IMO Ships Routeing - Latest 2025

Objectives

1) The seperation of opposing streams of traffic so as to reduce the incidence of head on encounter.

2) The reduction of dangers of collision between crossing traffic

3) The simplification of the patterns of traffic flow in converging area.

4) The organisation of safe traffic flow near concentrated offshore installation

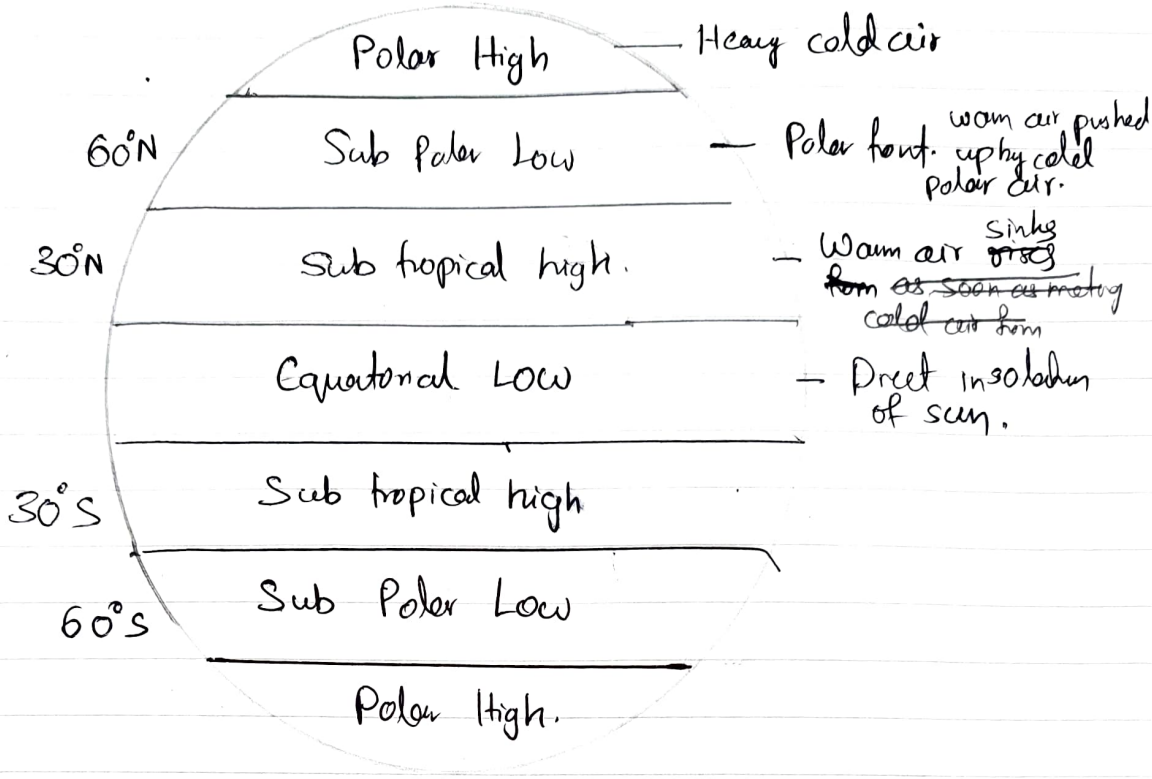
5) The organisation of safe traffic flow around areas where navigation of all or certain class of ship is dangerous.

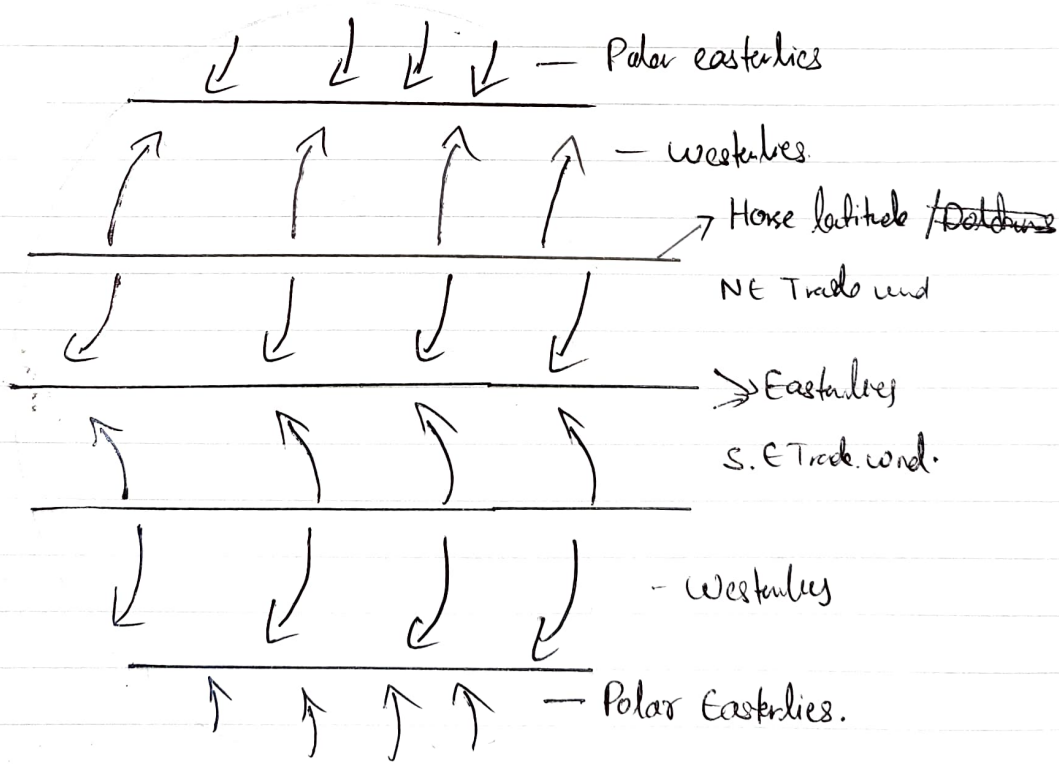
6) The organisation of safe traffic flow around or at safe distance from environmentally ~~sed~~ sensitive area.

7) The reduction of risk ~~by~~ of grounding by providing guidance to ship where water depths are uncertain or ~~shallow~~. critical.

8) The guidance of traffic clear of fishing grounds.

Pressure Distribution.





Due to rotation of earth. the wind ~~com~~ blows in N.H is deflected right direction & S.H in left direction called as coriolis force.

Ship Reporting System

CALDOVREP – MGN 364 (M+F)

Sources of information
1) MGN 364 - TSS, Route 10 & Navigation in Dover Strait
2) Ships Routeing
3) ENC/Charts & Sailing Direction.

Mandatory Reporting
-> Name of the ship, call sign, IMO NO & MMSI Number.
-> Position. (Lat & Long)
-> CO & Spd
-> Draft.
-> Route information
-> Hazardous cargo, IMO Class & Quantity.
-> Any existing defects & deficiencies
-> Any other circumstances affecting navigation as per SOLAS & MARPOL.

All ships above 300 GRT & above
Less than 300 GRT who are NUC, RAM or have defective navigational aids.

65 Miles stech of Dover Strait.
NE Bound reports to Gris-Nez
SW Bound reports to Dover Coastguard.

CNIS - Channel Navigation information System - Channel VTS
Functions:
Monitor Dover TSS.
Tracking ships moment
Provide navigational info
Enforcing safety regulations

AMVER

For 1000 GRT or more engaged in 24 hours.

Sailing Plan (SP)

Name, call sign, time, co & spd. Port of dep, destination & ~~way points~~ intended route
Sent few hours before or after departure.
Vessel should be inside 25 miles of reported information

Position Report (PR)

Name, call sign. Time, position, co & spd.
Sent 24 hours within departing port. & at least 48 hrs once thereafter.

Deviation Report (DR)

This report to be sent as soon as any voyage info changes which could affect amvers ability to predict the position.

Final Arrival Report (FR)

Name, call sign & Port of Arrival.
Sent at arrival of port. of destination

World-Wide - Navigational warning service.
=> IHO & IMO combined

3 types of Radio Navigational Warning.

- Navarea Warning
- Coastal warning
- Local Warning.

Total 21 Navarea, each managed by specific country.

Information area limit, Nav Coordinator, transmitting station, times & frequency given in ALRS Volume 3.

Transmission : Radio Comm, Satlite communication & NAVTEX.

NAVWARNINGS

(Generic as you have seen on ship)

Coastal Warning

Issued for particular coastal region. They supplement information contained in navarea warning. They often supplement info in NAVAREA warning. Not restricted to main shipping lanes.
Issued by National coordinator.

- RT
- VHF
- Navtex.

Local Warning.
Covers the limits of jurisdiction of a port authority or a harbour. Issued by port, Pilotage or Coastguard authority. Messages are not intended to ocean going vessel unless they are visiting that particular port. Means of promulgation is by VHF.

Navtex

Navtex is automated direct printing medium frequency receiver for navigational, meteorological, SAR as well as other more safety information related warnings & forecast.

International frequency is 518 KHz. with English language
Nearby ~~local~~ frequency used 490 KHz & 4209.5 KHz

Message Priority.
VITAL - For immediate broadcast.
IMPORTANT - For broadcast at next available period when f is not used.
ROUTINE :- For broadcast at scheduled transmission period.

Categories
A :- Navigational Warnings.
B :- Meterological warning.
D :- SAR Information & Pirate attack warning.
} Cannot be deselected

L :- Navigational warnings additional to category A. -> Should not be deselected.

AIS

Advantages :-

-> Continuously transmit ship details & receive details of the other ship in vicinity.
-> Positive identification of ships / structures / navaids fitted with AIS. eg VTS, TSS, CG.
-> Auto exchange of safety information.
-> Reduces verbal reporting / Reduction in VHF traffic.
-> Close monitoring of TSS / Pollution / SAR.
-> Real time information.
-> Range of AIS is VHF range longer than Radar.

-> Can display data on ECDIS or Radar.

Limitation

-> Limited to VHF range.
-> Must be prudently used in piracy zone.

Data

-> Static data
-> Voyage data
-> Dynamic data
-> Short safety related messages.

Information from radar plot relies solely upon data measured from ownship radar & provides accurate measurement of the targets relative course & speed, which is the most important factor in deciding upon action to avoid collision.

Important MGN

MGN 272 - VDR - Performance testing

Annual testing by competent person in conjunction with relevant statutory survey.

MGN - ~~285~~ 301 - Maneuvring info onboard ship

Pilot Card

→ Must be filled by Master.

→ Must contain of present loading condition, propulsion & maneuvring equipment, navigation equipment & any other relevent information.

→ Also contain any defect which may effect ships maneuverablity or pilotage operation.

Wheel house Poster

→ Permanently displayed on bridge

→ Should contain general particulars & maneuvering characteristics of the ship

→ Following info included.

- Ship Particulars
- Steering Particulars
- Anchor chain Particulars
- Propulsion (Thruster effect)
- Draft increase. (Squat, Heel)
- Turning Circle at max rudder angle charts
- Emcy maneuvr chart.
- Stopping characteristics including crash stop details.

Manoeuvring Booklet. (Dec-2020 Q5)

7 Sections

1) General description

2) Manoeuvring Characteristics in Deep Water

3) Stopping & Speed Control characteristics in Deep Water

4) Manoeuvring Characteristics in Shallow Water.

5) Manoeuvring Characteristics in Wind.

6) Manoeuvring Characteristics ~~in~~ at Low Speed.

7) Additional information.

MGN-199 · Danger of interaction (Dec-2020) Q5

Key Points

1) Understand that sudden shearing may occur when passing other vessel at close range.

2) Appreciate the need to reduce speed in narrow channel.

3) Dangerous effect on tugs when manoeuvring close to larger vessel.

4) Unexpected turning moments may occur when stopping in shallow ; confined basins.

5) Appropriate allowance should be made for squat.

6) Note the results of laboratory work.

MGN-285 - ECDIS in RCDS MODE
A full folio of Paper chart should be carried when using RCDS mode.
Limitation of Raster charts.

1) Chart based system & not Vector charts like ENC.

2) Alarms are not triggered by chart data

3) Datum shifts may occur while shifting charts.

4) Look ahead capability reduced.

5) Orientation of chart not practical, course up & headup cannot be used

6) Interrogation with RNC not possible.

7) Not possible to select safety contour.

8) Zooming degrades display.

MGN-324 - Ammendment 2 Navigation - Use of VHF & AIS.

Routine communication in UK water (Ship to Ship)
CH 6, 8, 72 & 77

MGN-364 - TSS - Application of Rule 10 & navigation in Dover straits.

MGN-369 - Navigation Practices relevant to restricted visibility.

MGN-375 - MSI

Visibility
Very Poor : Less than 0.5 Nm
Poor : 0.5 to 2 Nm
Moderate : 2 to 5 Nm
Good : More than 5 Nm

GMDSS for broadcasting MSI
- The international Navtex Service.
- The international Enhanced Group Calling (EGC) Service
  - → The int'l Safety net Service - (INMARSAT)
  - → The iridium Safety Cast Service (IRIDIUM)

MGN-379 - Use of electronic Navigation AID.

MGN-610 (M+F) - SOLAS CH V

Publications to be corrected.
1) Int Code of Signals.
2) IAMSAR Manual Vol III
3) Mariners Handbook (UKHO)
4) MSN, MGN, MIN
5) NTM
6) NTM - Annual Summary.
7) List of Radio Signal.
8) List of lights
9) Sailing Directions.
10) Nautical Almanac.
11) Navigational Tables.
12) Tide tables.
13) Tidal Stream Atlases.
14) Operating & Maintenance Instructions for Nav Aids carried by the ship.

Vessel fitted with ECDIS

NP 133C : Admiralty ENC Maintenance Record

NP 5012 : " Guide to ~~the~~ ENC Symbols used in ECDIS.

To comply with Radio Regulations

List of Coast Stations & Special Service Stations - List IV

List of Ship Stations & MMSI Assignments - List V

Manual for Maritime Mobile & Maritime Mobile satellite services.