学汇百川 德济四海

The effects toward maritime higher-education in China after the entry into force of Polar code

Xie Haibo, Lecturer, Dalian Maritime University

MSEA student , World Maritime University

Email: halbertsport@126.com

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Outline

1. Background
2. Requirements of Polar Code involving education/training
3. Current maritime higher-education in China
4. Effects toward maritime higher-education

1. Background

Fig 1. The new record of low Arctic sea ice

- The new record of low Arctic sea ice extent, from Sept. 16, 2012, comparing to the average minimum extent over the past 30 years (line in yellow).

1. Background

Fig 2. The new record of low Arctic sea ice

- M.V. Yong Sheng of China has sailed its second Arctic voyage to Europe from China since July 2015.

1. Background

- Arctic route has its own peculiarities and greater danger that means higher professional skills and psychology.
- The additional training/education demands beyond the existing requirements are adopted in Polar Code, expected to enter into force on 1 January 2017.

2. Requirements of Polar Code involving education/training

Source: IMO

Fig 3. Addition requirements of Polar code

2. Requirements of Polar Code involving education/training

- Amendment to chapter V of the STCW Convention and Code relating to training requirements in polar waters was issued this year.
- Requirements of Polar code involving education/training shall be fully considered to ensure the safety of the ship and protect the environment of polar waters.
- As a major exporter of seafarers, maritime higher-education in China should positively take appropriate measures to comply with the requirements of Polar code.

3. Current maritime higher-education in China

Dalian Maritime University

Shanghai Maritime University

Wuhan University of Technology

Jimei University

3. Current maritime higher-education in China

Fig 4. Current course system in China

- Additional courses , trainings and other relevant measures should be developed to make seafarers competent with operations in polar waters.

4. Effects toward maritime higher-education

➤ Updating of courses and textbooks

Fig 5. Different aspects of updating courses and textbooks

4. Effects toward maritime higher-education

➤ Training and assessment

Recognition of ice formation and characteristics
Laws and regulations
Safety of navigation
Impact on ships
Effects of extreme low temperature
Impact on device performance
Emergency response
Environmental protection

Table 1. Relevant content in training program

4. Effects toward maritime higher-education

➤ Selection of instructors

Fig 6. The flow to train young teachers

4. Effects toward maritime higher-education

➤ Development of simulators in polar waters

- *Ship mathematical motion models in polar waters*
- *Real world vision virtual display*
- *Electronic chart*

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Thank you for your attention