سازمان بنادر و دریانوردی

دستورالعمل اجرایی برگزاری دوره آموزشی و آزمون مهارت دریانوردی سمت

ملوان ماهر عرشه بر روی کشتیهای با ظرفیت ناخالص ۵۰۰ یا بیشتر - سفرهای نامحدود

The code of practice for conducting Able Seafarer Deck on ships of Gross Tonnage (GT ≥ 500) engaged on Unlimited Voyages Training Course and Competency assessment

کد مدرک : P6-W131

شماره بازنگری	تاریخ بازنگری	شرح تغییرات (علت و محل)	تهیه کننده	تأیید کننده	تصویب کننده
۰۱	۹۳/۰۶/۰۳	براساس بازنگری کلی کنوانسیون STCW 78, As Amended	رئیس اداره استانداردهای دریانوردان نصرت اله علی پور	مدیر کل امور دریانوردان حسین میرزایی	معاون امور دریایی سید علی استیری

فهرست مندرجات

مقـــدمـــه

سازمان بنادر و دریانوردی در راستای اجرای وظایف و اختیارات قانونی ناشی از ماده ۱۹۲ قانون دریایی جمهوری اسلامی ایران مصوب شهریور ماه ۱۳۴۳ و بند ۱۰ ماده ۳ آئین نامه تشکیل سازمان بنادر و دریانوردی مصوب بهمن ماه ۱۳۴۸ کمیسیون های خاص دو مجلس که صدور هر گونه سند یا گواهینامه و پروانه مربوط به کشتی ، فرماندهان ، افسران و کارکنان کشتیها را در صلاحیت این سازمان قرار داده و در راستای رعایت مفاد کنوانسیون بین المللی استانداردهای آموزش، صدور گواهینامه و نگهبانی دریانوردان (STCW- as amended) مصوب مرداد ماه ۱۳۷۵ مجلس شورای اسلامی ایران و با عنایت به مقرره II/5 کنوانسیون مذکور و بخش A-II/5 آئین نامه کنوانسیون مربوطه ، این "دستورالعمل اجرایی برگزاری دوره آموزشی و آزمون مهارت دریانوردی سمت ملوان ماهر عرشه بر روی کشتیهای با ظرفیت ناخالص ۵۰۰ یا بیشتر (GT≥500) - سفرهای نامحدود " را تدوین نموده و پس از تصویب هیأت عامل سازمان قابل اجرا می باشد.

یادداشت: قانون تغییر نام سازمان بنادر و کشتیرانی به سازمان بنادر و دریانوردی در تاریخ ۱۳۸۷/۰۲/۱۰ به تصویب مجلس شورای اسلامی رسید.

۱-هدف از تدوین

هدف از تدوین این دستورالعمل ارائه حداقل نیازمندیهای برگزاری دوره آموزشی و آزمون مهارت دریانوردی سمت ملوان ماهر عرشه بر روی کشتیها ی با ظرفیت نا خالص ۵۰۰ یا بیشتر (GT≥500) - سفرهای نامحدود می باشد.

۲- دامنه کاربرد

این دستورالعمل برای کلیه مراکز آموزشی مورد تایید سازمان و مجری برگزاری دوره آموزش سمت ملوان ماهر عرشه بر روی کشتیها ی با ظرفیت نا خالص ۵۰۰ یا بیشتر (GT≥500) - سفرهای نامحدود می باشند، کاربرد دارد.

۳-تعاریف

اصطلاحات استفاده شده در راستای اهداف این دستورالعمل دارای معانی ذیل می باشند.

۳-۱ ملوان ماهر عرشه (Able Seafarer Deck):

به معنای عضوی از خدمه کشتی در بخش عرشه می باشد که بر اساس مقرره II/5 کنوانسیون و مفاد دستورالعمل صدور ، تمدید و تجدید گواهینامه های دریانوردان واجد شرایط باشد.

۳-۲ تایید (Approved):

به معنای تایید اداره استانداردهای دریانوردان مطابق با دستورالعمل های سازمان می باشد.

۳-۳ دستگاه نظارت مرکز (Central Monitoring Office):

به معنای اداره یا بخشی که وظیفه صدور مجوز فعالیت آموزش دریانوردی و نظارت بر مراکز آموزشی را بر عهده دارد. دستگاه نظارت در ستاد سازمان ، اداره استانداردها ی دریانوردان می باشد. مدیر کل امور دریانوردان نیز جزء دستگاه نظارت مرکز بوده و می تواند صدور مجوز فعالیت آموزش دریانوردی و نظارت بر مراکز آموزش دریانوردان را تایید نماید.

۳-۴ گواهینامه دریانوردی(Certificate):

به معنای گواهینامه‌ای به غیر از گواهینامه شایستگی یا گواهینامه مهارت صادر شده طبق مفاد دستورالعمل صدور ، تمدید و تجدید گواهینامه های دریانوردان برای دریانورد است که نشان می‌دهد شایستگی‌خدمت در سمت مندرج را دارد.

۳-۵ دستورالعمل (Code of Practice):

به معنای مجموعه قوانین، مقررات ملی و الزامات مندرج در این دستورالعمل است که توسط اداره کل امور دریانوردان تدوین و به تصویب هیات عامل سازمان رسیده است.

هیات عامل سازمان بنادر و دریانوردی

۳-۶ شرکت کشتیرانی (Company):

به معنای مالک کشتی، هر شخصی مانند مدیر، یا اجاره کننده دربست کشتی است، که مسئولیت عملیات کشتی از طرف مالک کشتی بر وی فرض شده است، و با قبول چنین مسئولیتی، کلیه وظایف و مسئولیت‌های محول شده بر شرکت توسط این دستورالعملها را بر عهده گرفته است.

۳-۷ کنوانسیون (Convention):

به معنای کنوانسیون اصلاح شده بین المللی استانداردهای آموزشی، صدور گواهینامه و نگهبانی دریانوردان (STCW-78 as amended) می باشد.

۳-۸ گواهی طی دوره (Course Completion Certificate or Documentary Evidence):

به معنای گواهی است که مرکز آموزشی مورد تایید سازمان به فراگیر پس از گذراندن موفقیت آمیز دوره مربوطه ارائه می دهد.

۳-۹ گواهینامه مهارت دریانوردی (Certificate of Proficiency):

به معنای گواهینامه‌ای به غیر از گواهینامه شایستگی صادر شده طبق مفاد دستورالعمل صدور ، تمدید و تجدید گواهینامه های دریانوردان برای دریانورد است که نشان می‌دهد الزامات آموزشی، شایستگی‌ها یا خدمت دریایی مندرج در کنوانسیون را برآورده می نماید.

۳-۱۰ ملوان عرشه (Deck Rating):

به معنای عضوی از خدمه کشتی در بخش عرشه می باشد که بر اساس مقرره II/4 کنوانسیون و مفاد دستورالعمل صدور ، تمدید و تجدید گواهینامه های دریانوردان واجد شرایط باشد.

۳-۱۱ کارکرد (Function):

به معنای مجموعه ای از امور ، وظایف و مسئولیت ها جهت انجام عملیات در کشتی، ایمنی جان اشخاص در دریا و حفاظت از محیط زیست که در آیین نامه STCW درج شده است، می باشد.

۳-۱۲ ملوان عمومی (General Rating):

به معنای عضوی از خدمه کشتی در بخش عرشه است که بر اساس مفاد دستورالعمل صدور ، تمدید و تجدید گواهینامه های دریانوردان واجد شرایط باشد.

۳-۱۳ ظرفیت ناخالص کشتی (Gross Tonnage):

به معنای ظرفیت ناخالص حجمی محاسبه شده شناور بر اساس مقررات مربوطه می باشد.

۳-۱۴ آئین نامه ی امنیت کشتی ها (ISPS Code):

به معنای آئین نامه بین المللی امنیت کشتی ها و تسهیلات بندری است که در تاریخ ۲۰۰۲ میلادی طی قطعنامه شماره ۲ کنفرانس دولتهای متعاهد به کنوانسیون بین المللی ایمنی جان اشخاص در دریا ۱۹۷٤ (SOLAS) به تصویب رسیده و ممکن است توسط سازمان بین المللی دریانوردی براساس اصلاحیه های بعدی تغییر یابد.

۳-۱۵ فرمانده (Master):

به معنای شخصی است که عهده‌دار فرماندهی کشتی می باشد.

۳-۱۶ گواهینامه سلامت پزشکی (Medical Fitness Certificate):

به معنای گواهینامه ای است که توسط پزشک معتمد سازمان طبق دستورالعمل مربوطه و جهت متقاضیانی که از نظر پزشکی از سلامت برخوردار باشند، صادر می گردد.

۳-۱۷ کشتی تجاری (Merchant Ship):

به معنای هر نوع شناوری است (به استثنای شناورهای خدماتی، سکوهای متحرک فراساحلی، صیادی و یا نظامی) که در امر جابجایی کالاهای تجاری، مسافر و بار تسهیلات مربوط به کالاهای تجاری بکار گرفته می شود.

۳-۱۸ گواهینامه حداقل پرسنل ایمن (Minimum Safe Manning Certificate):

به معنای گواهینامه ای است که در آن حداقل پرسنل ایمن یک شناور تعیین و توسط سازمان تائید می گردد.

۳-۱۹ ماه (Month):

جهت محاسبه خدمت دریایی هر ماه متشکل از ۳۰ روز می باشد.

۳-۲۰ سفرهای نزدیک به ساحل (Near Coastal Voyages / NCV):

به معنای سفر هایی است که در آبهای خلیج فارس، دریای خزر و محدوده تعریف شده در دریای عمان (آبهای واقع در غرب خطی که نقطه جغرافیایی با مشخصات ۲۲ درجه و ۳۲ دقیقه شمال و ۵۹ درجه و ٤۸ دقیقه شرق « راس الحد- عمان» را به نقطه جغرافیایی دارای مشخصات ۲۵ درجه و ٤ دقیقه شمال و ٦۱ درجه و ۲۲ دقیقه شرق «گواتر- ایران» وصل می نماید) انجام می شود.

۳-۲۱ دفترچه کارورزی در کشتی (On Board Training Record Book):

به معنای دفترچه کارورزی مورد تایید سازمان می باشد که آموزشهای عملی و تئوری دریانورد میبایست بر اساس مفاد مندرج در آن تکمیل گردد.

۳-۲۲ دستگاه نظارت بندر (Port's Monitoring Office):

به معنای معاونتی که اداره امتحانات و اسناد دریانوردان بنادر زیر مجموعه آن می باشد و به نیابت از اداره استانداردهای دریانوردان، وظیفه صدور مجوز دوره های آموزشی و نظارت بر مراکز آموزشی محل استان جغرافیایی خود را به عهده دارد. اداره یا بخشهای دیگر در مجموعه معاونت مربوطه به عنوان دستگاه نظارت محسوب نمی گردند.

۳-۲۳ سازمان (Ports & Maritime Organization):

به معنای سازمان بنادر و دریانوردی جمهوری اسلامی ایران می باشد.

۳-۲۴ ملوان (Rating):

به معنای عضوی از خدمه‌ی کشتی به غیر از فرمانده یا افسر می باشد.

۳-۲۵ مقررات (Regulations):

به معنای مجموعه مقررات مندرج در کنوانسیون و آئین نامه می باشد.

۳-۲۶ خدمت دریایی (Seagoing Service):

به معنای مدت زمان دریانوردی بر روی کشتی است که می بایست مرتبط با صدور و یا تجدید گواهینامه های شایستگی و یا مهارت در یانوردان می باشد.

۳-۲۷ گواهی خدمت دریایی (Seagoing Service/ Documentary Evidence):

به معنای تأییدیه خدمت دریایی دریانوردان جهت شرکت در دوره های آموزشی، آزمونهای دریانوردی و صدور گواهینامه های دریانوردی می باشد که علاوه بر ثبت در شناسنامه دریانوردی، توسط شرکت کشتیرانی/ مالک کشتی و یا اتحادیه مالکان کشتیها به صورت فرم کامپیوتری (computer sheet)، نامه اداری شماره شده و یا فرم تعریف شده (به ضمیمه این دستورالعمل) قابل ارائه می باشد.

۳-۲۸ کشتی دریا پیما (Seagoing Ship):

به معنای کشتی است به غیر از آنهائیکه منحصراً در آبهای سرزمینی، نزدیک یا مجاور آبهای پناه گاهی و یا مناطق مشمول مقررات بندری ، تردد میکنند.

۳-۲۹ آئین نامه ی کنوانسیون (STCW Code):

به معنای آئین نامه ی استانداردهای آموزش، صدور گواهینامه و نگهبانی دریانوردان که طی قطعنامه ی شماره ۲ کنفرانس سال ۱۹۹۵ میلادی تصویب و ممکن است توسط سازمان بین المللی دریانوردی بر اساس اصلاحیه های بعدی تغییر یابد، می باشد.

۳-۳۰ سطح پشتیبانی (Support Level):

به معنای سطحی از مسئولیت اطلاق می گردد که وظایف، تکالیف و مسئولیتهای محوله بر روی کشتی را تحت نظر افراد سطح مدیریتی و یا عملیاتی انجام می پذیرد.

۳-۳۱ مرکز آموزشی(Training Center):

به معنای دانشگاه، شرکت، موسسه یا هر ارگانی که بر اساس مجوز اخذ شده از سازمان در زمینه آموزشهای دریانوردی فعالیت می کند.

۳-۳۲ سفرهای نامحدود (Unlimited Voyages):

به معنای سفرهای بین المللی که محدود به سفرهای نزدیک به ساحل نباشد.

۴- مسئولیت‌ها

۴-۱ مسئولیت بازنگری این دستورالعمل بر عهده دستگاه نظارت مرکز می‌باشد.

۴-۲ مسئولیت تایید اصلاحیه ها به این دستورالعمل بر عهده اداره کل امور دریانوردان می‌باشد.

۴-۳ مسئولیت تصویب اصلاحیه ها به این دستورالعمل برعهده معاون امور دریایی به نیابت از هیات عامل سازمان می باشد.

۴-۴ مسئولیت اجرای کامل دوره آموزشی بر اساس عناوین اعلام شده بر عهده مرکز آموزشی می باشد.

۴-۵ مسئولیت نظارت بر حسن اجرای این دستورالعمل در مراکز آموزشی دریانوردی بر عهده دستگاه نظارت مرکز می باشد.

۵- روش اجرا :

۵-۱ هدف از برگزاری دوره آموزشی

هدف از برگزاری این دوره آموزشی ، آماده نمودن فراگیران برای کسب توانمندی های مندرج در ستون ۱ از جدول بخش II/5 – الف می باشد.

۵-۲ طول دوره

۵-۲-۱طول دوره حداقل ۱۹۸ ساعت و بر اساس ۱۵۴ ساعت نظری (تئوری) و ۴۴ ساعت عملی می باشد.

۵-۲-۲ حداکثر مدت زمان آموزش روزانه برای هر فراگیر ۸ ساعت می باشد.

۵-۳ تعداد شرکت کنندگان در دوره

۵-۳-۱ حداکثر فراگیران شرکت کننده در هر دوره ۲۰ نفر می باشد.

۵-۳-۲ در صورت افزایش حداقل فضا، تجهیزات و امکانات کمک آموزشی مرتبط بر اساس دستورالعمل صدور مجوز و نظارت بر اجرای دوره ها در مراکز آموزشی دریانوردی و پس از اخذ تاییدیه از دستگاه نظارت ذیربط، تعداد شرکت کنندگان در دوره می تواند حداکثر تا ۳۰ نفر افزایش یابد.

۵-۴ شرایط ورود به دوره

۵-٤-۱ دارا بودن حداقل سن ۱۸ سال

۵-٤-۲ دارا بودن گواهینامه سلامت پزشکی معتبر بر اساس دستورالعمل مصوب سازمان

۵-٤-۳ دارا بودن حداقل مدرک تحصیلی سوم راهنمایی و یا مدرک تحصیلی همتراز با نظام آموزشی کشور و مورد تایید وزارت آموزش و پرورش

۵-٤-٤ دارا بودن گواهینامه مهارت ملوان عرشه بر روی کشتیها ی با ظرفیت نا خالص ۵۰۰ یا بیشتر سفرهای نامحدود؛ و

۵-٤-۵ دارا بودن حداقل ۱۸ ماه خدمت دریایی در سمت ملوان عرشه بر روی کشتیها ی با ظرفیت نا خالص ۵۰۰ یا بیشتر سفرهای نامحدود

۵-۵ دانش ، درک و مهارت مورد انتظار

۵-۵-۱ درک قوانین بین المللی جلوگیری از تصادم در دریا و توانایی برقراری و انجام نگهبانی و دیده بانی ایمن به صورت دیداری و شنیداری

۵-۵-۲ مشارکت و شناخت اصولی که لازم است به هنگام نگهبانی و دریانوردی ایمن رعایت گردد

۵-۵-۳ مشارکت در عملیات مهار، پهلو گیری و جداسازی شناور از اسکله وهمچنین لنگر اندازی و لنگر برداری

۵-۵-٤ توانایی در به کار گیری تجهیزات ایمنی در شرایط اضطرار و شناخت واکنش صحیح در شرایط اضطراری

۵-۵-۵ مشارکت در عملیات جابجایی بار و تجهیزات

۵-۵-٦ درک اقدامات لازم به هنگام وقوع حالتهای اضطراری در دریا و بندر

۵-۵-۷ آگاهی از رعایت و اجرای قواعد و قوانین بین المللی در زمینه ایمنی جان اشخاص، ایمنی دریانوردی، حمل کالا در دریا و جلوگیری از آلودگی دریا و توانایی در حفظ ایمنی و امنیت خدمه و مسافران

۵-۵-۸ آگاهی از شرایط و توانایی در حمل کالاهای خطرناک با کشتی

۵-۵-۹ مشارکت در تعمیرات و نگهداری ماشین آلات و تجهیزات مرتبط عرشه

۵-۵-۱۰ مشارکت در کاربری ایمن ماشین آلات و تجهیزات مرتبط عرشه

۵-۵-۱۱ رعایت ایمنی و بهداشت کار

۵-۵-۱۲ شناخت انواع پرچمها، بویه ها و چراغهای دریایی

۵-۵-۱۳ توانایی استفاده صحیح از عمق یاب دستی و آب سنج

۵-۵-۱٤ آگاهی از ساختار نردبان و بالابرهای راهنما و توانایی آماده سازی ایمن نردبان راهنما

۵-۵-۱۵ آگاهی از ساختار طنابهای الیافی و سیمی، مزایا و معایب و نحوه بازرسی و نگهداری آنها

۵-۵-۱٦ شناخت انواع گره ها و خفتها و کاربرد هرکدام

۵-۵-۱۷ توانایی استفاده صحیح و ایمن نگهدارنده های الیافی و سیمی

۵-۵-۱۸ توانایی آماده سازی داربست و صندلی ملوانی و استفاده ایمن

۵-۵-۱۹ شناخت اتصالات طناب سیمی و آگاهی از کاربرد آنها

۵-۵-۲۰ آشنایی با انواع دریکها و جرثقیلها و آگاهی از نکات ایمنی به هنگام استفاده از آنها

۵-۵-۲۱ آشنایی با انواع رنگهای مورد مصرف در کشتی و کاربرد آنها

۵-۵-۲۲ آگاهی از نکات ایمنی به هنگام آماده نمودن سطح و رنگ آمیزی

۵-۵-۲۳ توانمندی ارتباط و استفاده از زبان انگلیسی دریایی

۵-۶ عناوین دروس ، ریز مواد درسی و آزمون

عناوین دروس و جدول نمایانگر تعداد سؤالات، مدت، نوع، حدنصاب قبولی و مواد درسی آزمون مهارت دریانوردی برای داوطلبین سمت " ملوان ماهر عرشه بر روی کشتیها ی با ظرفیت نا خالص ۵۰۰ یا بیشتر (GT≥500) - سفرهای نامحدود " به شرح ذیل می باشد.

۱-۶-۵ جدول نمایانگر تعداد سؤالات، مدت، نوع، حد نصاب قبولی و مواد درسی آزمون مهارت سمت ملوان ماهر عرشه بر روی کشتیها ی با ظرفیت نا خالص ۵۰۰ یا بیشتر (GT≥500) – سفرهای نامحدود

ردیف	نام آزمون	تعداد سؤالات	مدت (ساعت)	نوع آزمون	حدنصاب قبولی (درصد)	مواد درسی (ماده ۲-۶-۵)	ملاحضات
۱	شفاهی	-	-	شفاهی/ عملی/ شبیه ساز	-	1.1.1-1.1.2-1.1.3-1.2.1-1.2.2-2.1.1-2.1.2-3.1.1-3.1.2-3.1.3-3.1.4-3.2.1-3.3.1-3.3.2-3.3.3-3.4.1-3.4.2-3.4.3-3.4.4-3.4.5-3.4.6-3.4.7-	در زمان آزمون شفاهی به همراه داشتن شناسنامه دریانوردی الزامی می باشد

۵-۶-۲ حداقل مواد درسی دوره آموزش سمت ملوان ماهر عرشه بر روی کشتیهای با ظرفیت نا خالص ۵۰۰ یا بیشتر (GT ≥ 500) - سفرهای نامحدود در بخش انگلیسی این دستورالعمل می باشد.

۵-۷ امکانات مورد نیاز جهت برگزاری دوره

جهت برگزاری دوره آموزشی علاوه بر فضای آموزشی قید شده در " دستورالعمل صدور مجوز و نظارت بر اجرای دوره ها در مراکز آموزشی دریانوردی "مصوب سازمان ، تجهیزات کمک آموزشی مشروحه زیر نیز مورد نیاز می باشد:

۵-۷-۱ سالن /کلاسها می بایست مجهز به سیستم تهویه و نورکافی و وسایل سمعی و بصری و امکانات مورد نیاز برای تدریس باشد (وسائل کمک آموزشی شامل: وایت بورد/ تخته سفید، کامپیوتر و دستگاه ویدئو پروژکتور چند رسانه ای، پرده ویدئو پرژکتور و امکانات مورد نیاز برای تدریس زبان انگلیسی تخصصی و عمومی)

۵-۷-۲ کتابخانه مجهز به کتب تخصصی مورد نیاز تدریس و اطلاعات جامع دیگر در خصوص دوره

۵-۷-۳ فیلم های آموزشی و جزوات درسی و آموزشی مورد نیاز و مرتبط با دوره.

۵-۷-٤ مدل کره زمین، مدلهای مختلف بویه های دریایی ، ماکت و مدلهای مختلف شناورها با علائم شناسایی شناورها در روز و شب، ماکت و مدلهای اسکله و حوضچه برای تمرین قوانین راه و پهلو گیری و جدا سازی از اسکله ، ماکت کشتیها که شماتیک جرثقالها و دیگر تجهیزات عرشه را نشان دهد.

۵-۷-۵ سالن آشنایی با وسایل مختلف مورد استفاده در کشتیها (Instrument Room) شامل:

Thermometer, Hydrometer, Magnetic Compass, azimuth mirror, international code of signals and flags, signalling equipment,

۵-۷-٦ دستگاه pyrotechnics , EPIRB , SART (جایگزین نمودن نرم افزار مناسب برای شبیه سازی دستگاههای مندرج در این بند و یا استفاده از کشتی های مستقر در بندر با تجهیزات مربوطه جهت تشریح بصورت بازدید، و با اخذ تائیدیه از دستگاه نظارت صادر کننده مجوز مورد قبول می باشد).

۵-۷-۷ کارگاه ملوانی شامل تجهیزات : کارگاه با نیمکتها و میز کار مناسب برای اجرای آموزشهای عملی ، یک عدد عمق یاب دستی دارای درجات مناسب، نردبان راهنما (Pilot Ladder) و وسایل ساخت آن، نمونه هایی از طنابهای الیافی، نمونه هایی از طنابهای سیمی، پنج سری ابزار و متعلقات لازم برای گره زنی، خفت زنی و پلاس زنی ، صندلی ملوانی (Bosun Chair) ، داربست (Stage) ، انواع قرقره ها، طنابهای پهلوگیری و مهار (سیمی و الیافی)، دوارها و نگهدارنده های لازم برای اجرای آموزش عملی (Winch /Windlass Arrangements) ، انواع اسکراپ دستی (Scrappers) ، نمونه هایی از رنگهای مختلف دریایی،

انواع گوناگون برس و غلتک رنگ زنی ،یک دستگاه رنگ پاش بدون هوا و مقدار کافی رنگ برای اجرای آموزش عملی، قلابهای شبکه کش، لوله کنوسی (Fire Hose) ، قیچی سیم بر (Wire Cutter) ، شکل در انداز ه های مختلف، چپ و راست، انواع تمپلی، انواع اتصالات طنابهای سیمی، کلمپس، انواع قلاب (Hooks)، وسایل نگهدارنده کانتینر، سندان وگیره، گوشی ایمنی، عینک ایمنی، کمربند ایمنی، پازوهای فلزی وچوبی (Spikes) ، وسایل و البسه کامل ضد حریق، وایراسلینگ در اندازه های مختلف، قایق نجات بادی(Life Raft) با کلیه وسایل، وسایل و البسه حفاظتی و ایمنی(دستکش، لباس کار، کفش و کلاه ایمنی) به تعداد فراگیران، جرثقیل دستی ۵ تنی (Chain Block)، سنگ برقی رومیزی، انواع تکلها، تابلو نمایش انواع گره های دریایی، وایر جهت اسپلایس زدن، نردبان مخصوص شرایط اضطرار(Monkey Ladder)، حلقه نجات ۳ عدد، جلیقه نجات ۵ عدد، کپسول هوای ماسک دار مخصوص اطفاء حریق یکدستگاه، انواع شیرهای مخازن، انواع شیرهای آتش نشانی (Nozzles) ، دستگاههای گاز سنج، انواع گیج (Gauges) ، انواع کپسولهای اطفای حریق، تجهیزات کمکهای اولیه (جعبه کمکهای اولیه پزشکی، برانکارد، تخت معاینه، کپسول و ماسک اکسیژن) ، طناب مخصوص کشیدن(Heaving Line) ، وسایل دوخت و دوز، خفت پران.

۸-۵ شرایط مدرسین و مربیان دوره

۱-۸-۵ مدرسین و مربیان دوره های آموزشی مندرج در این دستورالعمل می بایست علاوه بر گذراندن دوره مدرسی مورد تأیید سازمان دارای حداقل مدارک و تجارب مشروحه زیر باشند:

۱-۱-۸-۵ مدرسین:

۱-۱-۱-۸-۵ دارای حداقل گواهینامه شایستگی معتبر افسر دوم بر روی کشتیهای با ظرفیت ناخالص GT≥500سفرهای نامحدود و همچنین حداقل ٦ ماه خدمت دریایی در آن سمت و یا ;

۲-۱-۱-۸-۵ دارای مدرک تحصیلی لیسانس علوم دریایی با حداقل ۱۲ ماه خدمت دریایی(کارورزی) بر روی کشتیهای تجاری(اقیانوس پیما) و همچنین حداقل ۱۲ ماه سابقه تدریس مرتبط در مراکز آموزش دریانوردی باشند.

۲-۱-۸-۵ مربیان:

۱-۲-۱-۸-۵ دارای حداقل مدرک تحصیلی فوق دیپلم دریایی (ناوبری) با حداقل ۲ سال خدمت دریایی و یا دارای گواهینامه معتبر ملوان عرشه با حداقل ۵ سال خدمت دریایی بر روی کشتیهای تجاری باشند.

۹-۵ ارزیابی و صدور گواهینامه

۱-۹-۵ در صورت موفقیت فراگیران در ارزیابی های حین و یا پایان دوره، گواهی طی موفقیت آمیز دوره مربوطه توسط مرکز آموزشی مورد تایید و مجری برگزاری دوره صادر می گردد.

۲-۹-۵ سپس فراگیران می توانند درخواست حضور در آزمون مهارت دریانوردی سازمان را بر اساس مفاد بند ۱-٦-۵ این دستورالعمل ارائه نمایند؛ و

۳-۹-۵ نهایتا اداره امتحانات و اسناد دریانوردان سازمان برای آن دسته از شرکت کنندگان که آزمون مربوطه را با موفقیت طی نموده باشند و حائز دیگر شرایط لازم باشند، گواهینامه مرتبط بر اساس دستورالعمل صدور، تمدید و تجدید گواهینامه های دریانوردان صادر می نماید.

۱۰-۵ شرایط تمدید/ تجدید گواهینامه

گواهینامه های شایستگی و مهارت دریانوردی بر اساس مفاد دستورالعمل صدور ، تمدید و تجدید گواهینامه های دریانوردان تمدید و یا تجدید می گردد.

۱۱-۵ روش تأیید دوره

تأیید دوره بر اساس مفاد مندرج در دستورالعمل صدور مجوز و نظارت بر اجرای دوره‌ها در مراکز آموزش دریانوردی صورت می پذیرد.

۶-سوابق

کلیه سوابقی که نشان دهنده رعایت موارد مندرج در این دستورالعمل باشد.

۷-مراجع

۱-۷ کنوانسیون اصلاح شده STCW و آیین نامه مربوطه

۲-۷ مدل کورس سازمان بین المللی دریانوردی (IMO) شماره ----

۳-۷ دستورالعمل صدور ، تمدید و تجدید گواهینامه های دریانوردان

٤-۷ دستورالعمل صدور مجوز و نظارت بر اجرای دوره ها در مراکز آموزشی دریانوردی

۸- ضمائم

ندارد.

PMO

The code of practice for conducting Able Seafarer Deck on ships of Gross Tonnage (GT ≥ 500) engaged on Unlimited Voyages Training Course and Competency Assessment

P6-W131

Revision No.	Date of revision	Comment on revision	provider	approving amendments authority	endorsing amendments authority
01	25.AGU.2014	STCW Convention, as amended	N. Alipour, Head of Seafarers' Standards' Directorate	H. Mirzaei, Director General of Seafarers' Affairs	S.A.Estiri, PMO's Deputy for Maritime Affairs

Introduction

Ports and Maritime organization (P.M.O) of the Islamic republic of Iran in performing its duty and in exercising its prerogative resulting from article 192 of the Islamic republic of Iran maritime code, 1964 and paragraph 10 of article 3 of P.M.O manifesto, 1970 enabling it to issue any document, certificate or license for ships, masters, officers and other ship personnel and also in accordance with the provisions of the international convention on standards of training, certification and watch keeping for seafarers (STCW), 1978, as amended adopted by the Islamic consultative assembly in 1996 and taking into account regulations II/5 of the mentioned Convention and section A- II/5 of the STCW Code, develops this "code of practice for conducing Able Seafarer Deck on ships of Gross Tonnage GT≥500 engaged on unlimited voyages training course and competency assessment" which is applicable after endorsement by the board of executives of Ports & Maritime Organization.

NOTE: The title of Ports and Shipping Organization changed to Ports and Maritime Organization dated 29.04.2008 through parliamentary act and approved by Islamic council assembly.

1-Objective

The objective of this code of practice is to specify the minimum requirements for conducting Able Seafarer Deck on Ships of Gross Tonnage GT≥500 engaged on Unlimited Voyages training course and competency assessment.

2-Scope of application

This code of practice is applicable to all approved training centers that conduct Able Seafarer Deck on Ships of Gross Tonnage GT≥500 engaged on Unlimited Voyages training course.

3-Definition

For the purpose of this code of Practice, unless expressly provided otherwise:

3-1 Able Seafarer Deck

Means a rating qualified in accordance with the provisions of regulation II/5 of the Convention.

3-2 Approved

Means approved by the Seafarer's Standards Directorate in accordance with the PMO's Codes of practices.

3-3 Central Monitoring Office

Central monitoring office which is responsible for approving and monitoring training courses is the Seafarer's standard directorate of the PMO.

3-4 Certificate

Means Certificate other than Certificate Of proficiency and competency, which issued to fulfill the requirement in Codes of practices for issuing, revalidation and renewing certificates for seafarers, which shows the holder is capable of serving in that rank.

3-5 Code of Practice

Means all national rules, regulations and requirements specified in this document which have been drafted by the PMO's General Directorate of Maritime affairs and endorsed by the PMO's board of executive

3-6 Company

Means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the ship owner and who, on assuming such responsibility, has agreed to take over all the duties and responsibilities imposed on the company by these Codes of practices.

3-7 Convention

Means international convention on standards of training, certification and watch keeping for Seafarers, 1978, as amended.

3-8 Course Completion Certificate or Documentary Evidence

Means a certificate issued through the training center, after successfully completion of training program by the applicants

3-9 Certificate of Proficiency (COP)

Means a certificate, other than a certificate of competency issued to a seafarer, stating that the relevant requirements of training, competencies or seagoing service in the STCW Convention have been met.

3-10 Deck Rating

Means a rating qualified in accordance with the provisions of regulation II/4 of the Convention.

3-11 Function

Means a group of tasks, duties and responsibilities, as specified in the STCW Code, necessary for ship operation, safety of life at sea or protection of the marine environment.

3-12 General Rating

Means a member of ship's crew who is qualified in accordance with the provisions of Codes of practices for issuing, revalidation and renewing certificates for seafarers.

3-13 Gross Tonnage

Means the volume of all enclosed spaces of a vessel calculated in accordance with relevant regulations.

3-14 ISPS Code

Means the International Ship and Port Facility Security (ISPS) Code adopted on 12 December 2002, by resolution 2 of the Conference of Contracting Governments to the International Convention for the Safety of Life at Sea (SOLAS), 1974, as may be amended by the Organization.

3-15 Master

Means the person having command of a ship

3-16 Medical Fitness Certificate

Means a certificate issued by the PMO's recognized medical practitioner to the candidates who found to be medically fit.

3-17 Merchant Ship

Means any ship (other than servicing vessel, mobile offshore platform, fishing and naval ships) used for carriage of cargoes, passenger and/or provisions

3-18 Minimum Safe Manning Certificate

Means a certificate in which the minimum safe manning of a vessel being determined by shipping companies & approved by PMO.

3-19 Month

Means a calendar month or 30 days made up of periods of less than one month.

3-20 Near-Coastal Voyages (NCV)

Means voyages between ports situated in the Persian Gulf and Gulf of Oman (positions from LAT 22° 32' N 059° 48' E to 25° 04' N 061° 22' E) or between Caspian Sea ports.

3-21 On Board Training Record Book

Means on board training record book approved by Port and Maritime Organization in which practical and theoretical training of seafarer shall be fulfilled according to its content.

3-22 Port's Monitoring Office

Means the deputy of general directorate in ports in which the directorate of examinations & seafarers' documents is included and on behalf of seafarers' standards directorate is responsible for approving and monitoring training courses conducted in the province that port is situated

3-23 PMO

Means Ports & Maritime Organization (PMO) of the Islamic Republic of Iran

3-24 Rating

Means a member of the ship's crew other than the master or an officer.

3-25 Regulations

Means regulations contained in the annex to the STCW Convention

3-26 Seagoing service

Means service on board a ship relevant to the issue or revalidation of a certificate or other qualification.

3-27 Seagoing Service / Documentary Evidence

Means approved sea going service required to be presented for participating in a training course, maritime examination and issuance of certificate. These documentary evidence should be inserted in CDC and authenticated by company or ship owner or ship owner's associations and in addition be presentable in a form of computer sheet, official letter or other forms as defined in the annex to this code of practice.

3-28 Seagoing Ship

Means a ship other than those which navigate exclusively in inland waters or in waters within, or closely adjacent to, sheltered waters or areas where port regulations apply.

3-29 STCW Code

Means the seafarers' training, certification and watch keeping (STCW) code as adopted by the 1995 conference resolution 2,as it may be amended by the international maritime organization.

3-30 Support Level

Means the level of responsibility associated with performing assigned tasks, duties or responsibilities on board a seagoing ship under the direction of an individual serving in the operational or management level.

3-31 Training center

Means maritime university/center/ directorate/ department/company and/or any organization conducting maritime training course approved by PMO

3-32 Unlimited Voyages

Means voyages not limited to the near coastal voyages.

4- Responsibilities

4-1 Central monitoring office is responsible for revising this code of practice.

4-2 General Director of Seafarers' Affairs is responsible for approving amendments to this code of practice.

4-3 Deputy of maritime affairs is responsible to endorse amendments to this code of practice on behalf of PMO's board of executive.

4-4 Training centers are to conduct training course in accordance with this Code of practice.

4-5 Central monitoring office is responsible for supervising the implementation of this code of practice in training centers.

5-Procedure:

5-1 course objective

The objective of this training course is to prepare trainees to achieve competencies set out in the column 1 of table A-II/5 of the STCW Code.

5-2 course duration

5-2-1 A minimum of 154 hours theoretical and 44 hours practical for each trainee (total of 198 hours).

5-2-2 Maximum daily contact hours for each trainee are 8 hours.

5-3 number of trainees

5-3-1 the maximum number of trainees in each course is 20.

5-3-2 the number of trainees may be increased to 30 when the relevant facilities, teaching aids and class-room space are increased as per criteria set out in the code of practice for approving and monitoring training courses and is approved by the relevant monitoring office.

5-4 Course entry requirement

The course trainees should, at least;

5-4-1 be not less than 18 years of age;

5-4-2 hold valid medical fitness certificate, issued in accordance with the provisions of the relevant code of practice;

5-4-3 hold at least secondary school education certificate or other national equivalent certificate approved by Ministry of Education;

5-4-4 Hold Deck Rating certificate of proficiency on ships with GT ≥ 500, unlimited voyages; and

5-4-5 have at least 18 months seagoing service on merchant ships in the rank of Deck Rating on ships with GT ≥ 500, unlimited voyages.

5-5 Expected Knowledge, Understanding and Proficiency

5-5-1 Understanding collision avoidance at sea and maintaining a safe navigational watch and look out duties by sight and hearing;

5-5-2 Proficiency in to Contribute to a safe navigational watch;

5-5-3 Proficiency in to Contribute to berthing, anchoring and other mooring operations;

5-5-4 Knowledge of using safety equipment in emergency situation and responding to emergencies;

5-5-5 Proficiency in to Contribute to the handling of cargo and stores, monitoring the loading, stowage, securing and unloading of cargoes and their care during the voyage;

5-5-6 Knowledge of responding to a distress signal at sea;

5-5-7 Knowledge of compliance with legislative requirements, safety of life at sea, pollution-prevention requirements, contribution to safety/security of personnel/passenger and ship, apply precautions and contribute to the prevention of pollution of the marine environment;

5-5-8 Knowledge of handling and carriage of dangerous goods;

5-5-9 Proficiency in to Contribute to the safe operation of deck equipment and machinery Contribute to shipboard maintenance and repair;

5-5-10 Proficiency in to use and handling of deck and cargo-handling gear and equipment, application, maintenance and use of hand and power tools;

5-5-11 Proficiency in to Apply occupational health and safety precautions;

5-5-12 Knowledge of hoisting and dipping flags and the main single-flag signals;

5-5-13 Ability to use and handling of hand lead line;

5-5-14 Proficiency in to rig and unrig pilot ladders, hoists, rat-guards and gangways;

5-5-15 Proficiency in to work with fiber and wire ropes, cables and chains, including their construction, use, markings, maintenance and proper stowage;

5-5-16 Proficiency in to use marlin spike seamanship skills, including the proper use of knots, splices and stoppers;

5-5-17 Ability to use and safe handling of rope and wire stoppers;

5-5-18 Ability to rig and unrig bosun's chairs, staging, gangway and safe means of access;

5-5-19 Ability to use and safe handling of wire ropes and connections;

5-5-20 Ability to use and safe handling of winch/windlass and cranes;

5-5-21 Ability to use painting, lubrication and cleaning materials and equipment;

5-5-22 Knowledge of surface preparation techniques for painting;

5-5-23 Knowledge of the Maritime English in Written and Oral Form in order to understand manufacturer's safety guidelines and shipboard instructions;

5-6 Course syllabi and competency assessment:

5-6-1 Competency assessment details;

No.	Title	Number of Question	Time (hours)	Type	Pass mark	Subjects (5-6-2)	Remarks (if any)
1	Oral	-	-	Oral/practical/simulator	To the discretion of assessor	1.1.1-1.1.2-1.1.3-1.2.1-1.2.2-2.1.1-2.1.2-3.1.1-3.1.2-3.1.3-3.1.4-3.2.1-3.3.1-3.3.2-3.3.3-3.4.1-3.4.2-3.4.3-3.4.4-3.4.5-3.4.6-3.4.7-	At the time of oral examination seaman book must be presented

5-6-2 Course minimum syllabi

Function: 1. Navigation at the management level

Competence: 1.1 Contribute to a safe navigational watch

1.1.1 Ability to understand orders and to communicate with the officer of the watch on matters relevant to watchkeeping duties

1. Watch keeping duties and Perform lookout by sight and hearing 4hrs (T) + 4hrs (P) + 0hrs (E).

Knowledge of;

- Bridge watch keeping principles, arrangement, procedures, roles and responsibilities
- Principles of navigational recording devices for keeping records of the operation, behavior and performance of the ship and navigation equipment
- Identifying lights, sounds and shapes

Understanding of;

- That A proper look-out is maintained at all times and in such a way as to conform to accepted principles and procedures and regulatory requirements
- Procedures in performing lookout by sight and hearing
- Lights, shapes and sound signals conform with the requirements contained in the International Regulations for Preventing Collisions at Sea
- Distress signals and appropriate action to initiate search and rescue procedures
- Master is called in the event of navigational incident which falls outside the officer's limit of responsibility
- The principles and rules of the International Association of lighthouse Authorities (IALA) maritime buoyage system, system 'A' and 'B'.
- Fatigue and Signs of Fatigue

1.1.2 Procedures for the relief, maintenance and handover of a watch

.1 Procedures for the relief, maintenance and handover of a watch 4hrs (T) + 0hrs (P) + 0hrs (E).

Understanding of;

- Steering procedures

- Watch hand-over procedures, rest hours and working hours, fitness for duty.
- The conduct, handover and relief of the steering with accepted steering procedures
- Factors in carrying out watch keeping duties and appropriately responded in accordance with established navigational practice and regulatory requirements on the level applicable
- The duties prior to proceeding to sea, making harbour, berthing alongside quays, jetties, or other ships, and securing to buoys.
- The procedure for embarking pilot and the preparations required on board.
- The preparations to be taken before the onset of heavy weather.
- Duties in connection with protection of the marine environment in port.
- The various equipment on the bridge and their use.
- The duties while at anchor.

.2 Watch keeping in Port, keeping an Effective Deck Watch in Port under Normal Circumstances

4hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Watch arrangements.
- Terminologies and definitions used on board ships
- Marine piracy.
- Preventive measures to reduce effect of piracy.
- Responsibilities of crew members in respect to security, maintaining security on board and its relation to national reputation, its effect on ship's crew on board and its relation to foreign ports
- National rules and regulations on smuggling.
- Working hours and rest hours and Fatigue
- Fitness for duty, personal/social responsibilities and associated risks of using drugs and alcohol on board
- Ship board discipline and code of conduct
- Ordinary seaman & his duties.
- Able seafarer deck & his duties.
- Carpenter & his duties.
- Bosun & his duties.
- Keeping an effective deck watch in port to ensure; safety and security of life, environments, ship, cargo, port.
- Observe international, national and local rules, in particular observing requirements on ISM Code and ISPS Code.
- Maintain order and the normal routine of the ship.
- Action to take on receiving warning or an emergency threatening the safety and security of the ship.
- Precaution to prevent pollution, port regulations.
- Communication with shore in the event of emergency.
- Monitoring work in an enclosed space, permit to work procedures.
- Handing over and taking over, how the watch should be kept and points to which attention should be paid.

.3 Watch keeping in Port, Keeping a Watch in Port When Carrying Hazardous Cargo 4hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Hazardous cargo and special precaution for the safe handling of hazardous cargo.
- Sufficient personnel should be readily available on board when carrying hazardous cargo.
- That special requirements may be necessary for special types of ships or cargo:
  - Number of crew on board.
  - State of readiness of FFA and other safety equipment.
  - Special port regulations.
  - Communications with shore in emergency.
  - Special Precautions to prevent pollution of environment.
- That the watchkeeping personnel should be aware of the nature of the hazards and any special precautions necessary for the safe handling of cargo.
- That the watchkeeping personnel should be aware of the appropriate action in the event of spillage or fire.
- Procedure for entry into enclosed spaces and emergency rescue arrangements.

1.1.3 Information required to maintain a safe watch

.1 Information required to maintain a safe watch 2hrs (T) + 0hrs (P) + 0hrs (E).

Understanding of;

- Typical bridge instrumentation, controls and alarms and their functions
- Functions of unmanned machinery space controls, alarms ad indicators

Competence: 1.2 Contribute to berthing, anchoring and other mooring operations

1.2.1 Working knowledge of the mooring system and related procedures, including:

.1 The function of mooring and tug lines and how each line functions as part of an overall system 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- The function of mooring and tug lines and how each line functions as part of an overall system
- Safety precautions and regulations during mooring / unmooring in accordance with safe working practices
- Operational hazards during mooring / unmooring as per safe working practices
- Shipboard emergency and contingency plans in the event of a failure or emergency associated with mooring equipment and associated system as per safe working practices
- Warnings and manufacturer's instructions

.2 The capacities, safe working loads, and breaking strengths of mooring equipment, including mooring wires, synthetic and fiber lines, winches, anchor windlasses, capstans, bitts, chocks and bollards 4hrs (T) + 2hrs (P) + 0hrs (E).

Knowledge of;

- The capacities, safe working loads, and breaking strengths of mooring equipment, including mooring wires, synthetic and fiber lines, winches, anchor windlasses, capstans, bitts, chocks and bollards, leads and fairleads.
- Anchors and cables: types of anchors (admiralty pattern, stockless, high holding power), their applications and advantages; anchor marks and their markings; types of anchor cables, their construction and applications; kenter shackle and lugged shackle; marks and marking of shackles; bitter end securing arrangements; care and maintenance of anchors and cables; Windlass:

applications, driving media (electricity, steam, hydraulic); gypsies (cable lifters); drum ends; safety consideration when using (e.g. checking the brake before taking the windlass out of gear, not leaving windlass in gear, wearing goggles, safety and protective gears,)

.3 The procedures and order of events for making fast and letting go mooring and tug lines and wires, including towing lines **4hrs (T) + 2hrs (P) + 0hrs (E).**

Knowledge of;

- The procedures and order of events for making fast and letting go mooring and tug lines and wires, including towing lines
- Mooring and berthing and preparation for berthing, safety precautions, making fast to the bitts and buoys (fiber and wire ropes); number of turns on drums, not rendering a synthetic rope (fusing); rope inspection prior to use, placing the second eye of a mooring line over a bollard; use of manila and chain stoppers on fiber and wire ropes; use of protective clothing; rat guards;
- Station organization and management of team on forward and aft station; preparation for berthing and unberthing procedures
- The use of head ropes, stern ropes, breast ropes and springs.
- The safety measures to be taken when handling mooring ropes and wires and tow lines.
- Contribute to berthing, anchoring and other mooring operations.
- Towing operations.
- How to join two mooring ropes together.
- Typical mooring arrangements.
- The use of self-tensioning winches.
- How to make fast tugs on towing hawsers or lashed up alongside.
- The use of fenders during berthing and when secured in position.
- How to stow mooring ropes and wires for a sea passage.
- The preparations to be made for berthing alongside.
- The importance of keeping mooring lines clear of the propeller and notifying the bridge when the propeller is not clear.
- How to set up and secure a ship wire.
- The procedures for singling up and letting go from berths.

.4 The procedures and order of events for the use of anchors in various operations **4hrs (T) + 2hrs (P) + 0hrs (E).**

Knowledge of;

- The procedures and order of events for the use of anchors in various operations
- Procedures for anchoring and heaving up anchors, mooring arrangements.
- Safety considerations when working with anchors; appropriate signals and sounds
- How anchors should be cleared away ready for use.
- The use of anchor buoys.
- The safety measures to be taken by the anchor party.
- The method of letting go and the amount of cable to veer initially.
- The marking of the cable and the reports to be made to the bridge.
- How to determine when the ship is brought up.

Familiarity with;

- That anchors should be walked back clear of the hawse pipes when approaching the anchorage.
- That the lights or shape for a vessel at anchor should be displayed as soon as the ship is brought up.

Ability to;

- Demonstrate how to put a stopper on a rope or wire rope.
- Demonstrate how to make a mooring rope or wire fast to bitts.
- making preparation for mooring and using stopper on wire and fiber ropes

1.2.2 Working knowledge of the procedures and order of events associated with mooring to a buoy or buoys

.1 Working knowledge of the procedures and order of events associated with mooring to a buoy or buoys

4hrs (T) + 2hrs (P) + 0hrs (E).

Knowledge of;

- The procedures and order of events associated with mooring to a buoy or buoys
- The preparation of mooring / unmooring gears and equipment along side or secured on a buoy
- Prepare Mooring and unmooring gears and equipment in accordance with given orders from Officer on Watch based on terminal advised
- Mooring and unmooring operations alongside and secured in a buoy in accordance with the code of safe working practices
- Clear and timely communications during mooring / unmooring as per standard operating procedures
- Correctly interpret and promptly execute Orders of the Officer on Watch as per standard operating procedures
- Officer on Watch is advised as to the readiness of the mooring and unmooring gears / equipment as per standard operating
- Deterioration of vessel's deck areas, machinery and fittings
- Maintenance works
- Preparation of Mooring Winch
- Preparation of Mooring Lines and Gears to bits
- Maintenance tools and Equipment
- Personal Protective Equipment
- Lowering Mooring Lines
- Transferring Mooring Lines to Bits
- Accommodation Ladder
- Secure Mooring Line after un mooring
- Methods of mooring to a buoy.
- How to use a messenger to pass a wire or chain to a buoy.
- How to set up and secure a ship wire.
- The method of securing ropes and wires to a buoy.
- The procedures for singling up and letting go from berths and buoys.
- How to slip a slip wire.

Function: 2. Cargo handling and stowage at the support level

Competence: 2.1 Contribute to the handling of cargo and stores

2.1.1 Knowledge of procedures for safe handling, stowage and securing of cargoes and stores, including dangerous, hazardous and harmful substances and liquids

.1 Knowledge of procedures for safe handling, stowage and securing of cargoes and stores, including dangerous, hazardous and harmful substances and liquids 4hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Preparation of hold and care for during loading, securing, discharging and carriage of cargoes such as rice, steel cargo, palletized cargo, containers, vehicles and stores, including dangerous, hazardous and harmful substances and liquids .
- The precautions which should be taken while loading or discharging cargo.
- The meaning of the following stowage and segregation requirements for the different types of ships, with the aid of diagrams:
  - on deck only
  - on deck or under deck
  - away from
  - separated from
  - separated by a complete compartment or hold from
  - separated longitudinally by an intervening complete compartment or hold
- The importance of maintaining effective communications between all concerned during loading and discharging.
- The various persons/stations involved during cargo operations and the methods of communication available between them.
- That the communication arrangements should be checked before the commencement of cargo operations.
- The importance of having a Safe Working Load (SWL) for the cargo gear.
- The provisions for adequate lighting for working spaces, portable lights and precautions with dangerous cargoes, e.g. jute.
- The importance of maintaining close communication with the shore during the loading and unloading stage.
- The information that should be agreed between ship and shore before any loading or unloading operation.

Familiarity with;

- That all cargo gear should be visually inspected before the start of cargo operations each day.
- That all ropes and wires should come with the certificate of their properties.
- That hatch covers should be secured by locking devices to prevent them moving accidentally.
- That it is the ship's responsibility to cover hatches when notice of completion of work for the day is given by the stevedores incharge.
- That no person should stand or pass under a suspended load.

.2 Cargo Handling Equipment and Safety 4hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- The various cargo handling equipment on board.
- The use of slings, snotters, canvas slings, trays, pallets, nets, chain slings, cant hooks, bale hooks and vehicle slings.
- The care and maintenance of cargo gear.
- That rigging plan is to be followed when setting up.
- Handling of common unitized and pre-slung cargo.
- Compares the advantages and disadvantages of ship's cranes and derricks for handling cargo
- How hatch covers are secured for sea.
- That hatch covers should be secured by locking devices to prevent them moving accidentally.
- The provisions for adequate lighting for working spaces, portable lights and precautions with dangerous cargoes.
- Means of securing lifting appliances for sea.
- The precautions to take when lifting bales with hooks in the bale bands and damage caused by hooks generally.

Familiarity with;

- The precautions to be taken when fork-lift trucks or similar devices used in the 'tween-decks or holds.
- That all cargo gear should be visually inspected before the start of cargo operations each day.
- That ropes, wire, blocks and loose gear should be subject to frequent inspections while in use.
- That each item of cargo gear has its safe working load which should never be exceeded.
- That hatch openings should be properly fenced to a minimum height of 1 meter.
- The care and maintenance of:
  - Standing rigging, topping lifts, cargo runner guys and preventers.
  - Cargo blocks and topping lift blocks.
- Safety precautions and regulations when carrying out cargo handling operations
- Operational hazards and actions in conjunction with the officers, engineers and other members of the crew to minimize or eliminate risks to personnel, vessel and the environment
- Shipboard emergency and contingency plans in the event of failure or emergency during cargo handling operations

2.1.2 Basic knowledge of and precautions to observe in connection with particular types of cargo and identification of IMDG labeling

.1 Basic knowledge of and precautions to observe in connection with particular types of cargo and identification of IMDG labeling 4hrs (T) + 0hrs (P) + 0hrs (E).

Understanding of;

- The identification, segregation separation, labeling and stowage of dangerous goods.
- The classification of dangerous goods in the International Maritime Dangerous Goods (IMDG) Code.
- The properties, characteristics and physical state of the different substances, materials and articles covered by the 9 classes of the IMDG Code.
- The marking, labeling and placarding of dangerous goods as required by the IMDG Code and DGs in limited quantities.
- Where to look for damage and defects most commonly encountered due to:
  - loading and unloading operation
  - corrosion
  - severe weather conditions

- Measures to be taken in the event of an incident or accident and any necessary equipment and sufficient crew to operate it.
- That any incident or accident during the handling of dangerous goods should be reported immediately to the person in charge of the operation and all cargo operations to be ceased.
- That any doubts about the suitability and integrity of packages should be reported to the master or chief mate.
- The fire precautions which should be taken when carrying dangerous goods.

Function: 3. Controlling the operation of the ship and care for persons on board at the support level

Competence: 3.1 Contribute to the safe operation of deck equipment and machinery

3.1.1 Knowledge of deck equipment, including:

.1 function and uses of valves and pumps, hoists, cranes, booms, and related equipment 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Function and uses of valves and pumps, hoists, cranes, booms, and related equipment

.2 function and uses of winches, windlasses, capstans and related equipment 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Function and uses of winches, windlasses, capstans and related equipment
- Contribute to the safe handling of cargo and stores.

.3 hatches, watertight doors, ports, and related equipment 4hrs (T) + 2hrs (P) + 0hrs (E).

Knowledge of;

- Hatches, watertight doors, ports, and related equipment
- Hatch cover opening and closing operations
- Checking and routine maintenance on hatch securing and opening devices and machinery
- Hatch cover opening and closing operations in accordance with established procedures and under the supervision of the responsible officer
- Checks and routine maintenance on hatch securing and opening devices and machinery in accordance with established procedures and under the supervision of the responsible officer
- Securing hatch covers for sea in accordance with established procedures and under the supervision of the responsible officer
- Lashing of cargo and cleaning of cargo in accordance with established procedures and under the supervision of the responsible officer
- Precautions taken during cargo lashing
- Identification, marking and reporting of faulty and defective lashing and securing gear and equipment to the responsible officer
- Precautions are taken appropriately during cargo lashing procedures to avoid cargo damage
- Defective deck fittings, equipment and systems
- Maintenance equipment cleaning and storage
- Disposal of debris and unused materials and storage of returned materials

.4 Fiber and wire ropes, cables and chains, including their construction, use, markings, maintenance and proper stowage 4hrs (T) + 2hrs (P) + 0hrs (E).

Knowledge of;

- Fiber and wire ropes, cables and chains, including their construction, use, markings, maintenance and proper stowage
- Different Types and kinds of ropes and cordage used in tying knots, hitches and splices and their usage
- Rope work and knots, bends and hitches and care of ropes & Splicing of ropes and wires.
- Fiber ropes: natural fiber ropes (cotton, hemp, manila, sisal) and their applications; synthetic fiber ropes (polyamide, polyester, Polypropylene, nylon) and their applications; advantages and disadvantages of each type; care, use, storage, maintenance and wear and tear of each type.
- Wire ropes: galvanized steel wire rope; mixed wire and fiber ropes, rope construction, breaking strains and Safe Working Loads (SWL), care, use, storage, maintenance and wear and tear of wire and fiber ropes (opening a new coil, crossing fiber and wire ropes on board ship) e.g. back spring, Lifeboat fall, runner wire, hawser for towing and mooring.
- Wire rope fittings: open conical sockets, swivel spring hook, clamp, closed conical socket, thimbles, shackle, turnbuckle, bull-dog grip and their application.
- Chains: construction of chains, strength of chain, care and maintenance
- Dismantle, inspect and box-up at least two types of blocks
- Inspecting different types of wire and fiber ropes for detecting of defects,
- Dismantling and boxing-up a kenter shachkle,

.5 ability to use and understand basic signals for the operation of equipment, including winches, windlasses, cranes, and hoists 2hrs (T) + 2hrs (P) + 0hrs (E).

Ability to;

- Use and understand basic signals for the operation of equipment, including winches, windlasses, cranes, and hoists
- Contribute to the safe operation of deck equipment and machinery.
- Winch operation/ Derricks and Cranes.
- Inspecting a windlass prior to use and using it for mooring,

.6 ability to operate anchoring equipment under various conditions, such as anchoring, weighing anchor, securing for sea, and in emergencies 4hrs (T) + 2hrs (P) + 0hrs (E).

Ability to;

- operate anchoring equipment under various conditions, such as anchoring, weighing anchor, securing for sea, and in emergencies
- Procedures for Anchoring and Mooring
- How anchors should be cleared away ready for use.
- How the approach to an anchorage is made with regard to current and wind.
- The use of anchor buoys.
- The safety measures to be taken by the anchor party.
- The method of letting go and the amount of cable to veer initially.
- The marking of the cable and the reports to be made to the bridge.
- How to determine when the ship is brought up.
- The procedures for anchoring in deep water.
- The securing of anchors on the completion of anchoring.
- The preparation for and procedure during heaving up.

- How to handle cable safely in a non-self-stowing locker.
- How to secure anchors and seal spurling pipes for a sea passage.

Familiarity with;

- That anchors should be walked back clear of the hawse pipes when approaching the anchorage.
- That the lights or shape for a vessel at anchor should be displayed as soon as the ship is brought up.

.7 Shipboard Maintenance 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- The planned maintenance system on board.
- The chemistry of corrosion and the measures to prevent it on board.

3.1.2 Knowledge of the following procedures and ability to:

.1 rig and unrig bosun's chairs and staging 4hrs (T) + 2hrs (P) + 0hrs (E).

Knowledge of;

- Rig and unrig bosun's chairs and staging and method of their use.
- Appropriate length, size of rope of bosun's chair and staging of board in accordance with standards operating procedures
- Safety procedures in rigging stages and bosun's chair in accordance with International Standard Safety Practices
- Slinging of stages and bosun's chair: construction and its application; rigging a stage on ship side, over the bow and under the quarter ; safety belt; rigging a bosun chair; care and maintenance of stage and buson chair; care and maintenance of stages and buson chair; safety precautions when using each.
- Deterioration of vessel's deck areas, machinery and fittings
- Maintenance works
- Maintenance tools and Equipment
- Personal Protective Equipment

.2 rig and unrig pilot ladders, hoists, rat-guards and gangways 4hrs (T) + 2hrs (P) + 0hrs (E).

Knowledge of;

- Rig and unrig pilot ladders, hoists, rat-guards and gangways
- Pilot ladders and safe means of access
- Equipment should be at hand ready for use at the pilot ladder.
- That the rigging of the ladder and the embarkation and disembarkation of the pilot should be supervised by a responsible officer.
- Pilot ladders and hoists: construction requirements, care and maintenance of each, rigging a pilot ladder and pilot hoist.
- Gangways and accommodation ladders, safe means of access, boarding arrangements: construction and sitting requirements; care and maintenance; rigging a gangway or accommodation ladder.
- Inspecting and rigging a pilot ladder,
- Dismantle of pilot ladder and renewing steps,

.3 use marlin spike seamanship skills, including the proper use of knots, splices and stoppers

4hrs (T) + 4hrs (P) + 0hrs (E).

Knowledge of;

- Use marlin spike seamanship skills, including the proper use of knots, splices and stoppers
- Materials and tools in tying knots , hitches and splices
- Procedures in tying different types of knots and hitches and splices
- Seizing wire to the end of wire strand,
- Wire ropes splice using appropriate marlinespike and other related tools
- Splicing techniques
- Knots, bends and hitches: reef knot, bowling, bowline on the bight, timber hitch, timber hitch and half hitch, single sheet bend, clove hitch, bow hitch, sheep shank, rolling hitch, single and double Carrick bends, wall and crown knot, stage knot, lowering hitch,
- Whipping and Seizing (flat, round and cross).
- Splicing: back, cut, eye, long and short splices; preparation for splicing; safety precautions when splicing.
- Stoppers for ropes and wires: rope stopper, Chinese or West Country stopper, chain stopper, carpenters stopper; care and maintenance of stoppers; safety procedures while using.
- Safety precaution and Wearing of appropriate Personal Protective Equipment
- Perform different type of knots and hitches.

3.1.3 Use and handling of deck and cargo-handling gear and equipment:

.1 access arrangements, hatches and hatch covers, ramps, side/bow/stern doors or elevators

2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Access arrangements, hatches and hatch covers, ramps, side/bow/stern doors or elevators
- Hatch covers, watertight doors and ventilators
- Securing deck gears for severe weather condition, moving and loose gears, doors and ventilators, safety equipment on deck.
- Containers and container securing arrangements.
- Ship construction and stability (list, trim, heel, draft marks and load line)

.2 pipeline systems – bilge and ballast suctions and wells **2hrs (T) + 0hrs (P) + 0hrs (E).**

Knowledge of;

- Pipeline systems – bilge and ballast suctions and wells
- Opening, checking, cleaning and sealing of the bilge
- Dismantling of the strum box, Tools and equipment for basic maintenance
- Occupational Health , safety and pollution control requirements

.3 cranes, derricks, winches **2hrs (T) + 2hrs (P) + 0hrs (E).**

Knowledge of;

- Cranes, derricks, winches
- Cranes: construction, fixed or mobile cranes, advantages and disadvantages compared to derricks; safe working loads; statutory requirements; routing maintenance; safety considerations when using.
- Blocks and tackles: parts of a block (Becket, binding, bush, cheek, crown, distance piece, pin, sheave, swivel and shell); types of blocks (cargo, gin, non-toppling, snatch and wood); care and maintenance of blocks; safe working loads of blocks; sheave diameter and wire rope diameter.

3.1.4 Knowledge of hoisting and dipping flags and the main single-flag signals. (A, B, G, H, O, P, Q)

.1 Knowledge of hoisting and dipping flags and the main single-flag signals. (A, B, G, H, O, P, Q)

2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Hoisting and dipping flags and the main single-flag signals. (A, B, G, H, O, P, Q)

Competence: 3.2 Apply occupational health and safety precautions

3.2.1 Working knowledge of safe working practices and personal shipboard safety including:

.1 working aloft 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Safe working practices and personal shipboard safety when working aloft

.2 working over the side 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Safe working practices and personal shipboard safety when working over the side

.3 working in enclosed spaces 4hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Safe working practices and personal shipboard safety when working in enclosed spaces
- Precautions Before Entering Enclosed Or Contaminated Spaces
- Periodical tests of the atmosphere should be made by persons working in an enclosed space.
- The permit-to-enter system using safety checklists to be followed by the responsible person and the persons entering the enclosed space.

Familiarity with;

- The potentially dangerous spaces, including;
  - Cargo spaces, cargo, fuel and ballast tanks,
  - Pump rooms,
  - Cofferdams and
  - Duct keels, peak tanks, double bottom tanks.
- That enclosed spaces should be entered only with authorization and after appropriate safety checks have been carried out.
- The dangers associated with enclosed or contaminated spaces, they may be lacking in oxygen or contain flammable or toxic gases.
- that the responsible officer must ensure that a space is safe for entry by:
  - Ensuring that the space has been thoroughly ventilated
  - Testing at several levels for oxygen content and harmful vapours
  - Requiring breathing apparatus to be worn when there is any doubt about the adequacy of ventilation or testing
- That the oxygen content should be 21% by volume before entry is permitted.
- That the concentration of harmful vapour should be zero.
- That a space where the atmosphere is known to be unsafe should be entered only in an emergency, after safety checks have been carried out, and wearing breathing apparatus.
- That risk assessment must be carried out before the entry into enclosed spaces.

- The protective clothing and equipment which should be used by or be available to those entering the space.
- That mechanical ventilation should be maintained throughout the time persons are in an enclosed space.
- That all safety checks should be repeated before re-entering a space after a break.
- That a permit-to-work system should only be for the specific duration of the work for that particular day and not valid for the following day.
- That after work is completed; the area must be closed and secured.

.4 permit to work systems 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- ISM code and related procedures
- The permit-to-work system using safety checklists to be followed by the responsible person
- Code of Safe working practices and personal shipboard safety when carrying out duties.

.5 line handling 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Safe working practices and personal shipboard safety when handling lines

.6 lifting techniques and methods of preventing back injury 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- lifting techniques and Safe working practices and personal shipboard safety when lifting for preventing back injury

.7 electrical safety 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Safe working practices and personal shipboard safety when working with electrical equipments.

.8 mechanical safety 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Safe working practices and personal shipboard safety when working with mechanical equipments.

.9 chemical and biohazard safety 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Safe working practices and personal shipboard safety when working with chemical
- Selection of chemical, cleaning agents and equipment
- Warning and manufacturer's instructions
- Deterioration of vessel's deck areas, machinery and fittings

.10 personal safety equipment 4hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- personal safety equipment
- Apply occupational health & safety precautions.
- COSWOP (Code of Safe Working Practices for Merchant Seamen).
- IMO safety signs, precaution when entering enclosed spaces, fire extinguishers.
- Lifeboat and life raft launching, hydrostatic release unit.
- Vessel's contingency plans for emergency response and implemented in real and simulated emergency situations
- Escape routes and internal and external communications and alarm systems used in real and simulated emergency situations in accordance with regulatory requirements and established procedures
- Emergency communications and alarm signals and systems and required action implemented in accordance with emergency procedures and regulatory requirements
- Planned procedures for the use of damaged controls procedures for dealing with damage to the vessel and its hull in accordance with procedures and regulatory requirements
- General principles of damage and control and the manner in which watertight integrity of hull is maintained on a vessel, including the importance of preparation, control and repair
- Ways of controlling damage during a flooding emergency, including the use of various shipboard items that can be used for damage control purposes such as mattresses, canvass and clothing

.11 Take actions on becoming aware of an emergency 4hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Recognize and identify Emergencies correctly
- Response to an emergency situation under established vessel's emergency response procedures
- Correct action in discovery of an actual or potential emergency in accordance with established vessel procedures
- Prompt, accurate, complete and clear Information on raising alarm.
- Relevant maritime regulations/Navigational emergencies for vessels and appropriate action and solutions
- Taking initial action during real and simulated emergency situation
- Implementing emergency during a real and simulated emergency situations
- Identifying and evaluating problems that may occur during a shipboard emergency and determining appropriate courses of action
- Various types of emergency situations and the action to be followed when various types of actual or potential emergency situations are identified
- Emergency alarm signals and systems in use of vessels and procedures to be followed when an emergency alarm is raised

.12 Procedures for the use of various life saving appliances 4hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Participation in life saving drills readiness to correctly carry out life saving procedures and the use of life saving appliances
- Survival equipment used in the event of emergencies
- Procedures for the use of various shipboard life saving appliances in accordance with requirements, manufacturer's instruction

- Applying safety and life saving precautions and procedures during emergency situations during on board a vessel
- Participating in drills aimed at preparing shipboard personnel to respond emergency situation

Competence: 3.3 Apply precautions and contribute to the prevention of pollution of the marine environment

3.3.1 Knowledge of the precautions to be taken to prevent pollution of the marine environment

.1 Knowledge of the precautions to be taken to prevent pollution of the marine environment

4hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- The precautions to be taken to prevent pollution of the marine environment
- Methods for the prevention of oil pollution from ships while operating in special areas and outside special areas,
- Special areas,
- oil record book,
- garbage record book,
- garbage disposal,
- garbage management plan,
- accidental oil spillage,
- Reports on incidents involving oil or harmful substances.
- Bunkering operations while alongside or at anchor.
- Loading/discharging dangerous cargoes and harmful substances in event of collision or stranding.

Knowledge of the use and operation of anti-pollution equipment

.1 knowledge of the use and operation of anti-pollution equipment **2hrs (T) + 0hrs (P) + 0hrs (E).**

Knowledge of;

- The use and operation of anti-pollution equipment
- Anti-Pollution Procedures and All Associated Equipment
- Typical shipboard oil pollution emergency plan (SOPEP Plan) and SOPEP store.
- Antipollution equipment required by National legislation, for example, Oil Pollution Act of Islamic Republic of Iran 1389(Latest Edition).

3.3.2 Knowledge of the approved methods for disposal of marine pollutants

.1 Knowledge of the approved methods for disposal of marine pollutants **2hrs (T) + 0hrs (P) + 0hrs (E).**

Knowledge of;

- The approved methods for disposal of marine pollutants
- control of discharge of oil and oily water procedures,
- discharge of sewage,
- discharged of oil or other harmful substances into sea,
- Shore reception facility, discharging to shore facility.
- Ballasting/ De ballasting operations in ports, anchorages and at sea in all types of ships
- Regulation on Pumping out bilges of all types.

Competence: 3.4 Contribute to shipboard maintenance and repair

3.4.1 Ability to use painting, lubrication and cleaning materials and equipment

.1 Ability to use painting, lubrication and cleaning materials and equipment 4hrs (T) + 4hrs (P) + 0hrs (E).

Knowledge of;

- Appropriate paints and painting equipment for a particular surface in accordance with planned maintenance procedures
- Corrosion control and painting.
- Marine paints are applied using appropriate application equipment in accordance with occupational health and safety requirements, planned maintenance procedures
- Debris from maintenance activities is disposed of or stored in accordance with established procedures
- Correctly store Paint and painting equipment after use
- Painting purpose, surface preparation.
- Chipping, Sandblasting, Scraping
- Drying time, number of coats, paint composition.
- Types of paint: primers, under coats, glass or enamel, anti-corrosive, boot-topping, anti-fouling, top-side; zinc bituminous, chlorinated rubber, aluminum, vinyl, epoxy, high build and non-ship paints;
- Safe storage of paints.
- Paint application: proper mixing and stirring, means of application (brush, roller, spray) and advantages of each method;
- Types of paint brushes,(pencil, sash tool, Fitch, flat, round, man-help), their use and maintenance; construction and application of rollers;
- Types of paint which could be applied by rollers; principle operations of conventional and airless spray, method of applications;
- Safety consideration when painting with respect to type of paint and method of application.
- Safe use of scrapper and chipping machine to prepare a surface for painting.
- Preparing different types of paint and applying paint by different methods.

Ability to;

- Use painting, lubrication and cleaning materials and equipment

3.4.2 Ability to understand and execute routine maintenance and repair procedures

.1 Ability to understand and execute routine maintenance and repair procedures 4hrs (T) + 2hrs (P) + 0hrs (E).

Knowledge of;

- Execute routine maintenance and repair procedures
- Maintenance arrangements for deck machinery on the vessel in accordance with survey requirements and manufacturer's specifications
- Identify operational problems or faults with the vessel's deck machinery and the causes
- Any restrictions to operations arising from identified malfunctions of the deck machinery
- Routine lubrication and other preventative maintenance of deck machinery in accordance with manufacturer's instructions
- Identify Faulty deck machinery, equipment and parts, report and repair or replaced in accordance with manufacturer's instructions and procedures
- Carry out required adjustments to the deck machinery in accordance with manufacturer's specifications
- Records of preventative and remedial maintenance on deck machinery in accordance with procedures

- Paints and painting equipment used in marine maintenance and related procedures and precautions to be taken for preparation, application and storage
- Safety, environmental and hazard control precautions and procedures relevant to maintenance operation
- Storage principles of paints, chemicals and cleaning agents used in planned maintenance operations

3.4.3 Knowledge of surface preparation techniques

.1 Knowledge of surface preparation techniques 4hrs (T) + 2hrs (P) + 0hrs (E).

Knowledge of;

- Surface preparation techniques
- Checks of deck surfaces in accordance with planned maintenance system
- Identification of any deterioration or corrosion of a vessel's deck surfaces and appropriate maintenance action in accordance with planned maintenance system
- Repair of Minor faults and imperfections in painted surfaces in accordance with procedures
- Restore of weathered surfaces using cleaners and liquid abrasives in accordance with occupational health and safety and also pollution control requirements, planned maintenance procedures
- Preparation of Marine surfaces for the application of the required marine coating
- Obtain Maintenance materials, handle, prepare and apply in accordance with occupational health and safety and also pollution control requirements.
- Records of maintenance works carried out in accordance with procedures

3.4.4 Understanding manufacturer's safety guidelines and shipboard instructions

.1 Understanding manufacturer's safety guidelines and shipboard instructions 2hrs (T) + 0hrs (P) + 0hrs (E).

Understanding of;

- Manufacturer's safety guidelines and shipboard instructions
- Select appropriate chemicals, cleaning agents and equipment to clean an assigned area of the vessel
- manufacturer's warning and instructions regarding the use of chemicals and cleaning agents (read, understood and applied)
- completing cleaning tasks in the assigned area in accordance with procedures and manufacturer's instructions
- That chemical, cleaning agents and equipment are correctly stored after use.

3.4.5 Knowledge of safe disposal of waste materials

.1 Knowledge of safe disposal of waste materials 2hrs (T) + 0hrs (P) + 0hrs (E).

Knowledge of;

- Safety, environmental and hazard control precautions and procedures relevant to MARPOL regulations
- Safe disposal of any kind of waste materials
- Identify garbage segregation and disposal procedures
- Relevant guidelines for the implementation of garbage disposal onboard to ensure protection of marine environment
- Relevant requirements on marine environmental protection as per established practice
- Appropriate measures to prevent operational pollution to prevent pollution of the marine environment in accordance with regulations and procedures
- Compliance on garbage disposal procedures for the protection of the marine environment and required action where incidences of non-compliance are identified

- Social responsibilities in garbage disposal
- Storage of non-bio-degradable materials onboard
- Relevant ISM regulations
- Procedures for checking garbage coding on garbage segregation

3.4.6 Knowledge of the application, maintenance and use of hand and power tools

.1 Knowledge of the application, maintenance and use of hand and power tools 2hrs (T) + 2hrs (P) + 0hrs (E).

Knowledge of;

- Safety, hazard minimization and pollution control procedures and regulations at all times during the operation of deck machinery
- Operational and maintenance hazards related to deck machinery use and maintenance to minimize or eliminate hazards and risk to personnel, vessel and the environment
- Action taken in the event of failure or emergency to ensure the isolation and security of the deck machinery and maintain the safety of the vessel and personnel involved
- Shipboard emergency and contingency plans in the event of a failure or emergency involving deck machinery
- Safety precautions and regulations in handling deck machinery
- Use a hand lead line and read the markings,
- Using a hydrometer to determine the relative density of water,
- Using a Hydrometer: purpose, principle of operation, points to be considered when taking sample water and readings.

3.4.7 Knowledge of the Maritime English in Written and Oral Form

.1 Maritime English in Written and Oral Form 8hrs (T) + 4hrs (P) + 0hrs (E).

Knowledge of;

- Terminologies and definitions used on ships
- Useful terms relevant to the ship board operation and bridge watch keeping
- To communicate with others for the relief, maintenance, hand over and maintain a safe navigational watch, read and understand operation and avoidance of false distress alerts by pyrotechnics, EPIRB and SART.
- To communicate with other ships and coast stations especially in cases of emergency to understand and carry the duties, read and understand duties on muster list.
- Understand orders and be understood in relation to shipboard duties.
- To communicate with others and multi-lingual crew.
- To use IMO standard marine communication phrases.
- To understand information and messages concerning ship's safety/security and operation.
- Understand manufacturer's technical specifications and to converse with technical shore staff concerning ship and machinery repairs.
- Maritime communication techniques used during navigational emergencies

5-7 facilities and equipment required for conducting the course

Apart from those facilities, equipments and or requirements mentioned in Code of practice for approval and monitoring of maritime training courses followings have to be provided:

5-7-1 Classroom with air conditioning facilities, sufficient lighting and other facilities, suitable for delivering theoretical subjects(such as: white board, computer, multimedia projector and its curtain and other relevant facilities for teaching English)

5-7-2 library with related technical books and references

5-7-3 relevant educational and training films

5-7-4 Earth structure model, different buoys, ships model in day and night and relevant facilities for exercising rule of the road and ColReg in channels / rivers and lake or sea and berthing/unberthing exercises, ships model fitted with crane and other deck fittings.

5-7-5 Instrument Room equipped with following items:

- Thermometers, Marine Hydrometer , Magnetic Compass, Azimuth Mirror, International Code of Signal and Flags and a set of Visual Signalling Equipment and Accessories(or a computer based system).

5-7-6 navigational aids such as : SART, EPIRB, Pyrotechnics (replacing such equipments with approved simulation system or carry out ship visit to carry out relevant training may be accepted upon consultation and seeking approval of central monitoring office).

5-7-7 seamanship workshop equipped with following items:

- Tables and sittings suitable for practical exercises, hand lead line with markings, pilot ladder and its spares, different types of fiber/ synthetic/wire ropes together with stoppers and various types of shackles, five set of relevant tools for hitching/splicing ropes, Bosun Chair, Stage, different blocks, mooring ropes fiber/synthetic/wire, Winch/ Windlasses and mooring Arrangements, , Scrappers, different types of marine paints, different types of paint roller and brush, airless paint spraying machine, Drum hook and slings, fire hose, shackles, wire ropes joints and fittings, wire cutter, turnbuckles and timbles, clamps/clips and hooks, container securing tools, anvil and vice, ear and eye protective, safety belt, spikes, wire slings, life raft, safety protective clothing, five sets of scrappers flat/triangle, grinding machines/tools, chain blocks, tackles, hitches and knots, wire for splicing, monkey ladder, life ring, breathing apparatus, valves and nozzles, gas detector and gauges, portable fire extinguishers, first aid kits, heaving line, sewing tools, senhouse slip.

5-8 Lecturers and instructors minimum qualifications

5-8-1 Lecturers and instructors shall have completed a course in instructional techniques (TFT) in one of the training centers approved by the PMO, and:

5-8-1-1 for lecturing in theoretical subjects should;

5-8-1-1-1 Possess valid Second Officer certificate of competency for ships of GT≥500 engaged on unlimited voyages as well as having 6 months of seagoing service in that rank ; or

5-8-1-1-2 Possess B.Sc degree in maritime science as well as having 12 months of seagoing service on merchant ships and minimum of 12 months of teaching experience in maritime institute.

5-8-1-2 for delivering practical training should;

5-8-1-2-1 posses minimum nautical higher diploma as well as having two years of seagoing service, or possess valid deck rating certificate of proficiency and 5 years of experience on that rank on merchant ships.

5-9 Assessment and Certification

5-9-1 upon successful completion of the examination which is carried out during and at the end of the course, the trainee will be awarded relevant course completion certificate issued by the approved training center;

5-9-2 then after trainee applies for the PMO competency assessments specified in above paragraph 5-6-1; and

5-9-3 finally, Seafarers' Examination and Documents Directorate of the PMO will issue a CoP for those candidates who have passed above mentioned PMO competency assessment and fulfill other relevant certification requirements set out in the "Codes of practices for issuing, revalidation and renewing certificates for seafarers".

5-10 revalidation/renewal of certificates

5-10-1 CoPs and CoCs will be revalidated and renewed in accordance with provisions of the Codes of practices for issuing, revalidation and renewing certificates for seafarers.

5-11 course approval

5-11-1 it will be carried out as per code of practice for approval and monitoring of maritime training courses.

6-Records

6-1 All records which present the implementation of the content of this code of practice.

7- References

7-1 STCW Convention and STCW Code;

7-2 IMO Model course number.

7-3 Codes of practices for issuing, revalidation and renewing certificates for seafarers; and

7-4 Code of practice for approval and monitoring of maritime training courses.

8- Appendixes

Nil