

BASIC CONCEPTS OF NAVIGATION AND SAILING DIRECTIONS



Purpose:

The e-learning module is designed for theoretical training of navigators at operational level in accordance with Chapter II of the STCW Convention in the part concerning of basic concepts of navigation.

What is an e-learning module?

E-learning module is the electronic textbook on one or more sections. Theoretical materials can be accompanied by drawings, diagrams, photos, animations and videos. There is a test for assessment of knowledge gained at the end of each section.

Contents:

- Navigation and its role and place in ship's operation:
 - The purpose and objectives of the discipline.
 - Place of navigation among other sciences of ship's operation.
- Basic concepts of navigation and sailing directions:
 - Shape and models of the Earth.
 - Geographic coordinates: latitude, longitude.
 - Difference in latitude (D'LAT) and difference in longitude (D'LONG).
 - Sea direction counting systems. Use of gyrocompasses.
 - Terminology of nautical units of length and speed. Using lags.
 - Range of visibility of landmarks and lights.

Target groups

Deck - Operational

Ship types

Generic



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Regulations

Table A-II/1 STCW Code

Competence:

Plan and conduct a passage and determine position

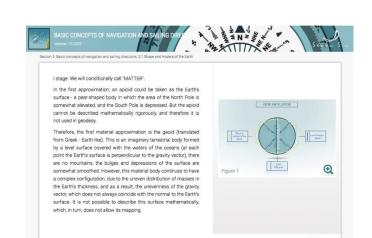


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4

Then the geographical visibility of the landmark (object) Do is equal

Substituting into expression (53) the values from formulas (51) and (52), we obtain the calculation formula for the geographic range of visibility of the landmark (object) Do:

According to formula (54), a table of the geographical visibility range of the Navigational Tables (MT-2000) object was calculated (Table 2.3).

to the sum of De and Dh Do = De + Dh (53)

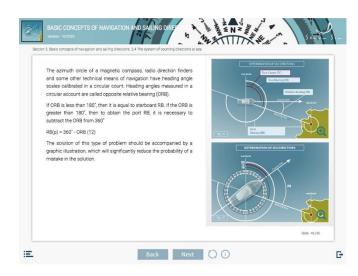
Do(miles)=2,08(√e (m)+√h (m)) (54)

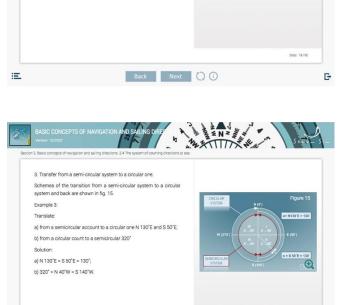
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Side: 41/90

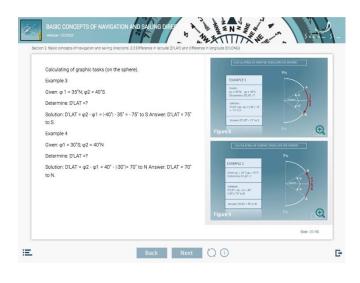
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Figure 24





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