

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာန
ရေကြောင်းပို့ဆောင်ရေးညွှန်ကြားမှုဦးစီးဌာန
(ရေကြောင်းအင်ဂျင်နီယာဌာနခွဲ)

ရက်စွဲ၊ ၂၀၂၀ ပြည့်နှစ်၊ နိုဝင်ဘာလ ၄ ရက်

ကြေညာချက်(၃ /၂၀၂၀)

အကြောင်းအရာ။ ရေကြောင်းအင်ဂျင်နီယာအရာရှိ / လျှပ်စစ်နည်းပညာအရာရှိကျွမ်းကျင်မှု
လက်မှတ် Online Updating Course သင်တန်းနှင့် Online Advanced
Fire Fighting Revalidation Course သင်တန်းများအတွက်လမ်းညွှန်ချက်၊
သင်ရိုးညွှန်းတမ်းနှင့် Course Outline များ ထုတ်ပြန်သတ်မှတ်ခြင်း

၁။ ကမ္ဘာ့နိုင်ငံအသီးသီးတွင်ဖြစ်ပွားလျက်ရှိသော Coronavirus Disease 2019 (COVID -19)
ရောဂါဖြစ်ပွားမှု၏အကျိုးဆက်အဖြစ် International Convention on Standards of Training ,
Certification and Watchkeeping for Seafarears , 1978 as amended (STCW 1978) အရ
မြန်မာနိုင်ငံကထုတ်ပေးထားသည့်ကျွမ်းကျင်မှုလက်မှတ် (Certificate of Competency)နှင့်
တတ်ကျွမ်းမှုလက်မှတ်(Certificate of Proficiency)ကိုဆောင်ထားသူများအနေဖြင့် အထက်ပါ
ကွန်ဗင်းရှင်းပါ သတ်မှတ်ချက်များနှင့်အညီ လက်မှတ်သက်တမ်းတိုးလဲလှယ်ခြင်း ဆောင်ရွက်ရန်
အခက်အခဲဖြစ်ပေါ်လျက်ရှိပါသည်။

၂။ သို့ဖြစ်ပါ၍ ရေကြောင်းအင်ဂျင်နီယာအရာရှိကျွမ်းကျင်မှုလက်မှတ်နှင့် လျှပ်စစ်နည်းပညာ
အရာရှိကျွမ်းကျင်မှုလက်မှတ်ကိုဆောင်ထားသူများအတွက် လက်မှတ်သက်တမ်းတိုးရန်လိုအပ်
သည့် သင်တန်းများအားအသိအမှတ်ပြုသင်တန်းကျောင်းများအနေဖြင့် Online မှ သင်ကြားဖွင့်
လှစ်ခွင့်ပြုသွားမည်ဖြစ်ပြီး Online Updating သင်တန်းများအတွက် လမ်းညွှန်ချက်၊ သင်ရိုးညွှန်း
တမ်းနှင့် Course Outline များအား အောက်ဖော်ပြပါနောက်ဆက်တွဲအတိုင်း ထုတ်ပြန်သတ်မှတ်
ကြောင်းကြေညာအပ်ပါသည်-

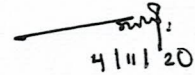
(က) ရေကြောင်းအင်ဂျင်နီယာအရာရှိကျွမ်းကျင်မှုလက်မှတ် Annex(A)

Online Updating Course သင်တန်းအတွက် လမ်းညွှန်
ချက်၊ သင်ရိုးညွှန်းတမ်းနှင့် Course Outline

(ခ) လျှပ်စစ်နည်းပညာအရာရှိကျွမ်းကျင်မှုလက်မှတ် Online Annex(B)

Updating Course သင်တန်းအတွက် လမ်းညွှန်ချက်၊
သင်ရိုးညွှန်းတမ်းနှင့် Course Outline

- (ဂ) အဆင့်မြင့်ကျွမ်းကျင်စွာမီးငြိမ်းသတ်နိုင်ကြောင်းထုတ်ပေး Annex(C)
သည့်တတ်ကျွမ်းမှုလက်မှတ်(Advanced Fire Fighting CoP)
Online Revalidation Course သင်တန်းအတွက်လမ်းညွှန်ချက်၊
သင်ရိုးညွှန်းတမ်းနှင့် Course Outline


၄/၁၁/၂၀

အောင်မိုး

ညွှန်ကြားရေးမှူး

ရေကြောင်းအင်ဂျင်နီယာဌာနခွဲ

၆/၁၁/၂၀၂၀

ဖြန့်ဝေခြင်း

ရေကြောင်းအင်ဂျင်နီယာဘက်ဆိုင်ရာသင်တန်းကျောင်းများအားလုံး

မိတ္တူကို

ညွှန်ကြားရေးမှူးချုပ်ရုံး၊

ဒုတိယညွှန်ကြားရေးမှူးချုပ် (နည်းပညာ)

ရေကြောင်းဌာနခွဲ၊

ရေကြောင်းအင်ဂျင်နီယာဌာနခွဲ၊

ရေကြောင်းအန္တရာယ်ကင်းရှင်းရေးလုံခြုံရေးနှင့်ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဌာနခွဲ၊

ရုံးလက်ခံ။

**Guidance for Online Marine Engineer Officer
Certificate of Competency Updating Course
(STCW Convention, 1978 as amended, Regulation I/11 &
STCW Code Section A-I/11)**

The online updating course for revalidation of Marine Engineer Officer Certificate of Competency consists of theory lectures and assessment.

1. Every candidate for certification shall:
 - (A) hold the Marine Engineer Officer certificate of competency Class I (or) II (or) III (or) IV(or) V issued by Department of Marine Administration.
 - (B) have served at least for (12) months on board during the preceding five years, or three months in total during the preceding six months immediately prior to attending updating course.
 - (C) have completed online Marine Engineer Officer updating course conducted in approved training centres with continuous assessment system for the following topics:
 - (1) Latest and Upcoming changes in IMO and ILO conventions;
 - (2) New Technology Developments in Marine Engineering Systems; and
 - (3) Environmental Pollution Prevention.

That training course shall be administered, supervised and monitored by the Department of Marine Administration.

2. The Department of Marine Administration shall issue the relevant Certificate of Competency to the candidates who have successfully completed the continuous assessment for online updating course as well as holding the respective valid Certificates of Proficiency which are required by the STCW Convention Regulations and Codes.

**SUMMARY OF TEACHING HOURS FOR
ONLINE MEO UPDATING COURSE TOPICS**

No.	Topic	Teaching hour
1.	Latest and Upcoming changes in IMO and ILO conventions	1
2.	New Technology Developments in Marine Engineering Systems	1
3.	Environmental Pollution Prevention	1
	Total teaching hours	3

Course outline for Online Marine Engineer Officers Updating Course
(STCW Convention Regulation I/11 and STCW Code Section A-I/11)

Topic	Subjected Area	Teaching Hour
Topic 1: Latest and Upcoming changes in IMO and ILO conventions	<p>1.1 International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974) (a)-2014 amendments (MSC.386(94)) effected on 1 January 2017 (New chapter XIV) to make use of the safety-related provisions of the Polar Code mandatory (b)-2016 amendments (MSC.402(96))effected on 1 January 2020¹ Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and Rescue boats, launching appliances and release gear (c)-2016 amendments (MSC.409(97)) effected on 1 January 2020 Protection against noise, boiler space foam type extinguisher (d)- 2019 amendments (MSC.456(101)) will be effect on [1 January 2024] (Amendments to Forms C,,E and P in the appendix to SOLAS Certificates) (e)- 2014 amendments MSC.365(93) for Testing requirements of Steering Gear (f)-2006 amendments (MSC.216(82)) for Performance standard for protective coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers</p> <p>1.2 Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974 (SOLAS PROT 1988) -2015 amendments (MSC.395(95)) effected on 1 January 2017 IGF code and ship using low Sulphur</p> <p>1.3 Codes and other instruments made mandatory under SOLAS: International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management (ISM) Code) (A.741(18)) -2019 amendments (MSC.461(101))will be effect on [1 January 2021] Amendments to ESP Code International Life-Saving Appliances (LSA) Code (MSC.48(66)) -2017 amendments (MSC.425(98))effected on 1 January 2020 Launching and Embarkation appliances -2019 amendments (MSC.459(101))will be effect on 1 January 2024 Survival Craft, Launching and Embarkation Appliances</p>	1

	<p>International Maritime Dangerous Goods (IMDG) Code (MSC.122(75)) -2018 amendments (MSC.442(99)) will be effect on 1 January 2020</p> <p>International Code for Application of Fire Test Procedures (FTP Code) (MSC.61(67)) Note: Superseded by <u>2010</u> FTP Code (MSC.307(88))</p> <p>International Code for Fire Safety Systems (FSS Code) (MSC.98(73)) 2006 amendments (MSC.206(81)) effected on 1 July 2010</p> <p>International Maritime Solid BulkCargoes (IMSBC) Code, (2008) (MSC.268(85)) -2019 amendments (MSC.462(101)) will be effect on [1 January 2021]</p> <p>Code for Ships Operating in Polar Waters (Polar Code)² -(MSC.385(94)) Effective as from: 1 January 2017</p> <p>International Code of Safety for Ships using Gases or other Low-flashing Point Fuels (IGF Code) (MSC.391(95)) Effective as from: 1 January 2017 2017 amendments (MSC.422(98)) 1 January 2020 2019 amendments (MSC.458(101)) 1 January 2024</p> <p>1.3 International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL) 2016 Amendments (MARPOL Annex I – Appendix II) 1 March 2018 (MEPC.276(70)) 2016 Amendments (MARPOL Annex V) 1 March 2018 (MEPC.277(70)) 2019 Amendments (MARPOL Annexes I, II and V) 1 October 2020 (MEPC.314(74)) 2019 Amendments (MARPOL Annex II) 1 January 2021 (MEPC.315(74))</p> <p>1.4 Codes made mandatory under MARPOL 73/78: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) (MEPC.19(22)) Effective as from: 6 April 1987</p>	
--	---	--

	<p>Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code) (MEPC.20(22))</p> <p>Effective as from: 6 April 1987</p> <p>Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL PROT 1997) (Annex VI on the prevention of air pollution from ships)</p> <p>2014 amendments (to make the use of the 1 January 2016 III Code mandatory) (MEPC.247(66)) 2014 amendments (to MARPOL Annex VI and 1 September 2015</p> <p>to the NOX Technical Code 2008) (MEPC.251(66))</p> <p>2014 amendments (MARPOL Annex VI, 1 March 2016 regulations 2 and 13 and the Supplement to the IAPP certificate) (MEPC.258(67))</p> <p>2016 amendments (MARPOL Annex VI, 1 September 2017 regulations 13 (MEPC.271(69));</p> <p>2016 amendments to the NOx Technical Code 1 September 2017 (MEPC.272(69));</p> <p>2016 amendments (MARPOL Annex VI, 1 March 2018 Data collection system for fuel consumption) (MEPC.278(70));</p> <p>2017 amendments (MARPOL Annex VI, 1 January 2019 Designation of the Baltic Sea and the North Sea Emission Control Areas for NOX Tier III control) (Information to be included in the bunker delivery note) (MEPC.286(71));</p> <p>2018 amendments (MARPOL Annex VI, ECAs and required 1 September 2019 EEDI for ro-ro cargo ships and ro-ro passenger ships) (MEPC.301(72))</p> <p>2018 amendments (Prohibition on the carriage of [1 March 2020] non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship) (MEPC.305(73))</p> <p>2019 amendments (Electronic Record Books and EEDI [1 October 2020] regulations for ice-strengthened ships) (MEPC.316(74))</p> <p>2019 amendments to the NOX Technical Code 2008 [1 October 2020] (Electronic Record Books and Certification</p>	
--	--	--

	<p>requirements for SCR systems) (MEPC.317(74))</p> <p>1.5 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW 1978)</p> <p>2015 amendments (MSC.396(95))(MSC.397(95)) 1 January 2017</p> <p>IGF training(Basic and Advanced)</p> <p>2016 amendments (MSC.416(97))Duel fuel 1 July 2018</p> <p>1.6 Maritime Labour Convention (MLC 2006)</p> <p>The 2016 amendments to the Maritime Labour Convention,2006 8.January 2019</p> <p>The 2018 amendments to the Maritime Labour Convention,2006 26.December 2020</p>	
<p>Topic 2: New Technology Developments in Marine Engineering Systems</p>	<p>2.1 Latest developments in machinery installations on new ships being constructed across the world, which may include green technologies and new technologies adopted for propulsion and Auxiliary systems.</p> <p>Green ship Technology</p> <ol style="list-style-type: none"> No ballast system LNG fuel for propulsion LNG fuel for auxiliary engine Sulphur scrubber system Advanced rudder and propeller system Speed Nozzle Hull Paint Waste Heat Recovery System Exhaust Gas Recirculation Water in Fuel Improved Pump and Cooling Water System Sail and Kite Propulsion System Fuel and Solar Cell Propulsion Sandwich Plate System(SPS) <p>2.2 Adoption of IMO GHG Strategy (MEPC 72)</p> <p>Fuel consumption data collection system MEPC.278(70)</p> <p>MEPC.282(70) 2016 Guidelines of the development of a ship energy efficiency management plan (SEEMP)</p> <p>2.3 Advancements related to improvement in design and materials of marine equipment. .</p> <p>Development in Automation/instrumentation and Control system</p> <p>- Development in Tier –III Engines and Electronically controlled camless engine</p>	1

	<ul style="list-style-type: none"> - Dual fuel engine arrangement and safety - Using Low Sulphur fueloil and problem it may occur <p>RESOLUTION MEPC.320(74) 2019 GUIDELINES FOR CONSISTENT IMPLEMENTATION OF THE 0.50% SULPHUR LIMIT UNDER MARPOL ANNEX VI MEPC.1/Circ.864/Rev.1 2019 GUIDELINES FOR ON BOARD SAMPLING FOR THE VERIFICATION OF THE SULPHUR CONTENT OF THE FUEL OIL USED ON BOARD SHIPS CIMAC WG7 Guidelines for Marine fuel handling in connection to stability and compatibility</p>	
Topic 3: Environmental Pollution Prevention	Environmental Pollution Prevention 3.1 Port state control and Flag state inspection, Concentrated inspection Campaigns, MEPC 74/18/Add.1 RESOLUTION MEPC.321(74) 2019 GUIDELINES FOR PORT STATE CONTROL UNDER MARPOL ANNEX VI CHAPTER 3 3.2 Areas for improvement to avoid detentions. (Machinery breakdown/personal injury) 3.3 IMO strategy to reduce GHG, MEPC72 (April 2018) 3.4 IMO emission limit (Tier III) 3.5 New National Emission control Area and methods	1
	Total	3 hours(Half Day)

SYLLABUS FOR ONLINE Marine Engineer Officer UPDATING COURSE (STCW Convention Regulation I/11 and STCW Code Section A-I/11)

Topic 1: Latest and Upcoming changes in IMO and ILO conventions

- 1.1 Amendments in the last 5 years and future regulations to be covered.
- 1.2 Amendments to SOLAS/ MARPOL/STCW2010 / MLC2006 / Load line etc.
- 1.3 Amendments and Changes to important codes recommendations and guidelines.

Topic 2: New Technology Developments in Marine Engineering Systems

- 2.1 Latest developments in machinery installations on new ships being constructed across the world, which may include green technologies and new technologies adopted for propulsion and Auxiliary systems.
- 2.2 Advancements related to improvement in design and materials of marine equipment. .
Development in Automation/instrumentation and Control system

Topic 3: Environmental Pollution Prevention

- 3.1 Port state control and Flag state inspection, Concentrated inspection Campaigns,
- 3.2 Areas for improvement to avoid detentions. (Machinery breakdown/personal injury)
- 3.3 IMO strategy to reduce GHG, MEPC72 (April 2018)
- 3.4 IMO emission limit
- 3.5 New National Emission control Area and methods

**Guidance for Online Electro-technical Officer
Certificate of Competency Updating Course
(STCW Convention 1978 as amended, Regulation I/11 &
STCW Code Section A-I/11)**

The online updating course for revalidation of Electro-technical Officer Certificate of Competency consists of theory lectures and assessment.

1. Every candidate for certification shall:
 - (A) hold the Electro-technical Officer certificate of competency issued by Department of Marine Administration.
 - (B) have served at least for (12) months on board during the preceding five years, or three months in total during the preceding six months immediately prior to attending updating course.
 - (C) have completed online Electro-technical Officer updating course conducted in approved training centres with continuous assessment system for the following topics:
 - (1) Latest and Upcoming changes in IMO and ILO conventions;
 - (2) New Technology Developments in Electrical, electronic, control and maintenance; and
 - (3) Environmental Pollution Prevention.That training course shall be administered, supervised and monitored by the Department of Marine Administration.
2. The Department of Marine Administration shall issue the Electro-technical Officer Certificate of Competency to the candidates who have successfully completed the continuous assessment for online updating course as well as holding the respective valid Certificates of Proficiency which are required by the STCW Convention Regulations and Codes.

**SUMMARY OF TEACHING HOURS FOR
ONLINE ETO UPDATING COURSE TOPICS**

No.	Topic	Teaching hour
1.	Latest and Upcoming changes in IMO and ILO conventions	1
2.	New Technology Developments in Electrical, electronic, control and maintenance	1
3.	Environmental Pollution Prevention	1
	Total teaching hours	3

Course outline for Online ETO Updating Course
(STCW Convention Regulation I/11 and STCW Code Section A-I/11)

Topic	Subjected Area	Teaching Hour
Competence 1: Latest and Upcoming changes in IMO and ILO conventions	<p>1.1- International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974) (a)-2014 amendments (MSC.386(94)) effected on 1 January 2017 (New chapter XIV) to make use of the safety-related provisions of the Polar Code mandatory (b)-2016 amendments (MSC.402(96)) effected on 1 January 2020¹ Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and Rescue boats, launching appliances and release gear (c)-2016 amendments (MSC.409(97)) effected on 1 January 2020 Protection against noise, boiler space foam type extinguisher (d) - 2019 amendments (MSC.456(101)) will be effect on [1 January 2024] (Amendments to Forms C,,E and P in the appendix to SOLAS Certificates) (e)- 2014 amendments MSC.365(93) for Testing requirements of Steering Gear (f)-2006 amendments (MSC.216(82)) for Performance standard for protective coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers</p> <p>1.2 Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974 (SOLAS PROT 1988) -2015 amendments (MSC.395(95)) effected on 1 January 2017 IGF code and ship using low Sulphur</p> <p>1.3 Codes and other instruments made mandatory under SOLAS: International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management (ISM) Code) (A.741(18)) -2019 amendments (MSC.461(101)) will be effect on [1 January 2021] Amendments to ESP Code International Code for Application of Fire Test Procedures (FTP Code) (MSC.61(67)) Note: Superseded by 2010 FTP Code (MSC.307(88)) International Code for Fire Safety Systems (FSS Code) (MSC.98(73)) 2006 amendments (MSC.206(81)) effected on 1 July 2010 International Code of Safety for Ships using Gases or other Low-flashing Point</p>	1

	<p>Fuels (IGF Code) (MSC.391(95))</p> <p>Effective as from: 1 January 2017</p> <p>2017 amendments (MSC.422(98)) 1 January 2020</p> <p>2019 amendments (MSC.458(101)) 1 January 2024</p> <p>1.3 International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL)</p> <p>2016 Amendments (MARPOL Annex I – Appendix II) 1 March 2018 (MEPC.276(70))</p> <p>2016 Amendments (MARPOL Annex V) 1 March 2018 (MEPC.277(70))</p> <p>2019 Amendments (MARPOL Annexes I, II and V) 1 October 2020 (MEPC.314(74))</p> <p>2019 Amendments (MARPOL Annex II) 1 January 2021 (MEPC.315(74))</p> <p>1.4 Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL PROT 1997) (Annex VI on the prevention of air pollution from ships)</p> <p>2014 amendments (to MARPOL Annex VI and 1 September 2015 to the NOX Technical Code 2008) (MEPC.251(66))</p> <p>2014 amendments (MARPOL Annex VI, 1 March 2016 regulations 2 and 13 and the Supplement to the IAPP certificate) (MEPC.258(67))</p> <p>2016 amendments (MARPOL Annex VI, 1 September 2017 regulations 13 (MEPC.271(69));</p> <p>2016 amendments to the NOx Technical Code 1 September 2017 (MEPC.272(69));</p> <p>2016 amendments (MARPOL Annex VI, 1 March 2018 Data collection system for fuel consumption) (MEPC.278(70));</p> <p>2017 amendments (MARPOL Annex VI, 1 January 2019 Designation of the Baltic Sea and the North Sea Emission Control Areas for NOX Tier III control) (Information to be included in the bunker delivery note)(MEPC.286(71));</p> <p>2018 amendments (MARPOL Annex VI, ECAs and required 1 September 2019 EEDI for ro-ro cargo ships and ro-ro passenger ships)</p>	
--	--	--

	<p>(MEPC.301(72)) 2018 amendments (Prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship) (MEPC.305(73)) [1 March 2020] 2019 amendments (Electronic Record Books and EEDI regulations for ice-strengthened ships) (MEPC.316(74)) [1 October 2020] 2019 amendments to the NOX Technical Code 2008 (Electronic Record Books and Certification requirements for SCR systems) (MEPC.317(74)) [1 October 2020]</p> <p>1.5 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW 1978)</p> <p>2015 amendments (MSC.396(95))(MSC.397(95)) 1 January 2017 IGF training(Basic and Advanced) 2016 amendments (MSC.416(97))Duel fuel 1 July 2018</p> <p>1.6 Maritime Labour Convention (MLC 2006) The 2016 amendments to the Maritime Labour Convention,2006 8.January 2019 The 2018 amendments to the Maritime Labour Convention,2006 26.December 2020</p>	
Topic 2: New Developments of Technology in Electrical, electronic, control and maintenance	<p>2.1 Theory and maintenance of (i)Soft starter (ii) Variable frequency drives 2.2 Basic Features of electronic control system for Cam-less Engine 2.3 Proportional control valve and Pulse Width Modulation method for control system</p>	1
Topic 3: Environmental Pollution Prevention	<p>Environmental Pollution Prevention</p> <p>3.1 Port state control and Flag state inspection, Concentrated inspection Campaigns, MEPC 74/18/Add.1 RESOLUTION MEPC.321(74) 2019 GUIDELINES FOR PORT STATE CONTROL UNDER MARPOL ANNEX VI CHAPTER 3 3.2 Areas for improvement to avoid detentions. (Machinery breakdown/personal injury) 3.3 IMO strategy to reduce GHG, MEPC72 (April 2018) 3.4 IMO emission limit (Tier III) 3.5 New National Emission control Area and methods</p>	1
	Total	3 hours(Half Day)

SYLLABUS FOR ONLINE Electro-technical Officer UPDATING COURSE (STCW Convention Regulation I/11 and STCW Code Section A-I/11)

Topic 1: Latest and Upcoming changes in IMO and ILO conventions

- 1.1 Amendments in the last 5 years and future regulations to be covered.
- 1.2 Amendments to SOLAS/ MARPOL/STCW2010 / MLC2006 / Load line etc.
- 1.3 Amendments and Changes to important codes recommendations and guidelines.

Topic 2: New Developments of Technology in Electrical, electronic, control and maintenance

- 2.1 (i) Soft starter (ii) Variable frequency drives
- 2.2 Basic Features of electronic control system for Cam-less Engine
- 2.3 Proportional control valve and PWM system

Topic 3: Environmental Pollution Prevention

- 3.1 Port state control and Flag state inspection, Concentrated inspection Campaigns,
- 3.2 Areas for improvement to avoid detentions. (Machinery breakdown/personal injury)
- 3.3 IMO strategy to reduce GHG, MEPC72 (April 2018)
- 3.4 IMO emission limit
- 3.5 New National Emission control Area and methods

**Guidance for Online Advanced Fire Fighting
Certificate of Proficiency Revalidation Course
(STCW Convention, 1978 as amended, Regulation VI-3 &
STCW Code Section A-VI/3)**

The online training course for revalidation of **Advanced Fire Fighting Certificate of Proficiency** consists of lecture and evaluation assessment.

1. Every candidate for certification shall:
 - (A) hold the Advanced Fire Fighting Certificate of Proficiency (Reg: VI-3) issued by the Department of Marine Administration.
 - (B) have successfully completed the online Advanced Fire Fighting revalidation Course in Approved Training Centres with continuous assessment system for the following subjects:
 - (1) Control fire-fighting operations aboard ship;
 - (2) Organize and train fire parties;
 - (3) Inspect and service detection and extinguishing systems and equipment; and
 - (4) Investigate and compile reports on incidents involving fire.

That training course shall be administered, supervised and monitored by the Department of Marine Administration.
2. The Department of Marine Administration shall issue the Advanced Fire Fighting Certificate of Proficiency required by the STCW Convention Regulations and Codes.

**SUMMARY OF TEACHING HOURS FOR
ADVANCED FIRE FIGHTING COURSE**

No.	Subjects	Teaching hours
1.	Advance Fire Fighting Course	3

**Course outline for Online AFF Revalidation Course
(STCW Convention Regulation VI-3 and STCW Code Section A-VI-3)**

Competence	Knowledge, Understanding and Proficiency	Teaching Hours
Competence 1: Control fire-fighting operations aboard ship	1.1 Fire-fighting procedures at sea and in port, with particular emphasis on organization, tactics and command. 1.2 Use of water for fire-extinguishing, the effect on ship stability, precautions and corrective procedures. 1.3 Communication and coordination during fire-fighting operations. 1.4 Ventilation control, including smoke extraction. 1.5 Control of fuel and electrical system. 1.6 Fire-fighting process hazards (dry distillation, chemical reactions, boiler uptake fires, etc.) 1.7 Fire-fighting involving dangerous goods 1.8 Fire precautions and hazards associated with the storage and handling of materials (paints, etc.). 1.9 Management and control of injured persons 1.10 Procedures for coordination with shore-based fire-fighters.	1
Competence 2: Organize and train fire parties	2.1 Preparation of contingency plans. 2.2 Composition and allocation of personnel to fire parties. 2.3 Strategies and tactics for control of fires in various parts of the ship	0.5
Competence 3: Inspect and service detection and extinguishing systems and equipment	3.1 Fire-detection systems; fixed fire-extinguishing systems; portable and mobile fire-extinguishing equipment, including appliances, pumps and rescue, salvage, life-support, personal protective and communication equipment. 3.2 Requirements for statutory and classification surveys.	1
Competence 4: Investigate and compile reports on incidents involving fire	4.1 Assessment of cause of incidents involving fire.	0.5
	Total	3 hours(Half Day)

**SYLLABUS FOR ONLINE REVALIDATION COURSE OF
ADVANCED FIRE FIGHTING
(STCW Convention Regulation VI-3 & Section A-VI/3)**

Competence 1: Control fire-fighting operations aboard ship

- 1.1 Fire-fighting procedures at sea and in port, with particular emphasis on organization, tactics and command.
- 1.2 Use of water for fire-extinguishing, the effect on ship stability, precautions and corrective procedures.
- 1.3 Communication and coordination during fire-fighting operations.
- 1.4 Ventilation control, including smoke extraction.
- 1.5 Control of fuel and electrical system.
- 1.6 Fire-fighting process hazards (dry distillation, chemical reactions, boiler uptake fires, etc.)
- 1.7 Fire-fighting involving dangerous goods
- 1.8 Fire precautions and hazards associated with the storage and handling of materials (paints, etc.).
- 1.9 Management and control of injured persons
- 1.10 Procedures for coordination with shore-based fire-fighters.

Competence 2: Organize and train fire parties

- 2.1 Preparation of contingency plans.
- 2.2 Composition and allocation of personnel to fire parties.
- 2.3 Strategies and tactics for control of fires in various parts of the ship

Competence 3: Inspect and service detection and extinguishing systems and equipment

- 3.1 Fire-detection systems; fixed fire-extinguishing systems; portable and mobile fire-extinguishing equipment, including appliances, pumps and rescue, salvage, life-support, personal protective and communication equipment.
- 3.2 Requirements for statutory and classification surveys.

Competence 4: Investigate and compile reports on incidents involving fire

- 4.1 Assessment of cause of incidents involving fire.