constructed from plastic | | |

element **SiloTank/objectNameInNationalLanguage**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | Name of object in national language characters. | |

element **SiloTank/objectName**

|  |  |
| --- | --- |
| diagram |  |
| type | **xs:string** |
| annotation | |  | | --- | | documentation | | The individual name of an object. | |

element **SiloTank/product**

|  |  |
| --- | --- |
| diagram |  |
| type | [**product**](#Link6F) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | oil |  | | enumeration | gas |  | | enumeration | water |  | | enumeration | stone |  | | enumeration | coal |  | | enumeration | ore |  | | enumeration | chemicals |  | | enumeration | drinking water |  | | enumeration | milk |  | | enumeration | bauxite |  | | enumeration | coke |  | | enumeration | iron ingots |  | | enumeration | salt |  | | enumeration | sand |  | | enumeration | timber |  | | enumeration | sawdust/wood chips |  | | enumeration | scrap metal |  | | enumeration | liquified natural gas (LNG) |  | | enumeration | liquified petroleum gas (LPG) |  | | enumeration | wine |  | | enumeration | cement |  | | enumeration | grain |  | |

element **SiloTank/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **SiloTank/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

element **SiloTank/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **SiloTank/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The total vertical length of an object. | |

element **SiloTank/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **PointOrSurfacePropertyType** |
| children | **pointProperty surfaceProperty** |

complexType **SoundingDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**MetaFeatureType**](#Link65) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**verticalDatum**](#Link1A1)[**geometry**](#Link1A2) |
| used by | |  |  | | --- | --- | | element | [**SoundingDatum**](#Link7C) | |
| annotation | |  | | --- | | documentation | | The horizontal plane or tidal datum to which soundings have been reduced. Also called datum for sounding reduction. | |

element **SoundingDatum/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **SoundingDatum/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **SurfacePropertyType** |
| children | **surfaceProperty** |
| annotation | |  | | --- | | documentation | | Permitted spatial primitives | |

complexType **SpatialUncertainty**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**InformationTypeType**](#Link50) |
| children | **informationAssociation invInformationAssociation** [**qualityOfPosition**](#Link1A3)[**positionalAccuracy**](#Link1A4) |
| used by | |  |  | | --- | --- | | element | [**SpatialUncertainty**](#Link7F) | |
| annotation | |  | | --- | | documentation | | Information object for uncertainty of individual features | |

element **SpatialUncertainty/qualityOfPosition**

|  |  |
| --- | --- |
| diagram |  |
| type | [**qualityOfPosition**](#Link72) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | surveyed |  | | enumeration | unsurveyed |  | | enumeration | inadequately surveyed |  | | enumeration | approximate |  | | enumeration | position doubtful |  | | enumeration | unreliable |  | | enumeration | reported (not surveyed) |  | | enumeration | reported (not confirmed) |  | | enumeration | estimated |  | | enumeration | precisely known |  | | enumeration | calculated |  | |

element **SpatialUncertainty/positionalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the accuracy of a position. The expected input is the maximum of the two-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. | |

complexType **StructureObject**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**AidsToNavigation**](#Link5) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_aidAvailabilityCategory**](#LinkA7)[**contactAddress**](#LinkA8)[**child**](#LinkA9) |
| used by | |  |  | | --- | --- | | element | [**StructureObject**](#Link82) | | complexTypes | [**GenericBeacon**](#Link41)[**GenericBuoy**](#Link44)[**Landmark**](#Link53)[**LightFloat**](#Link59)[**LightVessel**](#Link5C)[**OffshorePlatform**](#Link6E)[**Pile**](#Link71)[**SiloTank**](#Link86) | |
| annotation | |  | | --- | | documentation | | Something (such as a house, tower, bridge, etc.) that is built by putting parts together and that usually stands on its own | |

element **StructureObject/IALA\_aidAvailabilityCategory**

|  |  |
| --- | --- |
| diagram |  |
| type | [**IALA\_aidAvailabilityCategory**](#Link48) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Category 1 | |  | | --- | | documentation | | An AtoN or system of AtoN that is considered by the Competent Authority to be of vital navigational significance. Recommendation O-130 – Categorisation and Availability Objectives for Short Range Aids to Navigation December 2004 - Revised June 2011 | | | enumeration | Category 2 | |  | | --- | | documentation | | An AtoN or system of AtoN that is considered by the Competent Authority to be of important navigational significance. Recommendation O-130 – Categorisation and Availability Objectives for Short Range Aids to Navigation December 2004 - Revised June 2011 | | | enumeration | Category 3 | |  | | --- | | documentation | | An AtoN or system of AtoN that is considered by the Competent Authority to be of necessary navigational significance. Recommendation O-130 – Categorisation and Availability Objectives for Short Range Aids to Navigation December 2004 - Revised June 2011 | | |
| annotation | |  | | --- | | documentation | | A Category denoting the significance of an Aid to Navigation, expressed in terms of the probability that an AtoN or system of AtoN, as defined by the Competent Authority, is performing its specified function at any randomly chosen time. This is expressed as a percentage of total time that an AtoN or system of AtoN should be performing their specified function. adapted from the IALA Guideline No. 1035 To Availability and Reliability of Aids to Navigation - Theory and Examples. | |

element **StructureObject/contactAddress**

|  |  |
| --- | --- |
| diagram |  |
| type | [**contactAddress**](#Link2C) |
| children | [**deliveryPoint**](#Link1B6)[**cityName**](#Link1B7)[**administrativeDivision**](#Link1B8)[**country**](#Link1B9)[**postalCode**](#Link1BA) |

element **StructureObject/child**

|  |  |
| --- | --- |
| diagram |  |
| type | **gml:ReferenceType** |
| annotation | |  | | --- | | documentation | | The role given to the subordinate object(s) in a relationship | |

complexType **surveyDateRange**

|  |  |
| --- | --- |
| diagram |  |
| children | [**dateEnd**](#Link1BB)[**dateStart**](#Link1BC) |
| used by | |  |  | | --- | --- | | element | [**QualityOfNonBathymetricData/surveyDateRange**](#Link169) | |
| annotation | |  | | --- | | documentation | | The complex attribute describes the period of the hydrographic survey, as the time between its sub-attributes | |

element **surveyDateRange/dateEnd**

|  |  |
| --- | --- |
| diagram |  |
| type | [**S100\_TruncatedDate**](#Link83) |
| children | [**gDay**](#Link1B0)[**gMonth**](#Link1B1)[**gYear**](#Link1B2)[**gMonthDay**](#Link1B3)[**gYearMonth**](#Link1B4)[**date**](#Link1B5) |
| annotation | |  | | --- | | documentation | | The latest date on which an object (e.g., a buoy) will be present. | |

element **surveyDateRange/dateStart**

|  |  |
| --- | --- |
| diagram |  |
| type | [**S100\_TruncatedDate**](#Link83) |
| children | [**gDay**](#Link1B0)[**gMonth**](#Link1B1)[**gYear**](#Link1B2)[**gMonthDay**](#Link1B3)[**gYearMonth**](#Link1B4)[**date**](#Link1B5) |
| annotation | |  | | --- | | documentation | | The earliest date on which an object (e.g., a buoy) will be present. | |

complexType **Topmark**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**Equipment**](#Link38) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**idCode**](#Link93)[**dateEnd**](#Link94)[**dateStart**](#Link95)[**periodEnd**](#Link96)[**periodStart**](#Link97)[**information**](#Link98)[**informationInNationalLanguage**](#Link99)[**textualDescriptionInNationalLanguage**](#Link9A)[**textualDescription**](#Link9B)[**scaleMinimum**](#Link9C)[**sourceDate**](#Link9D)[**sourceIndication**](#Link9E)[**pictorialRepresentation**](#Link9F)[**IALA\_inspectionFrequency**](#LinkA0)[**IALA\_inspectionRequirements**](#LinkA1)[**IALA\_AtoNMaintenanceRecord**](#LinkA2)[**IALA\_installationDate**](#LinkA3)[**peer**](#LinkA4)[**IALA\_remoteMonitoringSystem**](#LinkD5)[**IALA\_remotelyMonitored**](#LinkD6)[**parent**](#LinkD7)[**geometry**](#LinkD8)[**colour**](#Link1A5)[**colourPattern**](#Link1A6)[**height**](#Link1A7)[**marksNavigationalSystemOf**](#Link1A8)[**status**](#Link1A9)[**topmarkDaymarkShape**](#Link1AA)[**verticalAccuracy**](#Link1AB)[**verticalDatum**](#Link1AC)[**verticalLength**](#Link1AD) |
| used by | |  |  | | --- | --- | | element | [**Topmark**](#Link85) | |
| annotation | |  | | --- | | documentation | | A characteristic shape secured at the top of a buoy or beacon to aid in its identification. (IHO Dictionary, S-32, 5th Edition, 5548) | |

element **Topmark/colour**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colour**](#Link36) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |

element **Topmark/colourPattern**

|  |  |
| --- | --- |
| diagram |  |
| type | [**colourPattern**](#Link39) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |

element **Topmark/height**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | |

element **Topmark/marksNavigationalSystemOf**

|  |  |
| --- | --- |
| diagram |  |
| type | [**marksNavigationalSystemOf**](#Link60) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | IALA A |  | | enumeration | IALA B |  | | enumeration | no system |  | | enumeration | other system |  | |

element **Topmark/status**

|  |  |
| --- | --- |
| diagram |  |
| type | [**status**](#Link7E) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |

element **Topmark/topmarkDaymarkShape**

|  |  |
| --- | --- |
| diagram |  |
| type | [**topmarkDaymarkShape**](#Link84) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | cone, point up |  | | enumeration | cone, point down |  | | enumeration | sphere |  | | enumeration | 2 spheres |  | | enumeration | cylinder (can) |  | | enumeration | board |  | | enumeration | x-shape (St. Andrew's cross) |  | | enumeration | upright cross (St George's cross) |  | | enumeration | cube, point up |  | | enumeration | 2 cones, point to point |  | | enumeration | 2 cones, base to base |  | | enumeration | rhombus (diamond) |  | | enumeration | 2 cones (points upward) |  | | enumeration | 2 cones (points downward) |  | | enumeration | besom, point up (broom or perch) |  | | enumeration | besom, point down (broom or perch) |  | | enumeration | flag |  | | enumeration | sphere over rhombus |  | | enumeration | square |  | | enumeration | rectangle, horizontal | |  | | --- | | documentation | | where the two longer opposite sides are standing horizontally. A rectangle is a plane figure with four right angles and four straight sides, opposite sides being parallel and equal in length | | | enumeration | rectangle, vertical | |  | | --- | | documentation | | where the two longer opposite sides are standing vertically. A rectangle is a plane figure with four right angles and four straight sides, opposite sides being parallel and equal in length | | | enumeration | trapezium, up |  | | enumeration | trapezium, down |  | | enumeration | triangle, point up |  | | enumeration | triangle, point down |  | | enumeration | circle |  | | enumeration | two upright crosses (one over the other) |  | | enumeration | T-shape |  | | enumeration | triangle pointing up over a circle |  | | enumeration | upright cross over a circle |  | | enumeration | rhombus over a circle |  | | enumeration | circle over a triangle pointing up |  | | enumeration | other shape |  | | enumeration | IALA\_tubular |  | |

element **Topmark/verticalAccuracy**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal.1**](#Link6C) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | The best estimate of the vertical accuracy of heights, vertical distances and vertical clearances, excluding sounding measurements. | | documentation | | Expected input: The one-dimensional error. The error is assumed to be positive and negative. The plus/minus character shall not be encoded. Minimum value: 0 Indication: Unit: defined in the HUNI subfield of the DSPM record or in the HUNITS attribute of the M\_UNIT meta object class, e.g. metre (m) Resolution: 0.1 m or 0.1 ft Format: xx.x Example: 1.2 for an error of 1.2 metres. | |

element **Topmark/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **Topmark/verticalLength**

|  |  |
| --- | --- |
| diagram |  |
| type | [**NonNegativeDecimal**](#Link69) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. | | documentation | | Minimum Value: 0 | | documentation | | References: INT 1: IC 14; IE 4; IK 10-11; M-4: 302; 352.4; 421.1-2; | | documentation | | Indication: Unit: defined in the data set metadata Resolution: 0.1 m or 0.1 ft Format: xxx.x Example: 73 for a height of 73 metres. Remarks: Height must not be used for floating objects. | |

complexType **VerticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | extension of [**MetaFeatureType**](#Link65) |
| children | **gml:boundedBy featureObjectIdentifier informationAssociation featureAssociation invFeatureAssociation** [**verticalDatum**](#Link1AE)[**geometry**](#Link1AF) |
| used by | |  |  | | --- | --- | | element | [**VerticalDatum**](#Link88) | |
| annotation | |  | | --- | | documentation | | Any level surface from which to reference elevations. Also called datum level, reference level, reference plane, levelling datum, datum for heights. (Adapted from IHO Dictionary – S-32). | |

element **VerticalDatum/verticalDatum**

|  |  |
| --- | --- |
| diagram |  |
| type | [**verticalDatum**](#Link8A) |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |

element **VerticalDatum/geometry**

|  |  |
| --- | --- |
| diagram |  |
| type | **SurfacePropertyType** |
| children | **surfaceProperty** |
| annotation | |  | | --- | | documentation | | Permitted spatial primitives | |

simpleType **beaconShape**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**GenericBeacon/beaconShape**](#LinkAA) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | stake, pole, perch, post | |  | | --- | | documentation | | an elongated wood or metal pole, embedded in the bottom to serve as a navigational aid or a support for a navigational aid. | | | enumeration | withy | |  | | --- | | documentation | | a tree without roots stuck or spoiled into the bottom of the sea to serve as a navigational aid. | | | enumeration | beacon tower | |  | | --- | | documentation | | a solid structure of the order of 10 metres in height used as a navigational aid. | | | enumeration | lattice beacon | |  | | --- | | documentation | | a structure consisting of strips of metal or wood crossed or interlaced to form a structure to serve as an aid to navigation or as a support for an aid to navigation. | | | enumeration | pile beacon | |  | | --- | | documentation | | a long heavy timber(s) or section(s) of steel, wood, concrete, etc., forced into the seabed to serve as an aid to navigation or as a support for an aid to navigation. | | | enumeration | cairn | |  | | --- | | documentation | | a mound of stones, usually conical or pyramidal, raised specifically for maritime navigation. | | | enumeration | buoyant beacon | |  | | --- | | documentation | | a tall spar-like beacon fitted with a permanently submerged buoyancy chamber, the lower end of the body is secured to seabed sinker either by a flexible joint or by a cable under tension. | | |
| annotation | |  | | --- | | documentation | | The shape a beacon exhibits | |

simpleType **buildingShape**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**SiloTank/buildingShape**](#Link18F) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | high-rise building | |  | | --- | | documentation | | a building having many storeys. | | | enumeration | pyramid | |  | | --- | | documentation | | a polyhedron of which one face is a polygon of any number of sides, and the other faces are triangles with a common vertex. | | | enumeration | cylindrical | |  | | --- | | documentation | | shaped like a cylinder, which is a solid geometrical figure generated by straight lines fixed in direction and describing with one of its points a closed curve, especially a circle. | | | enumeration | spherical | |  | | --- | | documentation | | shaped like a sphere, which is a body the surface of which is at all points equidistant from the centre. | | | enumeration | cubic | |  | | --- | | documentation | | a shape the sides of which are six equal squares a regular hexahedron. | | |
| annotation | |  | | --- | | documentation | | The specific shape of the building. | |

simpleType **buoyShape**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**GenericBuoy/buoyShape**](#LinkBD) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | conical (nun, ogival) | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has approximately the shape or the appearance of a pointed cone with the point upwards. | | | enumeration | can (cylindrical) | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has the shape of a cylinder, or a truncated cone that approximates to a cylinder, with a flat end uppermost. | | | enumeration | spherical | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has the shape of a part of a sphere. | | | enumeration | pillar | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure is a narrow vertical structure, pillar or lattice tower. | | | enumeration | spar (spindle) | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has the form of a pole, or of a very long cylinder, floating upright. | | | enumeration | barrel (tun) | |  | | --- | | documentation | | the upper part of the body above the water-line, or the greater part of the superstructure, has the form of a barrel or cylinder floating horizontally. | | | enumeration | super-buoy | |  | | --- | | documentation | | a very large buoy, generally more than 5m in diameter. | | | enumeration | ice buoy | |  | | --- | | documentation | | a specially constructed shuttle shaped buoy which is used in ice conditions. | | |
| annotation | |  | | --- | | documentation | | The shape a buoy exhibits. | |

simpleType **categoryOfCardinalMark**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**BeaconCardinal/categoryOfCardinalMark**](#LinkBA)[**BuoyCardinal/categoryOfCardinalMark**](#LinkCA) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | north cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing NW-NE taken from the point of interest it should be passed to the north side of the mark. | | | enumeration | east cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing NE-SE taken from the point of interest it should be passed to the east side of the mark. | | | enumeration | south cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing SE-SW taken from the point of interest it should be passed to the south side of the mark. | | | enumeration | west cardinal mark | |  | | --- | | documentation | | Quadrant bounded by the true bearing SW-NW taken from the point of interest it should be passed to the west side of the mark. | | |
| annotation | |  | | --- | | documentation | | Cardinal marks are classified according to the quadrant of space they occupy. | |

simpleType **categoryOfFogSignal**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**FogSignal/categoryOfFogSignal**](#LinkE6) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | explosive | |  | | --- | | documentation | | a signal produced by the firing of explosive charges. | | | enumeration | diaphone | |  | | --- | | documentation | | a diaphone uses compressed air and generally emits a powerful low-pitched sound, which often concludes with a brief sound of suddenly lowered pitch, termed the 'grunt'. | | | enumeration | siren | |  | | --- | | documentation | | a siren uses compressed air and exists in a variety of types which differ considerably in their sound and power. | | | enumeration | nautophone | |  | | --- | | documentation | | a horn having a diaphragm oscillated by electricity | | | enumeration | reed | |  | | --- | | documentation | | a reed uses compressed air and emits a weak, high pitched sound. | | | enumeration | tyfon | |  | | --- | | documentation | | a diaphragm horn which operates under the influence of compressed air or steam | | | enumeration | bell | |  | | --- | | documentation | | a ringing sound with a short range. | | | enumeration | whistle | |  | | --- | | documentation | | a distinctive sound made by a jet of air passing through an orifice. | | | enumeration | gong | |  | | --- | | documentation | | a sound produced by vibration of a disc when struck. | | | enumeration | horn | |  | | --- | | documentation | | a horn uses compressed air or electricity to vibrate a diaphragm and exists in a variety of types which differ greatly in their sound and power. | | |
| annotation | |  | | --- | | documentation | | Classification of the various means of generating the fog signal. | |

simpleType **categoryOfInstallationBuoy**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**BuoyInstallation/categoryOfInstallationBuoy**](#LinkCB) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | catenary anchor leg mooring (CALM) | |  | | --- | | documentation | | incorporates a large buoy which remains on the surface at all times and is moored by 4 or more anchors. Mooring hawsers and cargo hoses lead from a turntable on top of the buoy, so that the buoy does not turn as the ship swings to wind and stream. | | | enumeration | single buoy mooring (SBM or SPM) | |  | | --- | | documentation | | a mooring structure used by tankers to load and unload in port approaches or in offshore oil and gas fields. The size of the structure can vary between a large mooring buoy and a manned floating structure. Also known as single point mooring (SPM) | | |
| annotation | |  | | --- | | documentation | | Classification of fixed installation buoy | |

simpleType **categoryOfLandmark**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**Landmark/categoryOfLandmark**](#LinkF4) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | cairn | |  | | --- | | documentation | | a mound of stones, usually conical or pyramidal, raised as a landmark or to designate a point of importance in surveying. | | | enumeration | cemetery | |  | | --- | | documentation | | an area of land for burying the dead. | | | enumeration | chimney | |  | | --- | | documentation | | a vertical structure containing a passage or flue for discharging smoke and gases. | | | enumeration | dish aerial | |  | | --- | | documentation | | a parabolic aerial for the receipt and transmission of high frequency radio signals. | | | enumeration | flagstaff (flagpole) | |  | | --- | | documentation | | a staff or pole on which flags are raised. | | | enumeration | flare stack | |  | | --- | | documentation | | a tall structure used for burning-off waste oil or gas. Normally showing a flame and located at refineries. | | | enumeration | mast | |  | | --- | | documentation | | a straight vertical piece of timber or a hollow cylinder. | | | enumeration | windsock | |  | | --- | | documentation | | a tapered fabric sleeve mounted so as to catch and swing with the wind, thus indicating the wind direction. | | | enumeration | monument | |  | | --- | | documentation | | a structure erected or maintained as a memorial to a person or event. | | | enumeration | column (pillar) | |  | | --- | | documentation | | a cylindrical or slightly tapering body of considerably greater length than diameter erected vertically. | | | enumeration | memorial plaque | |  | | --- | | documentation | | a slab of metal, usually ornamented, erected as a memorial to a person or event. | | | enumeration | obelisk | |  | | --- | | documentation | | a tapering shaft usually of stone or concrete, square or rectangular in section, with a pyramidal apex. | | | enumeration | statue | |  | | --- | | documentation | | a representation of a human, animal or fantasy figure in marble, bronze, etc. | | | enumeration | cross | |  | | --- | | documentation | | a monument, or other structure in form of a cross. | | | enumeration | dome | |  | | --- | | documentation | | a landmark comprising a hemispherical or spheroidal shaped structure | | | enumeration | radar scanner | |  | | --- | | documentation | | a device used for directing a radar beam through a search pattern | | | enumeration | tower | |  | | --- | | documentation | | a relatively tall structure which may be used for observation, support, storage or communication etc. | | | enumeration | windmill | |  | | --- | | documentation | | a wind driven system of vanes attached to a tower like structure (excluding wind-generated power plants). | | | enumeration | windmotor | |  | | --- | | documentation | | a modern structure for the use of windpower. | | | enumeration | spire/minaret | |  | | --- | | documentation | | a tall conical or pyramid-shaped structure often built on the roof or tower of a building, especially a church or mosque. | | | enumeration | large rock or boulder on land | |  | | --- | | documentation | | an isolated rocky formation or a single large stone | | |
| annotation | |  | | --- | | documentation | | Classification of prominent cultural and natural features in the landscape | |

simpleType **categoryOfLateralMark**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**BeaconLateral/categoryOfLateralMark**](#LinkBB)[**BuoyLateral/categoryOfLateralMark**](#LinkCC) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | port-hand lateral mark | |  | | --- | | documentation | | indicates the port boundary of a navigational channel or suggested route when proceeding in the 'conventional direction of buoyage'. | | | enumeration | starboard-hand lateral mark | |  | | --- | | documentation | | indicates the starboard boundary of a navigational channel or suggested route when proceeding in the 'conventional direction of buoyage'. | | | enumeration | preferred channel to starboard lateral mark | |  | | --- | | documentation | | at a point where a channel divides, when proceeding in the 'conventional direction of buoyage', the preferred channel (or primary route) is indicated by a modified port-hand lateral mark. | | | enumeration | preferred channel to port lateral mark | |  | | --- | | documentation | | at a point where a channel divides, when proceeding in the 'conventional direction of buoyage', the preferred channel (or primary route) is indicated by a modified starboard-hand lateral mark. | | |
| annotation | |  | | --- | | documentation | | Classification of lateral buoys | |

simpleType **categoryOfLight**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**Light/categoryOfLight**](#Link106) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | directional function | |  | | --- | | documentation | | a light illuminating a sector of very narrow angle and intended to mark a direction to follow. | | | enumeration | leading light | |  | | --- | | documentation | | a light associated with other lights so as to form a leading line to be followed. | | | enumeration | aero light | |  | | --- | | documentation | | an aero light is established for aeronautical navigation and may be of higher power than marine lights and visible from well offshore. | | | enumeration | air obstruction light | |  | | --- | | documentation | | a light marking an obstacle which constitutes a danger to air navigation. | | | enumeration | fog detector light | |  | | --- | | documentation | | a light used to automatically determine conditions of visibility which warrant the turning on or off of a sound signal. | | | enumeration | flood light | |  | | --- | | documentation | | a broad beam light used to illuminate a structure or area. | | | enumeration | strip light | |  | | --- | | documentation | | a light whose source has a linear form generally horizontal, which can reach a length of several metres. | | | enumeration | subsidiary light | |  | | --- | | documentation | | a light placed on or near the support of a main light and having a special use in navigation. | | | enumeration | spotlight | |  | | --- | | documentation | | a powerful light focused so as to illuminate a small area. | | | enumeration | front | |  | | --- | | documentation | | term used with leading lights to describe the position of the light on the lead as viewed from seaward. | | | enumeration | rear | |  | | --- | | documentation | | term used with leading lights to describe the position of the light on the lead as viewed from seaward. | | | enumeration | lower | |  | | --- | | documentation | | term used with leading lights to describe the position of the light on the lead as viewed from seaward. | | | enumeration | upper | |  | | --- | | documentation | | term used with leading lights to describe the position of the light on the lead as viewed from seaward. | | | enumeration | moiré effect | |  | | --- | | documentation | | a short range (up to 2km) type of directional light. Sodium lighting gives a yellow background to a screen on which a vertical black line will be seen by an observer on the centre line. | | | enumeration | emergency | |  | | --- | | documentation | | a light available as a backup to a main light which will be illuminated should the main light fail. | | | enumeration | bearing light | |  | | --- | | documentation | | a light which enables its approximate bearing to be obtained without the use of a compass. | | | enumeration | horizontally disposed | |  | | --- | | documentation | | a group of lights of identical character and almost identical position, that are disposed horizontally. | | | enumeration | vertically disposed | |  | | --- | | documentation | | a group of lights of identical character and almost identical position, that are disposed vertically. | | |
| annotation | |  | | --- | | documentation | | Classification of different light types | |

simpleType **categoryOfNavigationLine**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**NavigationLine/categoryOfNavigationLine**](#Link140) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | clearing line | |  | | --- | | documentation | | a straight line that marks the boundary between a safe and a dangerous area or that passes clear of a navigational danger. | | | enumeration | transit line | |  | | --- | | documentation | | a line passing through one or more fixed marks. | | | enumeration | leading line bearing a recommended track | |  | | --- | | documentation | | a line passing through one or more clearly defined objects, along the path of which a vessel can approach safely up to a certain distance off. | | |
| annotation | |  | | --- | | documentation | | Classification of route guidance given to vessels | |

simpleType **categoryOfOffshorePlatform**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**OffshorePlatform/categoryOfOffshorePlatform**](#Link145) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | oil derrick/rig | |  | | --- | | documentation | | a temporary mobile structure, either fixed or floating, used in the exploration stages of oil and gas fields. | | | enumeration | production platform | |  | | --- | | documentation | | a term used to indicate a permanent offshore structure equipped to control the flow of oil or gas. It does not include entirely submarine structures. | | | enumeration | observation/research platform | |  | | --- | | documentation | | a platform from which one's surroundings or events can be observed, noted or recorded such as for scientific study. | | | enumeration | articulated loading platform (ALP) | |  | | --- | | documentation | | a metal lattice tower, buoyant at one end and attached at the other by a universal joint to a concrete filled base on the sea bed. The platform may be fitted with a helicopter platform, emergency accommodation and hawser/hose retrieval. | | | enumeration | single anchor leg mooring (SALM) | |  | | --- | | documentation | | a rigid frame or tube with a buoyancy device at its upper end , secured at its lower end to a universal joint on a large steel or concrete base resting on the sea bed, and at its upper end to a mooring buoy by a chain or wire. | | | enumeration | mooring tower | |  | | --- | | documentation | | a platform secured to the sea bed and surmounted by a turntable to which ships moor. | | | enumeration | artificial island | |  | | --- | | documentation | | a man-made structure usually built for the exploration or exploitation of marine resources, marine scientific research, tidal observations, etc. | | | enumeration | floating production, storage and off-loading vessel (FPSO) | |  | | --- | | documentation | | an offshore oil/gas facility consisting of a moored tanker/barge by which the product is extracted, stored and exported. | | | enumeration | accommodation platform | |  | | --- | | documentation | | a platform used primarily for eating, sleeping and recreation purposes. | | | enumeration | navigation, communication and control buoy (NCCB) | |  | | --- | | documentation | | a floating structure with control room, power and storage facilities, attached to the sea bed by a flexible pipeline and cables. | | |
| annotation | |  | | --- | | documentation | | Classification of an offshore raised structure | |

simpleType **categoryOfPile**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**Pile/categoryOfPile**](#Link156) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | stake | |  | | --- | | documentation | | an elongated wood or metal pole embedded in the bottom to serve as a marker or support. | | | enumeration | post | |  | | --- | | documentation | | a vertical piece of timber, metal or concrete forced into the earth or sea bed. | | | enumeration | tripodal | |  | | --- | | documentation | | a single structure comprising 3 or more piles held together (sections of heavy timber, steel or concrete), and forced into the earth or sea bed. | | |
| annotation | |  | | --- | | documentation | | Classification of pile, driven into the earth as a foundation or support for a structure | |

simpleType **categoryOfRadarTransponderBeacon**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**RadarTransponderBeacon/categoryOfRadarTransponderBeacon**](#Link16F) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | ramark, radar beacon transmitting continuously | |  | | --- | | documentation | | a radar marker beacon which continuously transmits a signal appearing as a radial line on a radar screen, the line indicating the direction of the beacon. Ramarks are intended primarily for marine use. The name 'ramark' is derived from the words radar marker. | | | enumeration | racon, radar transponder beacon | |  | | --- | | documentation | | a radar beacon which returns a coded signal which provides identification of the beacon, as well as range and bearing. The range and bearing are indicated by the location of the first character received on the radar screen. The name 'racon' is derived from the words radar beacon. | | | enumeration | leading racon/radar transponder beacon | |  | | --- | | documentation | | a radar beacon that may be used (in conjunction with at least one other radar beacon) to indicate a leading line. | | |
| annotation | |  | | --- | | documentation | | Classification of radar transponder beacon based on fuctionality. | |

simpleType **categoryOfRecommendedTrack**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**RecommendedTrack/categoryOfRecommendedTrack**](#Link17A) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | based on a system of fixed marks | |  | | --- | | documentation | | a straight route (known as a recommended track, range or leading line), which comprises at least two structures (usually beacons or daymarks) and/or natural features, which may carry lights and/or top-marks. The structures/features are positioned so that when observed to be in line, a vessel can follow a known bearing with safety. | | | enumeration | not based on a system of fixed marks | |  | | --- | | documentation | | a route (known as a recommended track or preferred route) which is not based on a series of structures or features in line. | | |
| annotation | |  | | --- | | documentation | | Classification of track based on defining navigational marks | |

simpleType **categoryOfSiloTank**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**SiloTank/categoryOfSiloTank**](#Link190) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | silo in general | |  | | --- | | documentation | | a generally cylindrical tower used for storing fodder or grain. | | | enumeration | tank in general | |  | | --- | | documentation | | a fixed structure for storing liquids. | | | enumeration | grain elevator | |  | | --- | | documentation | | a storage building for grain. Usually a tall frame, metal or concrete structure with an especially compartmented interior. | | | enumeration | water tower | |  | | --- | | documentation | | a tower with an elevated container used to hold water. | | |
| annotation | |  | | --- | | documentation | | Classification based on the product | |

simpleType **categoryOfSpecialPurposeMark**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**BeaconSpecialPurposeGeneral/categoryOfSpecialPurposeMark**](#LinkBC)[**BuoySpecialPurposeGeneral/categoryOfSpecialPurposeMark**](#LinkCD)[**Daymark/categoryOfSpecialPurposeMark**](#LinkD9) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | firing danger area mark | |  | | --- | | documentation | | a mark used to indicate a firing danger area, usually at sea. | | | enumeration | target mark | |  | | --- | | documentation | | any object toward which something is directed. The distinctive marking or instrumentation of a ground point to aid its identification on a photograph. | | | enumeration | marker ship mark | |  | | --- | | documentation | | a mark marking the position of a ship which is used as a target during some military exercise. | | | enumeration | degaussing range mark | |  | | --- | | documentation | | a mark used to indicate a degaussing range. | | | enumeration | barge mark | |  | | --- | | documentation | | a mark of relevance to barges. | | | enumeration | cable mark | |  | | --- | | documentation | | a mark used to indicate the position of submarine cables or the point at which they run on to the land. | | | enumeration | spoil ground mark | |  | | --- | | documentation | | a mark used to indicate the limit of a spoil ground | | | enumeration | outfall mark | |  | | --- | | documentation | | a mark used to indicate the position of an outfall or the point at which it leaves the land. | | | enumeration | ODAS (Ocean-Data-Acquisition-System) | |  | | --- | | documentation | | Ocean Data Acquisition System | | | enumeration | recording mark | |  | | --- | | documentation | | a mark used to record data for scientific purposes. | | | enumeration | seaplane anchorage mark | |  | | --- | | documentation | | a mark used to indicate a seaplane anchorage. | | | enumeration | recreation zone mark | |  | | --- | | documentation | | a mark used to indicate a recreation zone. | | | enumeration | private mark | |  | | --- | | documentation | | a privately maintained mark. | | | enumeration | mooring mark | |  | | --- | | documentation | | a mark indicating a mooring or moorings. | | | enumeration | LANBY (Large Automatic Navigational Buoy) | |  | | --- | | documentation | | a large buoy designed to take the place of a lightship where construction of an offshore light station is not feasible. | | | enumeration | leading mark | |  | | --- | | documentation | | aids to navigation or other indicators so located as to indicate the path to be followed. Leading marks identify a leading line when they are in transit. | | | enumeration | measured distance mark | |  | | --- | | documentation | | a mark forming part of a transit indicating one end of a measured distance. | | | enumeration | notice mark | |  | | --- | | documentation | | a notice board or sign indicating information to the mariner. | | | enumeration | TSS mark (Traffic Separation Scheme) | |  | | --- | | documentation | | a mark indicating a traffic separation scheme. | | | enumeration | anchoring prohibited mark | |  | | --- | | documentation | | a mark indicating an anchoring prohibited area. | | | enumeration | berthing prohibited mark | |  | | --- | | documentation | | a mark indicating that berthing is prohibited. | | | enumeration | overtaking prohibited mark | |  | | --- | | documentation | | a mark indicating that overtaking is prohibited. | | | enumeration | two-way traffic prohibited mark | |  | | --- | | documentation | | a mark indicating a one-way route. | | | enumeration | reduced wake mark | |  | | --- | | documentation | | a mark indicating that vessels must not generate excessive wake. | | | enumeration | speed limit mark | |  | | --- | | documentation | | a mark indicating that a speed limit applies. | | | enumeration | stop mark | |  | | --- | | documentation | | a mark indicating the place where the bow of a ship must stop when traffic lights show red. | | | enumeration | general warning mark | |  | | --- | | documentation | | a mark indicating that special caution must be exercised in the vicinity of the mark. | | | enumeration | sound ship's siren mark | |  | | --- | | documentation | | a mark indicating that a ship should sound its siren or horn. | | | enumeration | restricted vertical clearance mark | |  | | --- | | documentation | | a mark indicating the minimum vertical space available for passage. | | | enumeration | maximum vessel's draught mark | |  | | --- | | documentation | | a mark indicating the maximum draught of vessel permitted. | | | enumeration | restricted horizontal clearance mark | |  | | --- | | documentation | | a mark indicating the minimum horizontal space available for passage. | | | enumeration | strong current warning mark | |  | | --- | | documentation | | a mark warning of strong currents. | | | enumeration | berthing permitted mark | |  | | --- | | documentation | | a mark indicating that berthing is allowed. | | | enumeration | overhead power cable mark | |  | | --- | | documentation | | a mark indicating an overhead power cable. | | | enumeration | channel edge gradient mark | |  | | --- | | documentation | | a mark indicating the gradient of the slope of a dredge channel edge. | | | enumeration | telephone mark | |  | | --- | | documentation | | a mark indicating the presence of a telephone. | | | enumeration | ferry crossing mark | |  | | --- | | documentation | | a mark indicating that a ferry route crosses the ship route often used with a 'sound ship's siren' mark. | | | enumeration | pipeline mark | |  | | --- | | documentation | | a mark used to indicate the position of submarine pipelines or the point at which they run on to the land. | | | enumeration | anchorage mark | |  | | --- | | documentation | | a mark indicating an anchorage area. | | | enumeration | clearing mark | |  | | --- | | documentation | | a mark used to indicate a clearing line. | | | enumeration | control mark | |  | | --- | | documentation | | a mark indicating the location at which a restriction or requirement exists. | | | enumeration | diving mark | |  | | --- | | documentation | | a mark indicating that diving may take place in the vicinity. | | | enumeration | refuge beacon | |  | | --- | | documentation | | a mark providing or indicating a place of safety. | | | enumeration | foul ground mark | |  | | --- | | documentation | | a mark indicating a foul ground. | | | enumeration | yachting mark | |  | | --- | | documentation | | a mark installed for use by yachtsmen. | | | enumeration | heliport mark | |  | | --- | | documentation | | a mark indicating an area where helicopters may land. | | | enumeration | GPS mark | |  | | --- | | documentation | | a mark indicating a location at which a GNSS position has been accurately determined. | | | enumeration | seaplane landing mark | |  | | --- | | documentation | | a mark indicating an area where sea-planes land. | | | enumeration | entry prohibited mark | |  | | --- | | documentation | | a mark indicating that entry is prohibited. | | | enumeration | work in progress mark | |  | | --- | | documentation | | a mark indicating that work (generally construction) is in progress. | | | enumeration | mark with unknown purpose | |  | | --- | | documentation | | a mark whose detailed characteristics are unknown. | | | enumeration | wellhead mark | |  | | --- | | documentation | | a mark indicating a borehole that produces or is capable of producing oil or natural gas. | | | enumeration | channel separation mark | |  | | --- | | documentation | | a mark indicating the point at which a channel divides separately into two channels. | | | enumeration | marine farm mark | |  | | --- | | documentation | | a mark indicating the existence of a fish, mussel, oyster or pearl farm/ culture. | | | enumeration | artificial reef mark | |  | | --- | | documentation | | a mark indicating the existence or the extent of an artificial reef. | | | enumeration | IALA\_jetski prohibited | |  | | --- | | documentation | | A mark indicating a jetski prohibited area | | |
| annotation | |  | | --- | | documentation | | Classification of an aid to navigation which signifies some special purpose | |

simpleType **categoryOfTemporalVariation**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**QualityOfNonBathymetricData/categoryOfTemporalVariation**](#Link160) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | unassessed | |  | | --- | | documentation | | Temporal variation not assessed or cannot be determined | | | enumeration | event | |  | | --- | | documentation | | No new hydrographic survey conducted after an event (e.g. hurricane, earthquake, volcanic eruption, landslide, etc), which is considered likely to have changed the seafloor significantly. | | | enumeration | likely to change | |  | | --- | | documentation | | Continuous or frequent change (e.g. river siltation, sand waves, seasonal storms, ice bergs, etc). | | | enumeration | likely to change, but significant shoaling unlikely | |  | | --- | | documentation | | Likely to change but significant shoaling unlikely | | | enumeration | unlikely to change | |  | | --- | | documentation | | Significant change to the seafloor is not expected. | | |
| annotation | |  | | --- | | documentation | | An assessment of the likelihood of change within an area since last survey. | |

simpleType **colour**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**Daymark/colour**](#LinkDA)[**GenericBeacon/colour**](#LinkAB)[**GenericBuoy/colour**](#LinkBE)[**Landmark/colour**](#LinkF5)[**Light/colour**](#Link107)[**LightFloat/colour**](#Link11E)[**LightVessel/colour**](#Link12D)[**OffshorePlatform/colour**](#Link146)[**Pile/colour**](#Link157)[**RetroReflector/colour**](#Link188)[**SiloTank/colour**](#Link191)[**Topmark/colour**](#Link1A5) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | white |  | | enumeration | black |  | | enumeration | red |  | | enumeration | green |  | | enumeration | blue |  | | enumeration | yellow |  | | enumeration | grey |  | | enumeration | brown |  | | enumeration | amber |  | | enumeration | violet |  | | enumeration | orange |  | | enumeration | magenta |  | | enumeration | pink |  | |
| annotation | |  | | --- | | documentation | | The property possessed by an object of producing different sensations on the eye as a result of the way it reflects or emits light. | |

simpleType **colourPattern**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**Daymark/colourPattern**](#LinkDB)[**GenericBeacon/colourPattern**](#LinkAC)[**GenericBuoy/colourPattern**](#LinkBF)[**Landmark/colourPattern**](#LinkF6)[**LightFloat/colourPattern**](#Link11F)[**LightVessel/colourPattern**](#Link12E)[**OffshorePlatform/colourPattern**](#Link147)[**Pile/colourPattern**](#Link158)[**RetroReflector/colourPattern**](#Link189)[**SiloTank/colourPattern**](#Link192)[**Topmark/colourPattern**](#Link1A6) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | horizontal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented horizontally. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | vertical stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented vertically. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | diagonal stripes | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented diagonally (i.e. not horizontally or vertically). (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | squared | |  | | --- | | documentation | | Often referred to as checker plate, where alternate colours are used to create squares similar to a chess or draught board. The pattern may be straight or diagonal. (S-57 Edition 3.1, Appendix A  – Chapter 2, Page 2.113, November 2000). | | | enumeration | stripes (direction unknown) | |  | | --- | | documentation | | Straight bands or stripes of differing colours oriented in an unknown direction. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.113, November 2000). | | | enumeration | border stripe | |  | | --- | | documentation | | A band or stripe of colour which is displayed around the outer edge of the feature, which may also form a border to an inner pattern or plain colour. (S-57 Edition 3.1, Appendix A – Chapter 2,  Page 2.113, November 2000). | | | enumeration | IALA\_single colour | |  | | --- | | documentation | | One solid colour of uniform coverage | | | enumeration | IALA\_rectangle | |  | | --- | | documentation | | A four-sided shape that is made up of two pairs of parallel lines and that has four right angles, on a different coloured background | | | enumeration | IALA\_triangle | |  | | --- | | documentation | | a shape that is made up of three lines and three angles, on a different coloured background | | |
| annotation | |  | | --- | | documentation | | A regular repeated design containing more than one colour | |

simpleType **condition**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**GenericBeacon/condition**](#LinkAD)[**Landmark/condition**](#LinkF7)[**OffshorePlatform/condition**](#Link148)[**Pile/condition**](#Link159)[**SiloTank/condition**](#Link193) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | under construction |  | | enumeration | ruined |  | | enumeration | under reclamation |  | | enumeration | wingless |  | | enumeration | planned construction |  | |
| annotation | |  | | --- | | documentation | | The various conditions of buildings and other constructions. | |

simpleType **Decimal0.0To360.0**

|  |  |
| --- | --- |
| type | restriction of **xs:decimal** |
| used by | |  |  | | --- | --- | | elements | [**QualityOfNonBathymetricData/directionUncertainty**](#Link161)[**Light/orientation**](#Link110)[**NavigationLine/orientation**](#Link141)[**RecommendedTrack/orientation**](#Link17F)[**LocalDirectionOfBuoyage/orientation**](#Link13C)[**Light/sectorLimitOne**](#Link111)[**RadarTransponderBeacon/sectorLimitOne**](#Link173)[**Light/sectorLimitTwo**](#Link112)[**RadarTransponderBeacon/sectorLimitTwo**](#Link174) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | maxInclusive | 360.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | Type for value interval [0.0, 360.0]. Also limits value to 1 decimal place. | |

simpleType **exhibitionConditionOfLight**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**Light/exhibitionConditionOfLight**](#Link108) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | light shown without change of character | |  | | --- | | documentation | | a light shown throughout the 24 hours without change of character. | | | enumeration | daytime light | |  | | --- | | documentation | | a light which is only exhibited by day. | | | enumeration | fog light | |  | | --- | | documentation | | a light which is exhibited in fog or conditions of reduced visibility. | | | enumeration | night light | |  | | --- | | documentation | | a light which is only exhibited at night. | | |
| annotation | |  | | --- | | documentation | | The outward display of the light | |

simpleType **function**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**Landmark/function**](#LinkFB) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | harbour-master's office |  | | enumeration | custom office |  | | enumeration | health office |  | | enumeration | hospital |  | | enumeration | post office |  | | enumeration | hotel |  | | enumeration | railway station |  | | enumeration | police station |  | | enumeration | water-police station |  | | enumeration | pilot office |  | | enumeration | pilot lookout |  | | enumeration | bank office |  | | enumeration | headquarters for district control |  | | enumeration | transit shed/warehouse |  | | enumeration | factory |  | | enumeration | power station |  | | enumeration | administrative |  | | enumeration | educational facility |  | | enumeration | church |  | | enumeration | chapel |  | | enumeration | temple |  | | enumeration | pagoda |  | | enumeration | shinto shrine |  | | enumeration | buddhist temple |  | | enumeration | mosque |  | | enumeration | marabout |  | | enumeration | lookout |  | | enumeration | communication |  | | enumeration | television |  | | enumeration | radio |  | | enumeration | radar |  | | enumeration | light support |  | | enumeration | microwave |  | | enumeration | cooling |  | | enumeration | observation |  | | enumeration | timeball |  | | enumeration | clock |  | | enumeration | control |  | | enumeration | airship mooring |  | | enumeration | stadium |  | | enumeration | bus station |  | |
| annotation | |  | | --- | | documentation | | A specific role that describes a feature | |

simpleType **IALA\_aidAvailabilityCategory**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**StructureObject/IALA\_aidAvailabilityCategory**](#LinkA7) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Category 1 | |  | | --- | | documentation | | An AtoN or system of AtoN that is considered by the Competent Authority to be of vital navigational significance. Recommendation O-130 – Categorisation and Availability Objectives for Short Range Aids to Navigation December 2004 - Revised June 2011 | | | enumeration | Category 2 | |  | | --- | | documentation | | An AtoN or system of AtoN that is considered by the Competent Authority to be of important navigational significance. Recommendation O-130 – Categorisation and Availability Objectives for Short Range Aids to Navigation December 2004 - Revised June 2011 | | | enumeration | Category 3 | |  | | --- | | documentation | | An AtoN or system of AtoN that is considered by the Competent Authority to be of necessary navigational significance. Recommendation O-130 – Categorisation and Availability Objectives for Short Range Aids to Navigation December 2004 - Revised June 2011 | | |

simpleType **IALA\_categoryOfAggregation**

|  |  |
| --- | --- |
| type | union of (restriction of **xs:string**, restriction of **xs:string**) |
| used by | |  |  | | --- | --- | | element | [**Aggregation/IALA\_categoryOfAggregation**](#Link91) | |
| annotation | |  | | --- | | documentation | | Named aggregations between two or more aids to navigation and/or navigationally relevant features. | |

simpleType **IALA\_categoryOfAssociation**

|  |  |
| --- | --- |
| type | union of (restriction of **xs:string**, restriction of **xs:string**) |
| used by | |  |  | | --- | --- | | element | [**Association/IALA\_categoryOfAssociation**](#LinkA5) | |
| annotation | |  | | --- | | documentation | | Named associations between two or more aids to navigation and/or navigationally relevant features. | |

simpleType **ISO3166-alpha2**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | pattern | \w{2} |  | |
| annotation | |  | | --- | | documentation | | stub for ISO 3166 alpha2 country codes | |

simpleType **ISO639-2**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | pattern | \w{3} |  | |
| annotation | |  | | --- | | documentation | | stub for ISO 639-2 language codes | |

simpleType **ISO639-3**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | pattern | \w{3} |  | |
| annotation | |  | | --- | | documentation | | stub for ISO 639-3 language codes | |

simpleType **lightCharacteristic**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**Light/lightCharacteristic**](#Link10A) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | fixed |  | | enumeration | flashing |  | | enumeration | long-flashing |  | | enumeration | quick-flashing |  | | enumeration | very quick-flashing |  | | enumeration | ultra quick-flashing |  | | enumeration | isophased |  | | enumeration | occulting |  | | enumeration | interrupted quick-flashing |  | | enumeration | interrupted very quick-flashing |  | | enumeration | interrupted ultra quick-flashing |  | | enumeration | morse |  | | enumeration | fixed/flash |  | | enumeration | flash/long-flash |  | | enumeration | occulting/flash |  | | enumeration | fixed/long-flash |  | | enumeration | occulting alternating |  | | enumeration | long-flash alternating |  | | enumeration | flash alternating |  | | enumeration | group alternating |  | | enumeration | quick-flash plus long-flash |  | | enumeration | very quick-flash plus long-flash |  | | enumeration | ultra quick-flash plus long-flash |  | | enumeration | alternating |  | | enumeration | fixed and alternating flashing |  | |
| annotation | |  | | --- | | documentation | | The typical behaviour associated with the light | |

simpleType **lightVisibility**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**Light/lightVisibility**](#Link10B) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | high intensity |  | | enumeration | low intensity |  | | enumeration | faint |  | | enumeration | intensified |  | | enumeration | unintensified |  | | enumeration | visibility deliberately restricted |  | | enumeration | obscured |  | | enumeration | partially obscured |  | |
| annotation | |  | | --- | | documentation | | The specific visibility of a light, with respect to the light's intensity and ease of recognition. | |

simpleType **marksNavigationalSystemOf**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**GenericBeacon/marksNavigationalSystemOf**](#LinkB2)[**GenericBuoy/marksNavigationalSystemOf**](#LinkC1)[**Light/marksNavigationalSystemOf**](#Link10C)[**RetroReflector/marksNavigationalSystemOf**](#Link18B)[**Topmark/marksNavigationalSystemOf**](#Link1A8)[**NavigationalSystemOfMarks/marksNavigationalSystemOf**](#Link13E) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | IALA A |  | | enumeration | IALA B |  | | enumeration | no system |  | | enumeration | other system |  | |
| annotation | |  | | --- | | documentation | | The system of navigational buoyage a region complies with. | |

simpleType **multiplicityOfLightsType**

|  |  |
| --- | --- |
| type | restriction of **xs:positiveInteger** |
| used by | |  |  | | --- | --- | | element | [**Light/multiplicityOfLights**](#Link10D) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 2 |  | |
| annotation | |  | | --- | | documentation | | The number of lights of identical character that exist as a co-located group. Integer (minimum 2). | |

simpleType **natureOfConstruction**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**Daymark/natureOfConstruction**](#LinkDE)[**GenericBeacon/natureOfConstruction**](#LinkB3)[**Landmark/natureOfConstruction**](#LinkFD)[**LightFloat/natureOfConstruction**](#Link125)[**LightVessel/natureOfConstruction**](#Link134)[**OffshorePlatform/natureOfConstruction**](#Link14C)[**SiloTank/natureOfConstruction**](#Link198)[**GenericBuoy/natureOfconstuction**](#LinkC2) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | masonry |  | | enumeration | concreted |  | | enumeration | loose boulders |  | | enumeration | hard surfaced |  | | enumeration | unsurfaced |  | | enumeration | wooden |  | | enumeration | metal |  | | enumeration | glass reinforced plastic (GRP) |  | | enumeration | painted |  | | enumeration | IALA\_fiberglass | |  | | --- | | documentation | | Constructed from fiberglass | | | enumeration | IALA\_plastic | |  | | --- | | documentation | | Constructed from plastic | | |
| annotation | |  | | --- | | documentation | | The buildings primary construction material | |

simpleType **NonNegativeDecimal**

|  |  |
| --- | --- |
| type | restriction of **xs:decimal** |
| used by | |  |  | | --- | --- | | elements | [**Daymark/height**](#LinkDD)[**IALA\_EnvironmentObservationEquipment/height**](#LinkF1)[**Pile/height**](#Link15B)[**GenericBeacon/height**](#LinkB1)[**OffshorePlatform/height**](#Link14B)[**Landmark/height**](#LinkFC)[**Topmark/height**](#Link1A7)[**Light/height**](#Link109)[**SiloTank/height**](#Link197)[**RetroReflector/height**](#Link18A)[**RadarReflector/height**](#Link16B)[**LightVessel/horizontalAccuracy**](#Link131)[**LightFloat/horizontalAccuracy**](#Link122)[**QualityOfNonBathymetricData/horizontalDistanceUncertainty**](#Link162)[**LightVessel/horizontalLength**](#Link132)[**LightFloat/horizontalLength**](#Link123)[**QualityOfNonBathymetricData/horizontalPositionUncertainty**](#Link163)[**LightVessel/horizontalWidth**](#Link133)[**LightFloat/horizontalWidth**](#Link124)[**Light/IALA\_valueOfGeographicalRange**](#Link11C)[**Light/IALA\_valueOfLuminousRange**](#Link11D)[**SpatialUncertainty/positionalAccuracy**](#Link1A4)[**RecommendedTrack/soundingAccuracy**](#Link181)[**FogSignal/valueOfMaximumRange**](#LinkED)[**RadarTransponderBeacon/valueOfNominalRange**](#Link178)[**Light/valueOfNominalRange**](#Link118)[**Daymark/verticalLength**](#LinkE5)[**GenericBeacon/verticalLength**](#LinkB4)[**LightVessel/verticalLength**](#Link139)[**LightFloat/verticalLength**](#Link12A)[**OffshorePlatform/verticalLength**](#Link153)[**Pile/verticalLength**](#Link15E)[**SiloTank/verticalLength**](#Link19F)[**Landmark/verticalLength**](#Link103)[**Topmark/verticalLength**](#Link1AD)[**GenericBuoy/verticalLength**](#LinkC7)[**QualityOfNonBathymetricData/verticalUncertainty**](#Link168) | | simpleType | [**NonNegativeDecimal.1**](#Link6C) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | |
| annotation | |  | | --- | | documentation | | Type for decimal values with minimum 0.0. | |

simpleType **NonNegativeDecimal.1**

|  |  |
| --- | --- |
| type | restriction of [**NonNegativeDecimal**](#Link69) |
| used by | |  |  | | --- | --- | | elements | [**Daymark/verticalAccuracy**](#LinkE3)[**GenericBeacon/verticalAccuracy**](#LinkB5)[**GenericBuoy/verticalAccuracy**](#LinkC6)[**Landmark/verticalAccuracy**](#Link101)[**Light/verticalAccuracy**](#Link117)[**LightFloat/verticalAccuracy**](#Link129)[**LightVessel/verticalAccuracy**](#Link138)[**OffshorePlatform/verticalAccuracy**](#Link151)[**Pile/verticalAccuracy**](#Link15C)[**RadarReflector/verticalAccuracy**](#Link16D)[**RetroReflector/verticalAccuracy**](#Link18D)[**SiloTank/verticalAccuracy**](#Link19D)[**Topmark/verticalAccuracy**](#Link1AB) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | minInclusive | 0.0 |  | | fractionDigits | 1 |  | |
| annotation | |  | | --- | | documentation | | Type for decimal values with minimum 0.0 and at most 1 decimal place | |

simpleType **product**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**OffshorePlatform/product**](#Link14E)[**SiloTank/product**](#Link19B) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | oil |  | | enumeration | gas |  | | enumeration | water |  | | enumeration | stone |  | | enumeration | coal |  | | enumeration | ore |  | | enumeration | chemicals |  | | enumeration | drinking water |  | | enumeration | milk |  | | enumeration | bauxite |  | | enumeration | coke |  | | enumeration | iron ingots |  | | enumeration | salt |  | | enumeration | sand |  | | enumeration | timber |  | | enumeration | sawdust/wood chips |  | | enumeration | scrap metal |  | | enumeration | liquified natural gas (LNG) |  | | enumeration | liquified petroleum gas (LPG) |  | | enumeration | wine |  | | enumeration | cement |  | | enumeration | grain |  | |
| annotation | |  | | --- | | documentation | | The various substances which are transported, stored or exploited. | |

simpleType **qualityOfPosition**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**SpatialUncertainty/qualityOfPosition**](#Link1A3) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | surveyed |  | | enumeration | unsurveyed |  | | enumeration | inadequately surveyed |  | | enumeration | approximate |  | | enumeration | position doubtful |  | | enumeration | unreliable |  | | enumeration | reported (not surveyed) |  | | enumeration | reported (not confirmed) |  | | enumeration | estimated |  | | enumeration | precisely known |  | | enumeration | calculated |  | |
| annotation | |  | | --- | | documentation | | The degree of reliability attributed to a position | |

simpleType **qualityOfSoundingMeasurement**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**RecommendedTrack/qualityOfSoundingMeasurement**](#Link180) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | depth known |  | | enumeration | depth unknown |  | | enumeration | doubtful sounding |  | | enumeration | unreliable sounding |  | | enumeration | no bottom found at value shown |  | | enumeration | least depth known |  | | enumeration | least depth unknown, safe clearance at value shown |  | | enumeration | value reported (not surveyed) |  | | enumeration | value reported (not confirmed) |  | | enumeration | maintained depth |  | | enumeration | not regularly maintained |  | |
| annotation | |  | | --- | | documentation | | The reliability of the value of a sounding. | |

simpleType **radarConspicuous**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**GenericBuoy/radarConspicious**](#LinkC0)[**GenericBeacon/radarConspicuous**](#LinkAE)[**Landmark/radarConspicuous**](#LinkF8)[**LightFloat/radarConspicuous**](#Link120)[**LightVessel/radarConspicuous**](#Link12F)[**OffshorePlatform/radarConspicuous**](#Link149)[**SiloTank/radarConspicuous**](#Link194) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | radar conspicuous |  | | enumeration | not radar conspicuous |  | | enumeration | radar conspicuous (has radar reflector) |  | |
| annotation | |  | | --- | | documentation | | A feature which returns a strong radar echo. | |

simpleType **signalGeneration**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**FogSignal/signalGeneration**](#LinkE8) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | automatically |  | | enumeration | by wave action |  | | enumeration | by hand |  | | enumeration | by wind |  | |
| annotation | |  | | --- | | documentation | | The mechanism used to generate a fog signal. | |

simpleType **status**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**Daymark/status**](#LinkE1)[**IALA\_EnvironmentObservationEquipment/status**](#LinkF0)[**FogSignal/status**](#LinkEC)[**GenericBeacon/status**](#LinkB8)[**GenericBuoy/status**](#LinkC5)[**Landmark/status**](#Link100)[**Light/status**](#Link116)[**LightFloat/status**](#Link128)[**LightVessel/status**](#Link137)[**NavigationLine/status**](#Link142)[**OffshorePlatform/status**](#Link150)[**RadarReflector/status**](#Link16C)[**RadarTransponderBeacon/status**](#Link177)[**RecommendedTrack/status**](#Link182)[**RetroReflector/status**](#Link18C)[**SiloTank/status**](#Link19C)[**Topmark/status**](#Link1A9) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | permanent |  | | enumeration | occasional |  | | enumeration | recommended |  | | enumeration | not in use |  | | enumeration | periodic/intermittent |  | | enumeration | reserved |  | | enumeration | temporary |  | | enumeration | private |  | | enumeration | mandatory |  | | enumeration | extinguished |  | | enumeration | illuminated |  | | enumeration | historic |  | | enumeration | public |  | | enumeration | synchronized |  | | enumeration | watched |  | | enumeration | un-watched |  | | enumeration | existence doubtful |  | | enumeration | IALA\_confirmed | |  | | --- | | documentation | | made certain as to truth, accuracy, validity, availability, etc. - www.dictionary.com | | | enumeration | IALA\_candidate | |  | | --- | | documentation | | Item selected for an action | | | enumeration | IALA\_under modification | |  | | --- | | documentation | | Item that is in the process of being modified | | | enumeration | IALA\_candidate for modification | |  | | --- | | documentation | | Item selected for modification | | | enumeration | IALA\_under removal/deletion | |  | | --- | | documentation | | Item in the process of being removed or deleted | | | enumeration | IALA\_removed/deleted | |  | | --- | | documentation | | Item that has been removed or deleted | | |
| annotation | |  | | --- | | documentation | | The condition of an object at a given instant in time. | |

simpleType **techniqueOfSoundingMeasurement**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**RecommendedTrack/techniqueOfSoundingMeasurement**](#Link183) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | found by echo-sounder |  | | enumeration | found by side scan sonar |  | | enumeration | found by multi-beam |  | | enumeration | found by diver |  | | enumeration | found by lead-line |  | | enumeration | swept by wire-drag |  | | enumeration | found by laser |  | | enumeration | swept by vertical acoustic system |  | | enumeration | found by electromagnetic sensor |  | | enumeration | photogrammetry |  | | enumeration | satellite imagery |  | | enumeration | found by levelling |  | | enumeration | swept by side-scan sonar |  | | enumeration | computer generated |  | |
| annotation | |  | | --- | | documentation | | Survey method used to obtain depth information | |

simpleType **topmarkDaymarkShape**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**Daymark/topmarkDaymarkShape**](#LinkE2)[**Topmark/topmarkDaymarkShape**](#Link1AA) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | cone, point up |  | | enumeration | cone, point down |  | | enumeration | sphere |  | | enumeration | 2 spheres |  | | enumeration | cylinder (can) |  | | enumeration | board |  | | enumeration | x-shape (St. Andrew's cross) |  | | enumeration | upright cross (St George's cross) |  | | enumeration | cube, point up |  | | enumeration | 2 cones, point to point |  | | enumeration | 2 cones, base to base |  | | enumeration | rhombus (diamond) |  | | enumeration | 2 cones (points upward) |  | | enumeration | 2 cones (points downward) |  | | enumeration | besom, point up (broom or perch) |  | | enumeration | besom, point down (broom or perch) |  | | enumeration | flag |  | | enumeration | sphere over rhombus |  | | enumeration | square |  | | enumeration | rectangle, horizontal | |  | | --- | | documentation | | where the two longer opposite sides are standing horizontally. A rectangle is a plane figure with four right angles and four straight sides, opposite sides being parallel and equal in length | | | enumeration | rectangle, vertical | |  | | --- | | documentation | | where the two longer opposite sides are standing vertically. A rectangle is a plane figure with four right angles and four straight sides, opposite sides being parallel and equal in length | | | enumeration | trapezium, up |  | | enumeration | trapezium, down |  | | enumeration | triangle, point up |  | | enumeration | triangle, point down |  | | enumeration | circle |  | | enumeration | two upright crosses (one over the other) |  | | enumeration | T-shape |  | | enumeration | triangle pointing up over a circle |  | | enumeration | upright cross over a circle |  | | enumeration | rhombus over a circle |  | | enumeration | circle over a triangle pointing up |  | | enumeration | other shape |  | | enumeration | IALA\_tubular |  | |
| annotation | |  | | --- | | documentation | | The shape a topmark or day mark exhibits | |

simpleType **trafficFlow**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | element | [**RecommendedTrack/trafficFlow**](#Link184) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | inbound |  | | enumeration | outbound |  | | enumeration | one-way |  | | enumeration | two-way |  | |

simpleType **verticalDatum**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**Daymark/verticalDatum**](#LinkE4)[**Landmark/verticalDatum**](#Link102)[**Light/verticalDatum**](#Link119)[**OffshorePlatform/verticalDatum**](#Link152)[**Pile/verticalDatum**](#Link15D)[**RadarReflector/verticalDatum**](#Link16E)[**RecommendedTrack/verticalDatum**](#Link185)[**RetroReflector/verticalDatum**](#Link18E)[**SiloTank/verticalDatum**](#Link19E)[**Topmark/verticalDatum**](#Link1AC)[**SoundingDatum/verticalDatum**](#Link1A1)[**VerticalDatum/verticalDatum**](#Link1AE) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | Mean low water springs |  | | enumeration | Mean lower low water springs |  | | enumeration | Mean sea level |  | | enumeration | Lowest low water |  | | enumeration | Mean low water |  | | enumeration | Lowest low water springs |  | | enumeration | Approximate mean low water springs |  | | enumeration | Indian spring low water |  | | enumeration | Low water springs |  | | enumeration | Approximate lowest astronomical tide |  | | enumeration | Nearly lowest low water |  | | enumeration | Mean lower low water |  | | enumeration | Low water |  | | enumeration | Approximate mean low water |  | | enumeration | Approximate mean lower low water |  | | enumeration | Mean high water |  | | enumeration | Mean high water springs |  | | enumeration | High water |  | | enumeration | Approximate mean sea level |  | | enumeration | High water springs |  | | enumeration | Mean higher high water |  | | enumeration | Equinoctial spring low water |  | | enumeration | Lowest astronomical tide |  | | enumeration | Local datum |  | | enumeration | International Great Lakes Datum 1985 |  | | enumeration | Mean water level |  | | enumeration | Lower low water large tide |  | | enumeration | Higher high water large tide |  | | enumeration | Nearly highest high water |  | | enumeration | Highest astronomical tide (HAT) |  | |
| annotation | |  | | --- | | documentation | | Vertical datum used for measuring elevations of points on the earth's surface. Its the datum to which both heights and soundings are referred. | |

simpleType **visuallyConspicuous**

|  |  |
| --- | --- |
| type | restriction of **xs:string** |
| used by | |  |  | | --- | --- | | elements | [**GenericBeacon/visuallyConspicuous**](#LinkAF)[**Landmark/visuallyConspicuous**](#LinkF9)[**LightFloat/visuallyConspicuous**](#Link121)[**LightVessel/visuallyConspicuous**](#Link130)[**OffshorePlatform/visuallyConspicuous**](#Link14A)[**Pile/visuallyConspicuous**](#Link15A)[**SiloTank/visuallyConspicuous**](#Link195) | |
| facets | |  |  |  | | --- | --- | --- | | Kind | Value | Annotation | | enumeration | visually conspicuous |  | | enumeration | not visually conspicuous |  | |
| annotation | |  | | --- | | documentation | | Relating to a features ability to be clearly seen and identified | |