

Changes IES 2.1 -> IES 2.3.3

red = new, blue = relevant for German waterways administration

M=mandatory, C=conditional mandatory, O=optional

1. Objects:

M_QUAL	SUREND: M > O SURSTA: M > O
ADMARE	New: CONDTN (C), value 3 (=under reclamation, sea area which is reclaimed as land, usually after dumping earth)
AIRARE	CATAIR: additional value 4 (civil heliport – landing place for helicopters) New: CONDTN (C), values 1,2,3,5
BCNISD	New feature (P); beacon, isolated danger Attributes: BCNSHP, COLOUR, COLPAT, CONRAD, DATSTA, DATEND, PERSTA, PEREND, CONDTN, OBJNAM, NOBJNM, INFORM, NINFOM, SCAMIN, PICREP, TXTDSC, SORDAT, SORIND
BCNLAT	New: CONDTN (C), values 1,2,3,5
BOYCAR	New: MARSYS (C), values 1,2
BOYISD	New feature (P), buoy, isolated danger Attributes: BOYSHP, COLOUR, COLPAT, CONRAD, MARSYS, DATSTA, DATEND, PERSTA, PEREND, NOBJNM, OBJNAM, INFORM, NINFOM, SCAMIN, PICREP, TXTDSC, SORDAT, SORIND
BOYLAT	New: MARSYS (C), values 1,2
BOYSAW	New: MARSYS (C), values 1,2
BOYSPP	New: MARSYS (C), values 1,2 (IALA A – IALA B)
BUAARE	New: CONDTN (C), values 1,2,3,5
BUISGL	New: CONDTN (C), values 1,2,3,4,5
CBLARE	CATCBL: M > O New: STATUS (C), values 18 New: CONDTN (C), values 1,2,3,5
CBLSUB	CATCBL: M > O New: STATUS (C), value 18 (existence doubtful)
COALNE	New: CATCOA (O), values 1-11
CONVYR	New: CONDTN (C), values 1,2,3,5
CRANES	CATCRN: M > O; additional values 3,4,5 New: CONDTN (C), values 1,2,3,5
DAMCON	CATDAM, additional value 3 (flood barrage) New: CONDTN (C), values 1,2,3,5 OBJNAM, NOBJNM deleted
DAYMAR	New: CONDTN (C), values 1,2,3,5
DEPARE	DATSTA, DATEND, PERSTA, PEREND deleted
DRGARE	DATSTA, DATEND, PERSTA, PEREND deleted
DRYDOC	New: CONDTN (C), values 1,2,3,5
DMPGRD	New feature (P,A), dumping ground Attributes: CATDPG, RESTRN, OBJNAM, NOBJNM, INFORM, NINFOM, SCAMIN, SORDAT, SORIND
DYKCON	New: CONDTN (C), values 1,2,3,5
FLODOC	New: CONDTN (C), values 1,2,3,5 DATSTA, DATEND, PERSTA, PEREND deleted

FNCLNE	New: CONDTN (C) , values 1,2,3,5
FRPARE	New: CONDTN (C) , values 1,2,3,5
GATCON	New: CONDTN (C) , values 1,2,3,5 New: unlocd (C)
HRBFAC	New: CONDTN (C) , values 1,2,3,5
HULKES	New: CONDTN (C) , values 1,2,3,5 DATSTA, DATEND, PERSTA, PEREND deleted
LIGHTS	New: CONDTN (C) , values 1,2,3,5
LNDARE	DATSTA, DATEND, PERSTA, PEREND deleted
LNDMRK	New: CONDTN (C) , values 1,2,3,4,5
LNDRGN	New: CONDTN (C) , values 1,2,3,5
MARCUL	New feature (P,L,A), marine farm/culture Attributes: CATMFA, EXPSOU, VALSOU, QUASOU, SOUACC, WATLEV, STATUS, OBJNAM, NOBJNM, INFORM, NINFOM, SCAMIN, DATSTA, DATEND, PERSTA, PEREND, SORDAT, SORIND
MORFAC	CATMOR , additional value 3 (bollard) New: CONDTN (C) , values 1,2,3,5
OBSTRN	INFORM: C > O
PILPNT	New: CONDTN (C) , values 1,2,3,5
PIPARE	CATPIP: M > O (culvert) PRODCT: M > O New: STATUS (C) , value 18 (existence doubtful) New: CONDTN (C) , values 1,2,3,5
PIPSOL	CATPIP: M > O (siphon) PRODCT: M > O New: STATUS (C) , value 18 New: CONDTN (C) , values 1,2,3,5
PONTON	New: CONDTN (C) , values 1,2,3,5 DATSTA, DATEND, PERSTA, PEREND deleted
PRDARE	New feature (A), production/storage area (exploitation and storage of natural resources, connected to a transshipment site) Attributes: CATPRA, PRODCT, CONVIS, STATUS, CONDTN, OBJNAM, NOBJNM, INFORM, NINFOM, PICREP, TXTDSC, DATSTA, DATEND, PERSTA, PEREND, SORDAT, SORIND
PYLONS	New: CONDTN (C) , values 1,2,3,5 (under construction, ruined, planned construction)
RAILWY	New: CONDTN (C) , values 1,2,3,5
ROADWY	New: CONDTN (C) , values 1,2,3,5
RTPBCN	New: CONDTN (C) , values 1,2,3,5
RSCSTA	New feature (P), rescue station (place with life saving equipment, e.g. lifebelt) Attributes: catrsc , STATUS, OBJNAM, NOBJNM, INFORM, NINFOM, SCAMIN, NTXTDS, TXTDSC, DATSTA, DATEND, PERSTA, PEREND, SORDAT, SORIND (all optional)
SEAARE	CATSEA (optional), additional value 13 (shoal = shallow) New: CONDTN (C) , values 1,2,3,5
SILTNN	New: CONDTN (C) , values 1,2,3,5
SLCONS	New: CONDTN (C) , values 1,2,3,5
SLOGRD	New: NATSUR (O), values 1-9, 11,14,17,18
SLOTOP	New: NATSUR (O), values 1-9, 11,14,17,18 (material: e.g. sand, stone, rock) New: CONDTN (C) , values 1,2,3,5
SMCFAC	New: CONDTN (C) , values 1,2,3,5 (landing steps, boat towing facility)
TOPMAR	New: CONDTN (C) , values 1,2,3,5
TSEZNE	New feature (A), traffic separation zone (separate lanes for opposite directions)

	Attributes: CATTSS (IMO – not IMO adapted), STATUS (recommended – mandatory), INFORM, NINFOM, SCAMIN, TXTDSC, DATSTA, DATEND, SORDAT, SORIND
TUNNEL	HORCLR: M > C VERCLR: M > C New: CONDTN (C), values 1,2,3,5
UWTROC	Geometry type additional (A) New: NATSUR (O), values 1-9, 11,14,17,18 New: QUASOU (O), values 1,2,8,10,11
UNSARE	New feature (A), unsurveyed area Attributes: QUASOU, SORDAT, SORIND
WRECKS	New: QUASOU (O), values 1,2,8,10,11 (depth known, unknown, value reported (not surveyed), maintained depth, not regularly maintained) New: TECSOU (O), values 1-14 New: STATUS (O), values 12 (illuminated), 16-18 (watched/observed, unwatched, existence doubtful)
C_AGGR	New: unlocd (C) OBJNAM: O > M
achbrt	catach, additional values 12,13 clsdng, additional value 5 New: NATSUR (O), values 1-9,11,14,17,18
achare	catach, additional values 12,13 clsdng, additional value 5 New: NATSUR (O), values 1-9,11,14,17,18
bcnlat	New: CONDTN (C), values 1,2,3,5
berths	clsdng, additional value 5 (one red light / red cone top down)
bridge	CATBRG , additional value 9 wtwdis , decimal digits: 1 > 3 New: CONDTN (C), values 1,2,3,5
bunsta	New: CONDTN (C), values 1,2,3,5
cblohd	wtwdis , decimal digits: 1 > 3 New: unlocd (C) New: CONDTN (C), values 1,2,3,5
convyr	Geometry type additional (A) New: CONDTN (C), values 1,2,3,5
cranes	CATCRN: M > O, values additional 3,4,5 New: CONDTN (C), values 1,2,3,5
depare	hunits: C > M; wtwdis , decimal digits: 1 > 3 DATSTA, DATEND, PERSTA, PEREND deleted
excnst	hunits: C > M; wtwdis , decimal digits: 1 > 3 New: CONDTN (O), values 1,2,3,5 OBJNAM , NOBJNM deleted
flodoc	New: CONDTN (C), values 1,2,3,5
gatcon	CATGAT , additional value 2 wtwdis , decimal digits: 1 > 3 New: CONDTN (C), values 1,2,3,5 New: unlocd (C)
hrbare	New: CONDTN (C), values 1,2,3,5
hrbbsn	New: CONDTN (C), values 1,2,3,5
hrbfac	New: CONDTN (C), values 1,2,3,5
hulkes	New: CONDTN (C), values 1,2,3,5
lokbsn	New: CONDTN (C), values 1,2,3,5
lkbspt	New: CONDTN (C), values 1,2,3,5
notmrk	dirimp , additional value 5 New: bnkwtw (O), values 1,2 New: CONDTN (C), values 1,2,3,5

pipohd	wtwdis, decimal digits: 1 > 3 New: unlocd (C) New: CONDTN (C), values 1,2,3,5
ponton	New: CONDTN (C), values 1,2,3,5
prtare	New: CONDTN (C), values 1,2,3,5
rdocal	New: unlocd (C)
refdmp	New: unlocd (C) New: CONDTN (C), values 1,2,3,5
resare	restrn, additional value 37 (limited fairway width) New: NATSUR (O), values 1-9,11,14,17,18
slcons	catslc, additional value 19 (ice breaker) New: CONDTN (C), values 1,2,3,5
sistat	New: CONDTN (C), values 1,2,3,5 New: unlocd (C)
sistaw	New: CONDTN (C), values 1,2,3,5
termnl	New: CONDTN (C), values 1,2,3,5
uwtrroc	Geometry type additional (A) New: NATSUR (O), values 1-9,11,14,17,18 New: QUASOU (O), values 1,2,8,10,11
vehtrf	New: CONDTN (C), values 1,2,3,5
wtwgag	wtwdis, decimal digits: 1 > 3 New: CONDTN (C), values 1,2,3,5
wtwprf	hunits: C > M; wtwdis, wtwdis, decimal digits: 1 > 3
daymar	New feature (P), daymark (compared to DAYMAR additional ORIENT, dirimp, CONDTN). Attributes: COLOUR, COLPAT, DATSTA, DATEND, PERSTA, PEREND, TOPSHP, ORIENT, dirimp, CONDTN, OBJNAM, NOBJNM, INFORM, NINFOM, SCAMIN, PICREP, TXTDSC, SORDAT, SORIND

2. Attribute:

BCNSHP	additional value 2 (withy), 3 (beacon tower), 4 (lattice beacon)
CATAIR	additional value 4 (civil heliport)
CATBRG	additional value 9 (footbridge)
CATCOA	New attribute, category of coastline Values: 1 (steep coast), 2 (flat coast), 3 (sandy shore), 4 (stony shore), 5 (shingly shore), 6 (glacier (seaward end)), 7 (mangrove), 8 (marshy shore), 9 (coral reef), 10 (ice coast), 11 (shelly shore)
CATCRN	additional values 3 (sheerlegs), 4 (travelling crane), 5 (A-frame)
CATDAM	additional value 3 (flood barrage)
CATDPG	New attribute, category of dumping ground Values: 2 (chemical wasting dumping ground), 4 (explosives dumping ground), 5 (spoil ground)
CATGAT	additional value 2 (flood barrage gate)
CATLMK	value 22 (large rock or boulder on land) deleted (identical with 21)
CATMFA	New attribute: category of marine farm/culture Values: 1 (crustaceans), 2 (oysters/mussels), 3 (fish), 4 (seaweed)
CATMOR	additional value 3 (bollard)
CATPRA	New attribute, category of production area Values: 1 (quarry), 2 (mine), 3 (stockpile), 4 (power station area), 5 (refinery area), 6 (timber yard), 7 (factory area), 8 (tank farm), 9 (wind farm), 10 (slag heap/spoil heap)
CATSEA	additional value 13 (shoal=shallow)
CATTSS	New attribute, category of traffic separation scheme Values: 1 (IMO – adopted), 2 (not IMO – adopted)
CONDTN	New attribute, condition

	Values: 1 (under construction), 2 (ruined), 3 (under reclamation), 4 (wingless), 5 (planned construction)
EXPSOU	New attribute, exposition of sounding Values: 1 (within the range of depth of the surrounding depth area), 2 (shoaler than the range of depth of the surrounding depth area), 3 (deeper than the range of depth of the surrounding depth area)
MARSYS	New attribute, marks navigational – system of Values: 1 (IALA A), 2 (IALA B)
NATSUR	additional values 1 (mud), 2 (clay), 3 (silt), 4 (sand), 5 (stone), 6 (gravel), 7 (pebbles), 8 (cobbles), 11 (lava), 14 (coral), 17 (shells), 18 (boulder)
PILDST	deleted
QUASOU	additional values 3 (doubtful sounding), 4 (unreliable sounding), 6 (least depth known), 7 (least depth unknown, safe clearance at value shown), 9 (value reported (not confirmed))
RESTRN	additional values 3 (fishing prohibited), 5 (trawling prohibited), 7 (entry prohibited), 8 (entry restricted), 24 (dragging prohibited)
STATUS	additional value 18 (existence doubtful)
VERDAT	New attribute, vertical datum ((O), only used for GATCON) value 4 (lowest low water)
WATLEV	additional value 7 (floating; rests on the surface)
catach	additional values 12 (anchorage for dry cargo vessels), 13 (anchorage for rafts)
catlam	value 16 changed from „obstruction at the left-hand side” to “danger point or obstacles at the left-hand side” (adaption analogue to value 15)
catslc	additional value 19 (ice breaker)
catnmk	additional values 103 ((BR) proceed close to the margin on your portside), 104 ((BR) proceed close to the margin on your starboard side), 105 ((BR) proceed in the middle of the river), 106 ((BR) cross river to port), 107 ((BR) cross river to starboard), 108 ((BR) traffic between margins), 109 ((BR) reduce speed), 110 (wreck pontoon, passage allowed on side showing red-white sign), 111 (passage allowed on both sides), 112 (no passing or overtaking of convoys), 113 (small crafts prohibited), 114 (Attention! (Keep caution)), 115 (fairway crossing), 116 (shipping inspection point).
catcom	value 4: MID > MIB
catsrc	New attribute, category of rescue station (for RSCSTA) Values: 1 (rescue station with life boat), 2 (rescue station with rocket), 3 (not in use), 4 (refuge for ship-wrecked mariners), 5 (refuge for intertidal area walkers), 6 (lifeboat lying at a mooring), 7 (aid radio station), 8 (first aid equipment), 10 (lifebuoy, ring buoy, life ring, life saver)
clsdng	additional value 5 (one red light / red cone top down)
dirimp	additional value 5 (to harbor)
lg_fnc	deleted
marsys	additional values 13 (Brazilian national inland waterway regulations - two sides), 14 (Brazilian national inland waterway regulations - side independent), 15 (Paraguay-Parana waterway - Brazilian complementary aids)
restrn	additional value 37 (restricted fairway width)
lc_sp1	deleted
lc_sp2	deleted
bnkwtw	New attribute, bank of the waterway ((O), for notmrk) Values: 1 (left), 2 (right)