

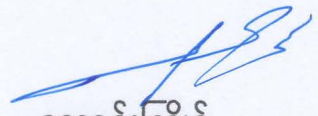
ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
 ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာန
 ရေကြောင်းပို့ဆောင်ရေးညွှန်ကြားမှုဦးစီးဌာန
အမိန့်ကြော်ငြာစာအမှတ် ၄/၂၀၁၉
 ၁၃၈၁ ခုနှစ်၊ နတ်တော်လဆန်း ၈ ရက်
 (၂၀၁၉ ခုနှစ်၊ ဒီဇင်ဘာလ ၄ ရက်)

ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာန၊ ရေကြောင်းပို့ဆောင်ရေးညွှန်ကြားမှုဦးစီးဌာန သည် မြန်မာနိုင်ငံကုန်သည်သင်္ဘောအက်ဥပဒေ ပုဒ်မ ၂၉၄-ခ ပုဒ်မခွဲ (ခ) အရ အပ်နှင်းထားသော လုပ်ပိုင်ခွင့်ကို ကျင့်သုံး၍ ရေယာဉ်မှူး၊ အရာရှိများနှင့် သင်္ဘောသားများ၏ ကျွမ်းကျင်မှုနှင့် တတ်ကျွမ်းမှု လက်မှတ်များ ထုတ်ပေးခြင်းဆိုင်ရာ နည်းဥပဒေများ၊ နည်းဥပဒေ ၂၃ အရ “သင်္ဘောသားများ၏ တတ်ကျွမ်းမှုလက်မှတ်များအတွက် သင်ရိုးညွှန်းတမ်းများ သတ်မှတ်ခြင်း ဆိုင်ရာ အမိန့်ကြော်ငြာစာအမှတ် ၅/၂၀၁၂ ကို ပြင်ဆင်သည့် အမိန့်ကြော်ငြာစာ” ကို ထုတ်ပြန်လိုက်သည်။

၁။ ပို့ဆောင်ရေးဝန်ကြီးဌာန၊ ရေကြောင်းပို့ဆောင်ရေးညွှန်ကြားမှုဦးစီးဌာနက ၂၀.၉.၂၀၁၂ ရက်စွဲပါ အမိန့်ကြော်ငြာစာအမှတ် ၅/၂၀၁၂ ဖြင့် ထုတ်ပြန်ခဲ့သည့် “သင်္ဘောသားများ၏ တတ်ကျွမ်းမှုလက်မှတ်များအတွက် သင်ရိုးညွှန်းတမ်းများ သတ်မှတ်ခြင်း” အမိန့်ကြော်ငြာစာ၏ အပိုဒ် ၂ အပိုဒ်ခွဲ (ဖ) ၏ နောက်တွင် အပိုဒ်ခွဲ (ဗ) နှင့် (ဘ) တို့ကို အောက်ပါအတိုင်း ဖြည့်စွက် ရမည်-

- (ဗ) ဝင်ရိုးစွန်းဒေသရေပြင်များတွင် ခုတ်မောင်းသွားလာသော - Annex -W သင်္ဘောများအတွက် အခြေခံတတ်ကျွမ်းမှု လက်မှတ် သင်ရိုးညွှန်းတမ်း (Syllabus for Basic Training for Ships Operating in Polar Waters (STCW Regulation V/4-1 & V/4-2))။

(ဘ) ဝင်ရိုးစွန်းဒေသရေပြင်များတွင် ခုတ်မောင်းသွားလာသော - Annex -X
သင်တန်းများအတွက် အဆင့်မြင့်တတ်ကျွမ်းမှု လက်မှတ်
သင်ရိုးညွှန်းတမ်း (Syllabus for Advanced Training for
Ships Operating in Polar Waters (STCW Regulation
V/4-3 & V/4-4))။


သောင်းကြိုင်
ညွှန်ကြားရေးမှူးချုပ်

စာအမှတ်၊ ရညန/အမိန့်ကြော်ငြာစာ/ ၁၁၇၅
ရက်စွဲ၊ ၂၀၁၉ ခုနှစ် ၊ ဒီဇင်ဘာလ ၄ ရက်

ဖြန့်ဝေခြင်း

မြန်မာနိုင်ငံရေကြောင်းပညာတက္ကသိုလ်
မြန်မာနိုင်ငံကုန်သွယ်ရေးကြောင်းကောလိပ်
ရေကြောင်းဘက်ဆိုင်ရာ သင်တန်းကျောင်းများ

ညွှန်ကြားရေးမှူးချုပ်
ပုံနှိပ်ရေးနှင့်ထုတ်ဝေရေးဦးစီးဌာန } မြန်မာနိုင်ငံပြန်တမ်းအပိုင်း(၁)တွင်ထည့်သွင်းကြေညာ
ပေးပါရန်မေတ္တာရပ်ခံချက်ဖြင့်ပေးပို့ပါ သည်။

မိတ္တူကို

- ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာန၊
- ပြည်ထောင်စုရှေ့နေချုပ်ရုံး၊
- ရုံးလက်ခံ။

**SYLLABUS FOR BASIC TRAINING FOR SHIPS OPERATING IN POLAR WATERS
STCW REGULATION V/4-1 & V/4-2 and
STANDARD OF COMPETENCE SPECIFIED IN SECTION A-V/4,
PARAGRAPH 1 OF THE STCW CODE**

**SPECIFICATION OF MINIMUM STANDARD OF COMPETENCE IN BASIS TRAINING FOR
SHIPS OPERATING IN POLAR WATERS COURSE**

**Competence No.1 – CONTRIBUTE TO SAFE OPERATION OF VESSELS OPERATING
IN POLAR WATERS**

1.1 Basic Knowledge of ice characteristics and areas where different types of ice can be expected in the area of operation:

- .1 ice physics, terms, formation, growth, ageing and stage of melt
- .2 ice types and concentrations
- .3 ice pressure and distribution
- .4 friction from snow covered ice
- .5 implications of spray-icing; danger of icing up; precautions to avoid icing up and options during icing up
- .6 ice regimes in different regions; significant differences between the Arctic and the Antarctic, first year and multiyear ice, sea ice and land ice
- .7 use of ice imagery to recognize consequences of rapid change in ice and weather conditions
- .8 knowledge of ice blink and water sky
- .9 knowledge of differential movement of icebergs and pack ice
- .10 knowledge of tides and currents in ice
- .11 knowledge of effect of wind and current on ice

1.2 Basic knowledge of vessel performance in ice and low air temperature:

- .1 vessel characteristics
- .2 vessel types, hull designs
- .3 engineering requirements for operating in ice
- .4 Ice strengthening requirements
- .5 limitations of ice-classes

- .6 winterization and preparedness of vessel, including deck and engine
 - .7 low-temperature system performance
 - .8 equipment and machinery limitation in ice condition and low air temperature
 - .9 monitoring of ice pressure on hull
 - .10 sea suction, water intake, superstructure insulation and special systems
- 1.3 Basic knowledge and ability to operate and manoeuvre a vessel in ice:
- .1 safe speed in the presence of ice and icebergs
 - .2 ballast tank monitoring
 - .3 cargo operations in polar waters
 - .4 awareness of engine loads and cooling problems
 - .5 safety procedures during ice transit

Competence No.2 – MONITOR AND ENSURE COMPLIANCE WITH LEGISLATIVE REQUIREMENTS

- 2.1 Basic knowledge of regulatory considerations:
- .1 Antarctic Treaty and the Polar Code
 - .2 accident reports concerning vessels in polar waters
 - .3 IMO standards for operation in remote areas

Competence No.3 – APPLY SAFE WORKING PRACTICES, RESPOND TO EMERGENCIES

- 3.1 Basic knowledge of crew preparation, working conditions and safety
- .1 recognize limitations of search and rescue readiness and responsibility, including sea area A4 and its SAR communication facility limitation
 - .2 awareness of contingency planning
 - .3 how to establish and implement safe working procedures for crew specific to polar environments such as low temperatures, ice-covered surfaces, personal protective equipment, use of buddy system, and working time limitations
 - .4 recognize dangers when crews are exposed to low temperatures
 - .5 human factors including cold fatigue, medical-first aid aspects, crew welfare

- .6 survival requirements including the use of personal survival equipment and group survival equipment
- .7 awareness of the most common hull and equipment damages and how to avoid these
- .8 superstructure-deck icing, including effect on stability and trim
- .9 prevention and removal of ice including the factors of accretion
- .10 recognize fatigue problems due to noise and vibrations
- .11 identify need for extra resources, such as bunker, food and extra clothing

Competence No.4 - ENSURE COMPLIANCE WITH POLLUTION - PREVENTION REQUIREMENTS AND PREVENT ENVIRONMENTAL HAZARDS

4.1 Basic knowledge of environmental factors and regulations:

- .1 identify particularly sensitive sea areas regarding discharge
- .2 identify areas where shipping is prohibited or should be avoided
- .3 special areas defined in MARPOL
- .4 recognize limitations of oil-spill equipment
- .5 plan for coping with increased volumes of garbage, bilge water, sewage, etc.
- .6 lack of infrastructure
- .7 oil spill and pollution in ice, including consequences

SYLLABUS FOR ADVANCED TRAINING FOR SHIPS OPERATING IN POLAR WATERS
STCW REGULATION V/4-3 & V/4-4 and
STANDARD OF COMPETENCE SPECIFIED IN SECTION A-V/4,
PARAGRAPH 2 OF THE STCW CODE

SPECIFICATION OF MINIMUM STANDARD OF COMPETENCE IN ADVANCED TRAINING
FOR SHIPS OPERATING IN POLAR WATERS COURSE

Competence No.1 – PLAN AND CONDUCT A VOYAGE IN POLAR WATERS

1.1 Knowledge of voyage planning and reporting

- .1 information sources
- .2 reporting regimes in polar waters
- .3 development of safe routeing and passage planning to avoid ice where possible
- .4 ability to recognize the limitations of hydrographic information and charts in polar regions and whether the information is suitable for safe navigation
- .5 passage planning deviation and modification for dynamic ice conditions

1.2 Knowledge of equipment limitations:

- .1 understand and identify hazards associated with limited terrestrial navigational aids in polar regions
- .2 understand and recognize high latitude errors on compasses
- .3 understand and identify limitations in discrimination of radar targets and ice features in ice-clutter
- .4 understand and recognize limitations of electronic positioning systems at high latitude
- .5 understand and recognize limitations in nautical charts and pilot descriptions
- .6 understand and recognize limitations in communication systems

Competence No.2 – MANAGE THE SAFE OPERATION OF VESSELS OPERATING IN POLAR WATERS

2.1 Knowledge and ability to operate and manoeuvre a vessel in ice:

- .1 preparation and risk assessment before approaching ice, including presence of icebergs, and taking into account wind, darkness, swell, fog and pressure ice
- .2 conduct communications with an icebreaker and other vessels in the area and with Rescue Coordination Centres
- .3 understand and describe the conditions for the safe entry and exit to and from ice or open water, such as leads or cracks, avoiding icebergs and dangerous ice conditions and maintaining safe distance to icebergs
- .4 understand and describe ice-ramming procedures including double and single ramming passage
- .5 recognize and determine the need for bridge watch team augmentation based upon environmental conditions, vessel equipment and vessel ice class
- .6 recognize the presentations of the various ice conditions as they appear on radar
- .7 understand icebreaker convoy terminology, and communications, and take icebreaker direction and move in convoy
- .8 understand methods to avoid besetment and to free beset vessel, and consequences of besetment
- .9 understand towing and rescue in ice, including risks associated with operation
- .10 handling ship in various ice concentration and coverage, including risks associated with navigation in ice, e.g. avoid turning and backing simultaneously
- .11 use of different type of propulsion and rudder systems, including limitations to avoid damage when operating in ice
- .12 use of heeling and trim systems, hazards in connection with ballast and trim in relation with ice
- .13 docking and undocking in ice-covered waters, including hazards associated with operation and the various techniques to safely dock and undock in ice-covered waters

- .14 anchoring in ice, including the dangers to anchoring system – ice accretion to hawse pipe and ground tackle
- .15 recognize conditions which impact polar visibility and may give indication of local ice and water conditions, including sea smoke, water sky, ice blink and refraction

Competence No.3 – MAINTAIN SAFETY OF THE SHIP'S CREW AND PASSENGERS AND THE OPERATIONAL CONDITION OF LIFE-SAVING, FIRE-FIGHTING AND OTHER SAFETY SYSTEMS

3.1 Knowledge of safety:

- .1 understand the procedures and techniques for abandoning the ship and survival on ice and in ice-covered waters
- .2 recognize limitations of fire-fighting systems and life-saving appliances due to low air temperatures
- .3 understand unique concerns in conducting emergency drills in ice and low temperatures
- .4 understand unique concerns in conducting emergency response in ice and low air and water temperatures