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M/V CORINNEN TRAINING MANUALIN SEKÄ
KANSIKÄSIKIRJAN PÄIVITTÄMINEN JA KÄÄNTÄMINEN
ENGLANNIKSI

Merenkulun koulutusohjelma

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M/V CORINNEN TRAINING MANUALIN SEKÄ KANSIKÄSIKIRJAN PÄIVITTÄMINEN JA KÄÄNTÄMINEN ENGLANNIKSI

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Tämän opinnäytetyön tarkoitus oli päivittää ja kääntää englanniksi M/V Corinnen Training Manual sekä kansikäsikirja. Kansainvälinen IMO:n laatima sääntökokoelma SOLAS, määrää Training manuaalin sisältöä. Sen tulee sisältää kaikki tieto aluksen pelastautumisvälineistä sekä henkilökunnan toiminnan eri hätätilanteissa.

Kansikäsikirja kuuluu varustamon ISM-koodiin. ISM-koodi tarkoittaa yhtiön turvallisuus- ja ympäristönsuojeluohjelmaa. Kansikäsikirja antaa ohjeita turvalliseen työskentelyyn kansitoissa sekä huolto-ohjeita kansimiehille.

Toimin aluksella yliperämiehenä, joten työkielen vaihtuessa englanniksi, tehtävänäni oli kääntää molemmat manuaalit englanniksi. Samalla oli tarpeen myös käydä manuaalit perusteellisesti läpi ja päivittää ne ajantasaisiksi. Training manuaalin rakenne muutettiin vastaamaan varustamon muiden alusten vastaavaa manuaalia, näin on helpompi aluksen mahdollisesti vaihtuessa tutustua uuteen manuaaliin. Kansikäsikirja päivitettiin kansihenkilökunnan kannalta helposti luettavaan muotoon. Näin varsinkin uuden työntekijän on helpompi tutustua aluksen kansirutiineihin.

UPDATING M/V CORINNE'S TRAINING MANUAL AND DECK HANDBOOK AND TRANSLATING THEM INTO ENGLISH

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The purpose of this thesis was to update M/V Corinne's Training Manual and deck handbook and translate them into English. The content of Training manual is determined by International Convention for the Safety of Life at Sea (SOLAS). It has to contain all information about vessels lifesaving appliances and crew members duties in case of emergencies.

Deck handbook is part of company's International Safety Management (ISM) code. Purpose of ISM-code is to ensure safety at sea and avoid damage to the environment. Deck handbook gives guidelines for safe working and maintenance instructions for deck crew.

When the official language changes to English, it was my job as chief officer to translate both manuals. It was also necessary to update the manuals. The structure of Training manual was changed to correspond manuals in company's other vessels. This way it is easier to get familiar with new manual when changing vessel inside the company. Deck handbook was updated so that it would be easy to follow, especially for new crewmembers.

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1 JOHDANTO

Tämän opinnäytetyön tarkoituksena oli päivittää M/V Corinnen Training manual (Liite 1) ja kansikäsikirja, eli deck handbook (Liite 2) ajantasaiseksi, sekä samalla kääntää molemmat manuaalit englanniksi.

Aluksen työkielen vaihtuessa englanniksi, huomasin kääntäessäni manuaaleja, että laajempi päivittäminen olisi myös tarpeellista. Aikaisemmat manuaalit ovat hieman liian suoraan siirretty ja kopioitu yhtiön edellisestä laivasta, joten tarkemmat päivitykset, kuvien lisäykset ja asiatakkennukset olisivat tarpeen. Konttorin edustajan kanssa päätimme myös, että manuaalien tyyli tulisi vastaamaan enemmän varustamon muiden laivojen tyyliä. Näin olisi helpompi tutustua manuaaleihin laivan mahdollisesti vaihtuessa.

Työskentelen kyseisessä laivassa yliperämiehenä, joten olen päivittäin töissäni tekemisissä manuaaleihin liittyvien asioiden kanssa. Viikoittaisten ja kuukausittaisten turvallisuusharjoitusten yhteydessä olemme miehistön kanssa löytäneet parannettavaa training manuaaliin, sekä päivittäisten huoltotöiden yhteydessä, kokeneet kansimiehet ovat esittäneet hyviä parannusehdotuksia kansikäsikirjaan.

Tarkoituksena oli siis tehdä mahdollisimman selkeä training manual, jotta miehistö ja varsinkin uusi miehistö, pystyy helposti tutustumaan laivan turvallisuus- ja pelastautumisjärjestelmään. Sekä myös selkeyttää kansikäsikirjaa, jotta päivittäistä huoltoseurantaa ja kansityöruutiineja olisi mahdollisimman helppo seurata.

2 M/V CORINNE



Kuva 1. M/V Corinne (Kuvaaja: Timo Männistö)

M/V Corinne on vuonna 1990 Hitzler Werftin telakalla Saksan Lauenburgissa rakennettu kuivarahti/minibulk alus. Pituutta on 73,83 ja leveyttä 11,5 metriä. Aluksen bruttovetoisuus on 1524 tonnia ja lastia alus voi ottaa maksimissaan noin 2100 tonnia. Liikennealueena pääasiassa Itämeri ja Pohjanmeri.

Aluksen omistaa Porvoolainen Gran Ship Oy ja se purjehtii Suomen lipun alla. Työkielenä on vielä Suomi (marraskuu 2016), mutta kieli vaihtuu kevään 2017 aikana englanniksi.

3 TRAINING MANUAL

3.1 Mikä on training manual

Training manual on laivan turvallisuus ja hengenpelastusjärjestelmistä kertova opas. Sitä on säilytettävä yleisellä paikalla laivassa, kaikkien luettavissa. Opas kertoo aluksen kaikkien pelastusvälineiden ja palonsammutusvälineiden sijainnin ja toiminnan sekä hälytyslistan, eli jokaisen miehistön jäsenen toiminnan eri hälytystilanteissa laivalla.

Jokaisen tulee käydä training manual läpi aina laivalle tullessa, varsinkin uusien miehistön jäsenten. Myös vakituisten tulee tarkastaa manuaali mahdollisten päivitysten varalta. Manuaalin tarkoitus on tutustuttaa uusi miehistön jäsen aluksen hengenpelastus- ja turvallisuusjärjestelmään. On erittäin tärkeä, että jokainen miehistön jäsen tietää vähintäänkin oman tehtävänsä laivalla hätätilanteen sattuessa. Pienellä laivalla, kuten Corinne, on vielä tärkeämpää tutustua mahdollisimman laajasti kaikkien tehtäviin. 5 hengen miehistöllä on todennäköistä, että tehtävissä joudutaan joskus hieman joustamaan. Jokainen osa hätätilannetoiminnassa on äärimmäisen tärkeä. Manuaalia on hyvä käyttää pohjana myös turvallisuusharjoituksia pidettäessä. Kertaus säännöllisin väliajoin, varsinkin päivitysten tai muutosten jälkeen on tarpeellista.

3.2 Training manualia koskevia määräyksiä

SOLAS (Safety Of Life At Sea) on Kansainvälisen merenkulkujärjestö IMO:n (International Maritime Organization) laatima, alusten meriturvallisuutta koskeva sääntökokoelma. Kaikkien allekirjoittajamaiden lipun alla seilaavien alusten on läpäistävä tietyt turvallisuusmääräykset.

SOLAS kokoelman 3. luku, pykälä 35 (SOLAS Ch III-5, reg. 35), määrää training manualin sisältöä. Manuaalista pitää löytyä tieto aluksen pelastautumisvälineistä,

niiden sijainti sekä toiminta hätätilanteissa. Lippuvaltion merenkulkuviranomaiset (Suomessa Trafi), tai ulkomailla kyseisen maan Port state control, suorittavat aluksilla määrätyn väliajoin, tai tarvittaessa tarkastuksia, joilla valvotaan, että alus täyttää IMO:n asettamat turvallisuusvaatimukset. (SOLAS, 2014)

Pykälän 35 viimeisessä kohdassa mainitaan vielä erikseen, että training manual on oltava laivan virallisella työkielellä kirjoitettu.

Myös tämän lopputyön tapauksessa, Suomen merenkulkuviranomaiset (Trafi) tulevat tarkastamaan lopullisen manuaalin, ennen laivan työkielen virallista vaihtumista.

4 KANSIKÄSIKIRJA

4.1 Mikä on kansikäsi kirja

Kansikäsi kirja (täkkikäsi kirja) eli deck handbook, käsittelee nimensä mukaisesti kansipuolen töitä. Se on tarkoitettu kansihenkilökunnan, tai kannella työskentelevien käyttöön. Käsi kirja sisältää tarkastuslistoja, huolto-ohjelmia sekä muita ohjeita kansipuolen kunnossapito- ja huoltotöihin. Käsi kirja on varsinkin hyödyllinen uudelle kansityöntekijälle, sisältäen mm. tärkeimpien työkalujen sijainnit eri varastoissa, rasvaus- ja voitelupaikat ja kuvat niistä, tietoa erikoistyöluvista, sekä hieman toimintaohjeita eri työ- ja hätätilanteissa.

4.2 Kansikäsi kirja säädökset

Kansikäsi kirja on osa varustamon ISM-koodia (International Safety Management Code), eli kansainvälistä turvallisuusjohtamisjärjestelmää. ISM-koodilla tarkoitetaan järjestelmää, jolla yhtiön henkilöstö voi toteuttaa tehokkaasti yhtiön

turvallisuus- ja ympäristönsuojeluohjelmaa. ISM-koodi kuuluu SOLAS sääntökokoelmaan, lukuun IX. (Liikenteen turvallisuusviraston www-sivut, 2017)

Kansikäsikirja sisältää ohjeita aluksen ja laitteistojen kunnossapitoon sekä aluksen toimintoja koskevia suunnitelmia. Merenkulkuviranomaisten tekemissä ISM-auditoinneissa tarkastetaan, kuinka hyvin varustamo noudattaa omaa ISM-koodiaan. Tämän opinnäytetyön osalta, on minun vastuullani saattaa kansikäsikirja vastaamaan viranomaisten määräyksiä.

5 MANUAALIEN PÄIVITYS

5.1 Tavoitteet

Molempien manuaalien tarkoituksena on helpottaa aluksen henkilökunnan työskentelyä aluksella ja tehdä uusien työntekijöiden tulosta alukselle mahdollisimman helppoa. Kansainvälisten määräysten vuoksi, manuaalien pitää myös olla virallisesti hyväksytyjä. Tarkoitus on siis päivittää manuaalit uusien vaatimusten mukaisiksi sekä kääntää englanniksi, tulevan kielivaatimuksen mukaiseksi. Tavoitteena on saada manuaaleista merenkulkuviranomaisten hyväksymiä, sekä aluksen henkilökunnan kannalta helposti käytettäviä.

5.2 Työskentelymenetelmät

Olen työskennellyt Corinnella reilun vuoden yliperämiehenä, joten olen töissäni ollut paljon tekemisissä molempiin manuaaleihin liittyvien asioiden kanssa. Vastuullani ovat turvallisuusharjoitukset ja hengenpelastusvälineistön ylläpito, joita training manual käsittelee. Kansipuolen huoltotöiden seuranta sekä töiden jakaminen kansikäsikirjan ohjeistuksen mukaan on myös yliperämiehen vastuulla.

Aloittaessani manuaalien päivitystä, kävin ensiksi yksin läpi jokaisen kohdan molemmista manuaaleista. Kuljin opukset kourassa ympäri laivaa, ja merkitsin alustavasti kaikki puutteet ja korjaustarpeet, jotka heti nousivat esille.

Kansikäsikirjaan liittyen, kävin vielä laivan kokeneen matruusin kanssa läpi kaikki huoltokohteet ja työskentelytavat. Otin vastaan ehdotuksia ja tein muistiinpanoja mahdollisista muutostarpeista. Myös varustamon oman ISM-auditoinnin yhteydessä tuli esille muutamia uusia huoltotoimenpiteitä, jotka lisättäisiin uuteen käsikirjaan. Suurena päivitystoimenpiteenä olivat mm. rasvaus- ja voitelupaikkojen uudet kuvat. Laivan kansi on maalattu yli uudella värillä viimeisen vuoden aikana. Vanha punainen on vaihtunut vaalean harmaaksi, joten uudet kuvat olivat paikallaan. Vanha kansikäsikirja käsitteli melkein pelkästään huoltokohteita. Uuteen käsikirjaan yhdistin varustamon muiden laivojen käsikirjassa olevia asioita; tietoa erikoistyöluvista, ohjeistusta ja turvallisuustietoa erilaisiin työtilanteisiin liittyen, esim. ankkurointi, luotsin otto/jättö, kiinnitykset ja irroitukset, ym. Yritin tehdä kokonaisuudesta helpon lukea, varsinkin uuden työntekijän kannalta.

Training manualin seuraavassa vaiheessa tehostimme hieman turvallisuusharjoituksia. Pidimme ylimääräisiä harjoituksia eri miehistöjen kanssa, jotta mahdollisimman monilla olisi esittää omia parannusehdotuksia. Merkittävänä muutoksena sanottakoon palovarusteiden uusimisen. Trafin auditointi oli aikaisemmin osoittanut vanhojen palovarusteiden hankalakäyttöisyyden ja toimimattomuuden, mm. pleksin huurtuminen lämpimissä olosuhteissa sekä näkökentän rajoittuneisuuden yleensäkin. Tilasimme siis uudet varusteet. Koska vanhoja palovarusteita oli ainoastaan kahdet, yhdet keulan paloasemalla sekä yhdet ahterin paloasemalla, kuului puolimatruusin hälytystehtävään toisen puvun hakeminen keulasta (palon ollessa ahterissa). Tähän kuului huomattavan paljon arvokasta aikaa. Uusia palovarusteita tuli yhteensä neljät, eli kahdet varusteet molemmille asemille. Tämän johdosta puolikkaan hälytystehtävistä voitiin poistaa toisen puvun hakeminen ja näin jää aikaa enemmän muihin tehtäviin.

Päivitin myös lähes kaikki kuvat manuaaliin. Lisäsin myös hieman tarkentavia kuvia esimerkiksi pelastusveneen laskuun liittyen.

5.3 Työn viimeistely

Saatuani kokoon riittävästi materiaalia, siirryin päivittämään manuaaleja. Training manuaalin rakenne muuttui hieman vastaamaan varustamon muiden laivojen manuaalia. Varsinkin konttorin on helpompi tehdä päivityksiä manuaaleihin, kun ne ovat yhtenevät.

Kansikäsikirjaan tuli enemmän muutoksia ja se hieman laajeni. Lähtökohtana oli nimenomaan, kuten olen jo aikaisemmin maininnut, kansitöihin tutustuminen uuden työntekijän kannalta.

Tein uudet manuaalit ensin suomenkieliselle pohjalle, jonka jälkeen kävimme laivan miehistön kanssa läpi manuaalit vielä kerran. Kun asiat vaikuttivat olevan kaikilta osin kunnossa, käänsin manuaalit englanniksi. Valmiit manuaalit lisätään varustamon ISM-koodiin ja niistä tulee osa kansainvälisten säädösten mukaisia virallisia dokumentteja.

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M/V Corinnen Training manual, Gran Ship Oy

M/V Corinnen kansikäsikirja, Gran Ship Oy

LITE 1



mv Corinne

Training manual

According to SOLAS Chapter III, Section 5, regulation 35

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1. Introduction

1.1. General

This training manual has been developed in accordance with SOLAS 1974-including (SOLAS Ch III, Sect. 5, reg 35). This training manual should be used as a source of information about the ships safety equipment and it contains also instructions how to act in emergency situations. This training manual must be stored in the ships messroom and therefore at everybody's disposal.

1.2. Fire safety and life saving appliances onboard mv Corinne

The ships firesafety and life saving appliances are described in the ships Safety plan which is located in the crew cabin department. The ships Musterlist is located in all the cabins, messroom and the bridge.

1.3. When you arrive on board mv Corinne

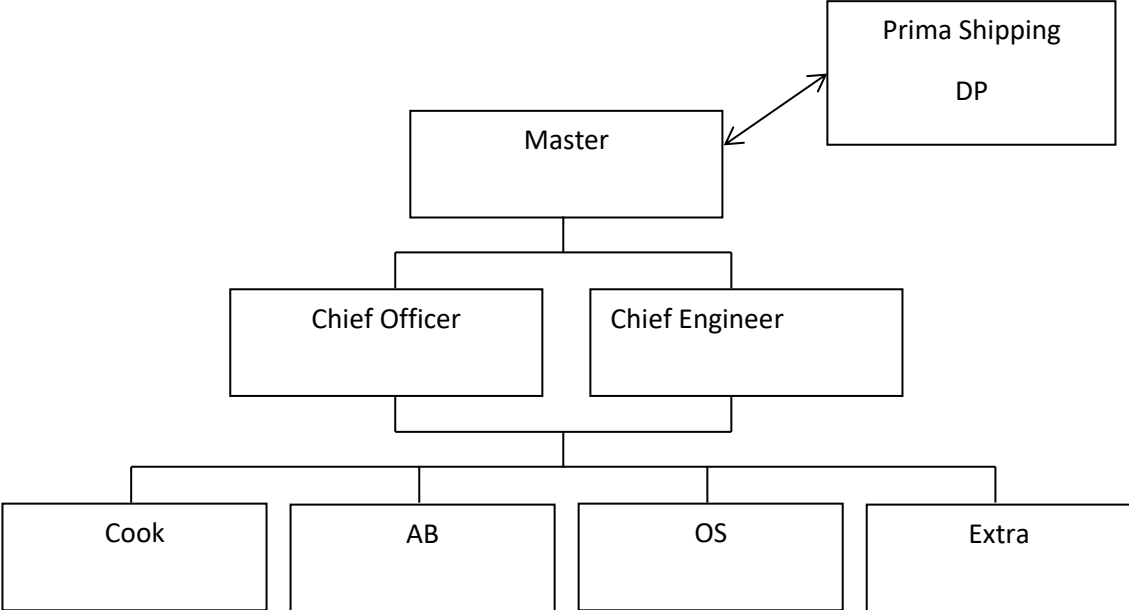
When you arrive onboard for the first time or from your leave it is your obligation to ensure your duty in case of emergency according to the Musterlist. You must also familiarize with the ships ISM manual and acknowledge you have read it.

Your duty in the fire and safety organization:

1. To familiarize with this training manual, ships safetyplan and musterlist.
2. Know your duty by heart in case of emergency according to musterlist.
3. Familiarize with the fire and life saving appliances onboard and know how to use it.
4. To participate in the fire and safety drills onboard.
5. Ask if you don't know.

2. Organization

Ships safety organization:



3. Contact Details

Contact information in case of emergency

Company DP	24 h	xxx
Company office		
Prima Shipping Oy Ab	24 h	xxx
Tolkkistentie 773	fax 24 h	xxx
06750 Tolkkinen	email	
Governmental		
MRCC Turku	puh 24 h	xxx
		VHF 16 (or DSC)
General Emergency Telephone Number	112	

4. Muster List (SOLAS Ch III, reg 37, Muster List)

4.1. Structure

In the muster list there is specified each crew members tasks during emergency situation onboard. Each crew member must remember their tasks and duties.

4.2. Placement

The muster list can be found in all the cabins, messroom and the bridge. There is also one in this manual.

4.3. Muster List

On the next page you can find the Muster list

5.3.1.1.1.1 CORINNE – Muster List

	Fire	Collision, Grounding, SOPEP	MOB	Abandon Ship
	FIRE ALARM	GENERAL ALARM	MAN OVERBOARD	ABANDON SHIP
Rank	Muster Station Bridge	<i>5.3.1.2 Muster Station Bridge</i>	Muster Station Bridge	Muster Station Bridge
Master	Over all command. Leading emergency radio communication.	Over all command Send distress alarm Leading emergency communication	Over all command. Send distress call	Over all command Send distress alarm Takes ships logbook Makes crew count Makes abandon ship order
Chief Officer	Smoke diver chief	Leads damage prevention actions with ChEng	MOB-boat Master Wears immersion suit, takes emergency VHF from bridge	Leads launching of liferafts/lifeboat Brings distress signals and VHF radios from bridge
Officer	Assists as Fire Chief orders	Assists in damage prevention actions	Assistant	Assists in launching liferafts/lifeboat
Chief Engineer	Fire Chief Starts fire pumps	Leads damage prevention actions with ChOff	Prepares MOB-boat for launching	Assists launching liferafts/lifeboat
A.B.	Smoke diver Closes flaps	Assists in damage prevention actions	MOB-boat crew Wears immersion suit	Prepares liferafts/lifeboat for launching Takes care of water and provision

O.S.	Assistant smoke diver Closes flaps Prepares hoses	Assists in damage prevention actions	Assists preparing MOB-boat for launching	Assists in liferafts/lifeboat launching
Extra	Assists as Fire Chief orders	Assists in damage prevention actions	Assistant	Assists in liferafts/lifeboat launching

FIRE ALARM



Continous signal of one short and one long blast

GENERAL ALARM



Seven short blasts and one long blast

MAN OVERBOARD



Three long blasts

5. Safety plan (SOLAS Ch II-2, reg 15, 2.4)

5.1. Structure and duties




























The Ships safety plan contains information about the life saving appliances and fire fighting equipment onboard and where it is located. The plan must correspond to reality and it's not allowed to permanently move any fire fighting equipment or life saving appliances. For temporarily maintenance works or for drill purposes the equipment can be moved, but must restored immediately after.

5.2. Placement

The ships safety plan can be found in the cabin department starboard side, outside Chief Officers cabin and also on aft deck port side.

Next page you can find copy of Safety Plan symbols.

5.2.1. Safety plan symbols

	Muster Station Kokoonntumisasema Mönstringsstation	1
	Rescueboat for 8 persons Valmiusvene 8lle hengelle Rescuebåt för 8 personer	1
	Liferaft for 8 persons Pelastuslautta 8lle hengelle Räddningsflotte för 8 personer	2
	Embarkation ladder Pelastuslautta- / veneleidarit Embarkeringslejdare	2
	Emergency Escape Hätäpoistumistie Nödutgång	2
	Medicinal cabinet Lääkekaappi Medicinskåp	1
	Lifejacket Pelastusliivi Räddningsväst	8
	Immersion suit 8 pcs, of which 3 are suitable for rescue boat crew Pelastautumispuiku 8 kpl, joista 3 valmiusveneeseen miehistöille Räddningsdräkt 8 st, varav 3 är lämpade för rescuebåtens besättning	8
	Emergency Escape Breathing Device (EEBD) Hätäpoistumislaitte (EEBD) Nödutrymningsapparat (EEBD)	4
	Lifebuoy Pelastusrengas Livboj	2
	Lifebuoy with light Pelastusrengas valolla Livboj med ljus	2
	Lifebuoy with line Pelastusrengas narulla Livboj med lina	2
	Lifebuoy with light and smoke (MOB) Pelastusrengas valolla ja savulla (MOB) Livboj med ljus och rök (MOB)	2
	Emergency Position Indicating Radio Beacon (EPIRB) Hätäradiomajakka (EPIRB) Nödradiolyfr (EPIRB)	1
	Search And Rescue Transponder (SART) Tutkatransponderi (SART) Radartransponder (SART)	2
	Survival craft portable radio Pelastusvenneradio Livbåtsradio	3
	Emergency pyrotechnics (12 rockets, 12 flares, 6 smoke signals) Pyrotekniset hätämerkit (12 rakettia, 12 soitua, 6 savumerkkiä) Pyrotekniska nödsignaler (12 raketer, 12 bloss, 6 röksignaler)	1
	Rescueboat pyrotechnics (4 rockets, 4 flares, 2 smoke signals) Pelastusveneeseen pyrotekniset hätämerkit (4 rakettia, 4 soitua, 2 savumerkkiä) Livbåtens pyrotekniska nödsignaler (4 raketer, 4 bloss, 2 röksignaler)	1
	Line throwing appliance Nuoranampumalaitte Linkastningsapparat	1
	Signaling lamp 24V (Aldis) Aldis-lamppu 24 V Aldis-lamppa 24V	1
	Lighting for launching area 24V Vesillelaskupaikan valaistus 24V Sjösättningsbelysning 24V	3
	Safety- and Fire control plan Turvallisuus- ja Palokaavo Säkerhets- och Brandskyddsplan	3
	Control panel for fire alarm- and detection system Palovarointikeskus Brandlarmcentral	1
	Push button for general alarm Yleishälytysnappi Tryckknapp för allmänt alarm	1
	Fire/General alarm bell Palo/Yleishälytyskello Alarmklocka för Brand/Allmänt alarm	4
	Manually operated call point for fire alarm Palo/hälytysnappi Tryckknapp för brandlarm	3
	Space equipped with smoke detector Tilassa savunilmaisin Utrymme med rökdetektor	16
	Fire/General alarm siren Palo/Yleishälytys sireeni Siren för Brand/Allmänt alarm	1
	CO ₂ horn CO ₂ -torvi CO ₂ -siren	1
	Fire equipment (breathing device, 2 spare bottles, suit, helmet, lamp, line, axe) Palovarusteet (paineilmahengityslaitte, 2 varapulloa, puku, kypärä, lamppu, köysi, kirves) Brandutrustning (tryckluftssaggregat, 2 reservflaskor, dräkt, hjälm, lamppa, lina, yxa)	2
	Spare charges for fire extinguishers Palosammuttimien varätyttö Reservpåfyllnader för brandsläckare	1
	Dry powder fire extinguisher 6 kg Jauhesammutin 6 kg Pulversläckare 6 kg	9

	Portable foam tank Liikuteleva vaahotosäiliö Mobil skumbehållare	1
	CO ₂ fire extinguisher 2kg / 6kg CO ₂ -sammutin 2kg / 6kg CO ₂ -släckare 2kg / 6kg	2
	Fire main section valve Palolinjan osastoventtiili Sektionsventil för brandlinje	1
	Fire hydrant Paloposti Brandpost	7
	Fire hose 20 m with nozzle Paloletku 20 m ja -suutin Brandslang 20 m med munstycke	7
	CO ₂ battery (5 bottles) - net weight 225 kg CO ₂ -patteri (5 pulloa) - nettopaino 225 kg CO ₂ -batteri (5 flaskor) - nettovikt 225 kg	1
	International Shore Connection Kansainvälinen laituriliitin Internationell landanslutning	1
	Fire pump 60 m ³ /h, 3 bar Palopumppu 60 m ³ /h, 3 bar Brandpump 60 m ³ /h, 3 bar	1
	Emergency fire pump 60 m ³ /h, 3 bar Hätäpalopumppu 60 m ³ /h, 3 bar Nödbbrandpump 60	1
	Emergency generator Hätägeneraattori Nödgenerator	1
	Reserve source of electrical power (24V battery) Varavoimälähde (24V akusto) Reservelenergikälla (24V batteri)	1
	Main Engine emergency stop Pääkoneen hätäpysäytys Nödstop för huvudmaskin	1
	CO ₂ release station CO ₂ -laukaisukeskus CO ₂ -utlösningscentral	1
	Remote control for firepump Palopumpun kaukokäyttö Fjärrmanövrering av brandpump	1
	Remote control for emergency firepump Hätäpalopumpun kaukokäyttö Fjärrmanövrering av nödbbrandpump	1
	Fuel oil pump remote shut off Polttoainepumpun kaukopysäytys Fjärrstop för bränslepump	1
	Lube oil pump remote shut off Voiteluöljypumpun kaukopysäytys Fjärrstop för smörjoljepump	1
	Fuel oil remote shut off Polttoainesyötön kaukosulku Fjärrstängning av bränsletillförsel	2
	Remote shut off for cargo hold ventilation Lastiruuman tuuletuksen kaukopysäytys Fjärrstop för lastrumsluften	1
	Remote shut off for accommodation ventilation Asuintilojen ilmastoinnin kaukopysäytys Fjärrstop för luftkonditionering i bostadsutrymmen	2
	Remote shut off for engine room ventilation Konehuoneen tuuletuksen kaukopysäytys Fjärrstop för maskinrumsventilation	2
	Closing device for cargo hold ventilation inlet/outlet Lastiruuman tuuletuksen sulkupelti Avstängningsplåt för lastrumsventilation	4
	Closing device for accommodation ventilation inlet/outlet Asuintilojen ilmastoinnin sulkupelti Avstängningsplåt för bostadsutrymmens luftkonditionering	5
	Closing device for machinery spaces ventilation inlet/outlet Konetilojen tuuletuksen sulkupelti Avstängningsplåt för maskinutrymmens ventilation	7
	Water sprinkler release valve Vesiprinklerin laukaisuventtiili Vattensprinklerns utlösningsventil	1
	Space protected by water sprinkler Vesiprinklerin suojaattu tila Vattensprinkler-skyddat utrymme	1
	Space protected by CO ₂ CO ₂ -suojattu tila CO ₂ -skyddat utrymme	1
	B-class fire door B-luokan palo-ovi Klass B brand dörr	19
	A-class fire door A-luokan palo-ovi Klass A brand dörr	8
	B-class fire division B-luokan palo-osastointi Klass B brandskott	
	A-class fire division A-luokan palo-osastointi Klass A brandskott	

6. Exits

All exits and escape routes are marked clearly with fluorescent exit signs.

Always know the nearest exit or escape route. Remember that heavy list or thick smoke can make it very difficult to orientate inside the ship.

Know your ship! .



6.1. Placing

The exits from the accommodation, cargo hold and forecastle:

- From living quarters and engine room below deck: Doors in aft and STB/BB on main deck
- Cargo hold: Ladders in fore and aft in cargo hold
- Forecastle storage: Hatch to forecastle
- Paint storage: Hatch to forecastle

The emergency exits from the accommodation and engine room are::

- From living quarters below deck: Hatch from provision room
- Engine room: Ladders from control room and engine room. Elevator shaft

All exits and emergency exits must always be accessible. Do not block them in any way!

7. Black out

If the vessel suffers with black out, it means that the power supply onboard stops. This can in worst case lead to total loss of the ship or other dangerous situations.

This happens in a black out situation:

- 220 volt power supply stops (air conditioning, ballast pumps, hydraulic pumps, steering gear)
- Main engine booster-, cooling-, and electric pumps also stops
- 24V power supply starts
- Aux.engine in Stand By mode will start
- If aux.engine doesn't start, emergency generator will start
- The navigation equipment, the ships radio station and emergency lighting is back-upped by emergency batteries

8. Collision and grounding

8.1. General

If collision or grounding occurs there is a high risk of flooding. In order to control the flooding some necessary actions has to be taken, it means practically closing of all watertight doors and hatches onboard. If engine room is flooded an emergency suction is required. If situation requires General alarm is sounded which consists of constant ringing the bell.

Placing of the watertight doors and hatches.

- Doors (3) to living quarters on main deck
- Hatches (3) to provision room and engine room on aft deck
- Inside: Provision room, engine room and elevator shaft doors
- Hatch to cargo hold on aft deck
- Hatches (2) to paint-, and forecastle storage on forecastle deck
- Door between forecastle storage and cargo hold

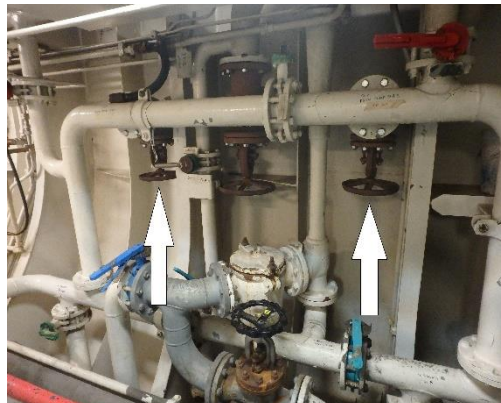
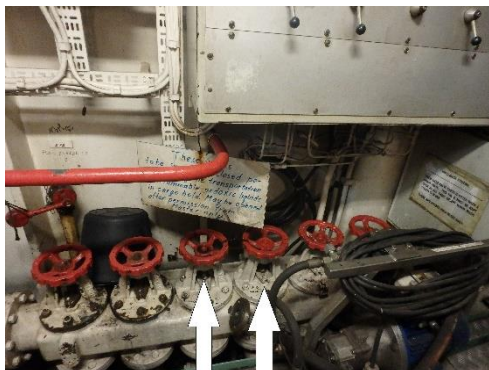
8.2. Emergency suction

The ship is equipped with a emergency suction system, and it means if the ships engine room is flooded the water can be pumped out from there with effective pumps.

The system is managed from the engine room.

The pumps are in normal conditions used as ballast pumps.

- Emergency suction from the engine room
 - Open two bilge valves (see pic.)
 - Open valves from ballast pumps to sea
 - Start pumps

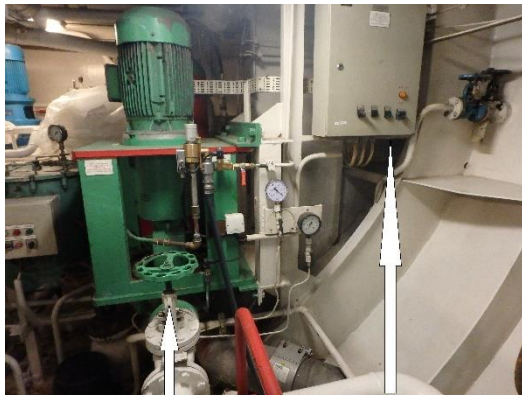


Open engine room bilge valves

Open valves to sea

Stb side ballast pump

Port side pump



Open valve Start pump

Open valve

Start pump

This system is only to be used in emergency situation.

In case there is oil leak in the engine room, everything will be pumped to sea causing damage to the environment.

Emergency suction must always be marked to the machine log book!

9. Illness attack

9.1. General

The ship is equipped with medical chest for traffic area "B", it means practically for near coastal trade (the Baltic sea and the North sea), which the ship is engaged in.

Medical equipment is located in Masters cabin.

Waterproof first aid kit is also in MOB-boat.

9.2. If you discover an illness attack

1. Alarm the OOW (officer on watch):
 - Tell what happened and if the patient is conscious.

2. Start giving first aid if possible and stay with the patient until help arrives.

10. Helicopter evacuation

10.1. General

When rescuing a patient with helicopter there are several risks that should be known beforehand. Therefore it is high priority to investigate the condition of the patient. Helicopter can fly approximately 150-200 nautical miles from the coast. The

communication to helicopter is done through VHF radio and a specific channel given by the rescue centre or helicopter. Remember that the communication outside on deck is almost impossible because of the loud noise.

10.2. Preparations before hoisting with helicopter

Move every item or make fast before the operation start, otherwise it might move

during the lifting due to high wind caused by helicopter rotor. If possible move also the antennas and similar. Use all available light to light up the deck where the hoisting is going to take place.

If there is bad visibility or dark, move the searchlight upward to sky to help the helicopter to localise the ship. When snowing a blinking light might be the best option. Do not blind the helicopter pilot with the light.

The ships radar should be in use to help estimating the bearings and distance between the ship and helicopter.

Move the patient nearby the hoisting area and maintain the patient's condition at all times. Remember to give a report where stated what kind of medicine and treatment the patient have been given. If the patient is in any good shape to move, put an immersion suit on him.

10.3. The hoisting

BEWARE OF THE STATIC ELECTRICITY!

The helicopter gathers static electricity during the flight and must be get rid of before starting the hoisting operation. The earth connection must be established between helicopter and ship before anybody touches the hoisting cable. Find a secure place with minimum risk of possible fire.

When the basket or similar (used to hoist the patient) is hoisted / lowered from helicopter it is critical to follow at all times the steering line and make sure it do not get stuck anywhere. There might be two steering lines for the basket that helps steering. With help of these lines. the helicopter is able to make several hoists.

Always control that steering lines are fastened!

When basket is used put the patient in sitting position with lifebelt on.

10.4. Hoisting from liferaft

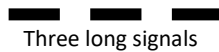
- When the steering line is pulled to the life raft fasten it always on the outside to avoid unnecessary complications with the line
- The life rafts roof is taken down if it is raft type of 6 persons or less. This is done because of minimizing the risk of capsizing when the hard turbulence comes from the helicopter
- Divide the weights evenly inside the raft
- Maintain sitting position inside the raft

11. MOB – Man Over Board

11.1. General

If you see someone falling into the sea the first thing to do is to shout man over board and throw lifebuoy to the person in danger. After this the next thing to do is to notify the bridge, which makes the Man Over Board alarm. The MOB alarm is three (3) long signals..

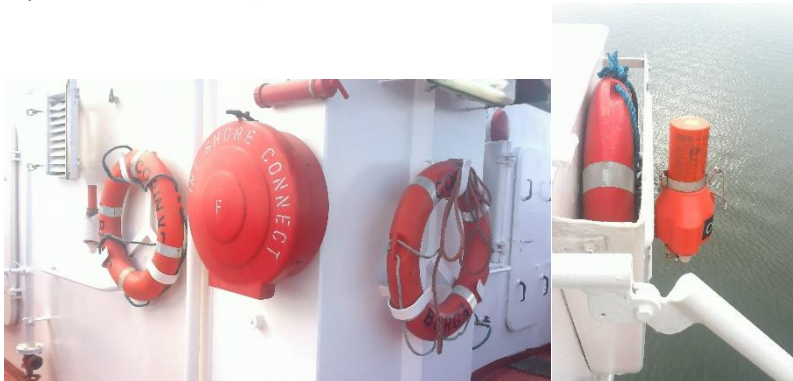
MOB-ALARM



11.2. Lifebuoys

The ship has eight lifebuoys:

- 2 pcs in the poop deck (1 with line and 1 without line)
- 2 pcs with light and smoke signal on the bridge wings
- 2 pcs with light in the aft deck
- 2 pcs in the aft deck (1 with line and 1 without line)



11.3. The MOB boat

The vessels MOB/lifeboat is located at the port side aft part on the vessel.

MOB boat can only be lowered to the sea when ships speed is five knots or less.

It is highly important that the leading line from the MOB-boat is fasten to the ship before lowering it to the water level. Otherwise there is a risk for MOB boats capsizing and danger for the crew in the boat.



11.3.1. Before launching

1. Chief Officer and Able Seaman put on immersion suits and take the emergency VHF radio with them.
2. Ordinary Seaman and Chief Engineer make the MOB boat ready for launching:
 - Remove cover and supporting woods
 - Open boat lashings (2 pelicanhooks, picture on the right) and load starp from the davit
 - **Check that the leading line is attached both on the ship and on the boat**
 - Check that the crane hook is fast and secured in the boat



- Open the remote steering rope coils from the handles (yellow and red)
- Insert the bottom plug
- Check that the boat engine is ready for use. (Fuel hoses, tank ventilation, sufficient gas)
- Open the side gunwale (opens in two parts, first forward one)
- Turn on the main switch
- Lift the boat up by pressing the green button carefully
- Turn the blue handle to open position and lift the yellow handle to turn the boat outside.
- Lift the red brake lever to lower the boat to decklevel.



Blue and yellow handle



Green button on the side, main switch
and brake lever

11.3.2. Launching the MOB boat

1. When orders given from the bridge, the Chief officer and A.B. boards the boat
2. It is important to sit immediately down
3. ChEng lowers the boat by gently lifting the red break lever.
4. When the boat reaches the water ChOff releases the lifting hook
5. **WARNING! The hook is heavy and may swing around at bad weather**
6. Chief officer starts the engine and starts slowly move the boat forward and keeping it still
7. After this A.B. releases the leading line

In black out situation the hand winch must be used to lift the boat back up.

WARNING!

If the ship is still in motion and the leading line is let go before opening the lifting hook there is a major danger of capsizing the MOB boat. Capsizing may cause severe damage to the crew and to the

11.3.3. Lifting the boat up

1. Fasten the leading line
2. Fasten the lifting hook
3. **WARNING! The hook is heavy and may swing around at bad weather**
4. Stop the engine
5. All persons onboard the boat must be seated
6. ChEng lifts the boat up using the winch or if necessary, manually
7. Persons in the boat must keep the boat away from ships side by using the boat hook

11.3.4. Starting, driving, stopping and service for the MOB boat engine

1. Chief Engineer is responsible for service for the MOB boat according to the SOLAS checklist
2. Check the fuel level and connect the fuel hose. Pump fuel to the engine.
3. Connect the MOB-switch and check that gear is neutral
4. Open choke and give little gas from the hand lever
5. Engine starts by pulling the pull cord
6. Close the choke and operate the engine by adjusting the hand lever
7. Before stopping the gear is to be putted on neutral.
8. Stop the engine by disconnecting the MOB-switch

11.4. Rescuing persons from water

A person in the water drifts depending on the current and wind. This makes it critical for the boat driver to plan the rescue operation and also maintain continuous radio communication with the bridge. The communication is vital for the rescue operation. For success in the rescue operation next things must be considered::

- Take course towards the person in the water.
- Slow down when approaching the person. It is better to slow down earlier than have to make a new approach when the speed was too fast at the first time.
- When the boat is near let the boat drift slowly towards the person.
- The technique to lift the person in the boat is to put your arms under armpits. Doing this you avoid causing damage to the spine. If the person is injured the lying position is the best alternative.
- **Warning!** Driver of the MOB boat must ensure that the person in distress don't get too close the propeller. Never try to lift the person from aft part of the boat.

11.5. Towing

Duties of the mob boat are also to assist with the liferafts. It is important to follow the leading line when assisting the liferaft.

11.6. Items in the MOB boat (LSA Ch V, 5.1.2)

1. Floating oar with hook
2. Floating hand bailer
3. Bucket
4. Compass
5. Sea anchor with line
6. Boyant line
7. Steering line 50m
8. Waterproof morse light
9. Flashlight and spare batteries in watertight bag
10. Whistle
11. Waterproof first aid package
12. Throwing line with ring
13. Search light
14. Radar reflector
15. Thermal Protective Aid
16. Fire extinguisher (3kg) (located in immersion suit locker)
17. Boat hook
18. Axe

12. Abandoning the ship

12.1. In general

It is always the Masters decision to abandon the ship. This is the last option when it is clear that there is no other way to save the crew.

It is not wise to abandon the ship if there is the smallest possibility that the ship can be saved. It is far more dangerous to be on a life raft than remain onboard. It is also easier for the rescue team from ashore or another ship to see the echo of a ship in the radar than a small life raft..

12.2. SART

SART (Search And Rescue Transponder) is a floating radar transponder, which activates from the radar signals. It has a five nautical miles working range and the battery capacity is minimum 96 hours. On this ship there are two SART devices and they are located on both sides of the bridge near the doors.



Stb side



Port side

Instructions:

1. Take the SART off from the stand.
2. Activate the SART by pulling the securing pin, or the red tab.

3. Check that the red control light starts glowing.
4. Put the SART in an open place or take it with you to the life raft.

12.3. EPIRB

EPIRB (Emergency Position Indicating Radio Beacon) is a rescue sender, which activates automatically when in contact with the water. It can also be activated manually.

The EPIRB can be seen from all the rescue centres ashore and even from airplane or another ship. It sends 121,5 MHz signals for reflections and 406,5 MHz for alarming purposes. The EPIRB has the same MMSI than the ship. (Maritime Mobile Service Identity).

The ships EPIRB is located outside on the port bridge wing. It has a system of automatic releasing



when the ship sinks 1,5 - 4 meters under the water level.

12.4. Portable VHF

Portable VHF is a radio that can be used to maintain

contact with the rescue team leader (MRCC, OSC etc.) or to call for help in distress situation. The Chief officer takes the portable VHF to the life raft or MOB boat when abandoning the ship.

There are 3 portable VHF on the ship, located on the bridge.



12.5. Emergency signals

The following emergency signals are used together or separately depending on the situation:

1. Cannon or other type of high bang with one-minute interval.
2. Constant signal with ships typhoon.
3. Red rocket with short interval.
4. SOS *** __ _ *** signal with any device.
5. "Mayday" call with radio.
6. International flags N and C
7. Signal of one quadrate and a ball.
8. Open fire onboard.
9. Red parachute rocket and hand flare.
10. Orange colour smoke signals.
11. Continuous lifting and lowering your arms.
12. Distress signal with GMDSS system.

Distress signals mentioned above are strictly forbidden to use in any other situations than emergency.

12.6. Pyrotechnic emergency signals

The Pyrotechnic signals mean in general different types of signals that contain flammable material. On this ship there are emergency rockets, smoke signals and hand flares.

12.6.1. Parachute rockets (LSA Ch III, 3.1) (12 pcs on the bridge, 2 pcs in rafts, 4 pcs in lifeboat)

The parachute rocket is build in a tube that contains a small parachute with a flare. When launched the rocket rises to approximately 300 meters height where the flare ignites and the parachute opens. If possible, in distress situation, try to spare four rockets for the use when seeing an aircraft or a ship.



Instructions:

1. Remove the covering plastic bag and take off the bottom by turning it.
2. Hold tight from the handle, **aim the rocket upward (arrows up) and away from the ship.**

12.6.2. Line throwing appliance (LSA Ch VII, 7.1) (1 pcs + 4 charges on the bridge)

All ships must be equipped with line throwing appliance. It has a minimum throwing distance of 230 meters and the line must hold 2 kN.



Instructions:

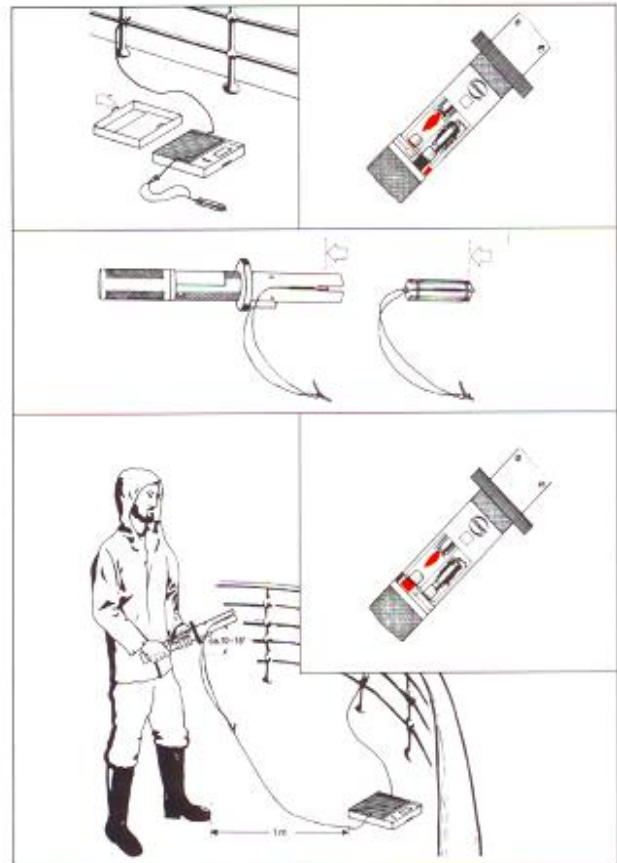
1. Take line throwing appliance out from the box and prepare it for launching
2. Fasten the line on the ship
3. Load the rocket in the tube and fast the other end of the line in the rocket. Control that the line is packed in the box so that it is free to use. Do not take the line out from the box
4. Aim above the target and take of the safety switch and launch
5. Never aim towards other persons

Where to use:

1. Establish a connection with the line between the ship and the distress craft
2. Towing assistance
3. When evacuating persons.
4. When using a rescue chair
5. Very difficult rescue situations
6. In Man Over Board situations, aim the rocket as near as possible the person in distress

Aiming with the line-throwing appliance:

- When strong wind from the side, aim so that the rocket goes against the wind and turns by itself and lands near the person in distress.
- Remember that the line is only 230 meters long and the wind may be rough. Shooting from a higher ground gives better results.
- **Never launch the rocket if the line is not fasten properly. The rocket fly uncontrolled if not fastened.**



12.7. Lifejackets and immersion suits

When abandoning the ship it is everybody's duty to take lifejackets and immersion suits with them. They are located in the port side locker next to lifeboat. There is also 2 lifejackets and 2 immersion suits on the bridge.

Don't use lifejackets together with immersion suits.

12.7.1. Putting your lifejacket on

1. Open the belt from the lock
2. Pull the life belt over your head.
3. Lock the belt with the lock
4. Tighten the belt

12.7.2. Putting your immersion suit on



1. If there is time, take off your shoes (tight shoes=cold feet)
2. Do not take off all your clothes. More clothes makes more insulation against the cold
3. Put the immersion suit on as you would put on an overall
4. Pull the headpiece over your head and close the zipper
5. Push the excess air out from the suit by lowering yourself and at the same time loosening the headpiece so that the air comes out. (see photo)
6. Suit contains small rope and a hook, which you can attach to another suit, to keep group together.
7. Suit also has attached hood with integrated inflatable cushion to improve watertightness and floating position. Don't use lifejackets with suit. Inflatable cushion doesn't work properly with lifejacket.



Important! If there is too much air inside the suit it might happen that the air goes to your feet and puts you in upright position when floating in the water.

Important! Don't use lifejackets with suit.

12.7.3. Jumping from the ship to the sea

You should always avoid jumping from the ship. You might go in a shock and automatically breath for air when located under water. It is also possible that the jump may cause the suit a leak. If jumping is the only change, do following things:

1. Switch on the lamp in the immersion suit by twisting it.
2. Keep the hands tight against your body. One arm can be laid against the mouth and nose to avoid breathing the water.
3. Always watch where you are jumping to avoid other persons or items in the water.
4. When you jump, take a big step forward and cross your feet. Remember also to look strait forward to maintain the upward position.
5. Always jump in a position that makes you feet touch the water first.

12.8. Ships safety system

12.8.1. Lightning on the aft deck

The electricity for the lightning and crane (MOB boat) comes from ships backup system so they work even in blackout situations. The emergency lights for the bridge is switched on from the bridge and MOB boat and life rafts areas can be switched on from the deck, STB and port side.

12.9. Life rafts

Ship has two liferafts which both can accommodate 8 persons. The life rafts are located at the upper deck behind the bridge on both sides. They can be pushed via railings into the water. The life rafts are also fitted with automatic hydrostatic release that releases the life raft if the ship sinks.

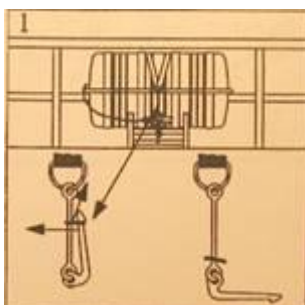


Port side

Stb side

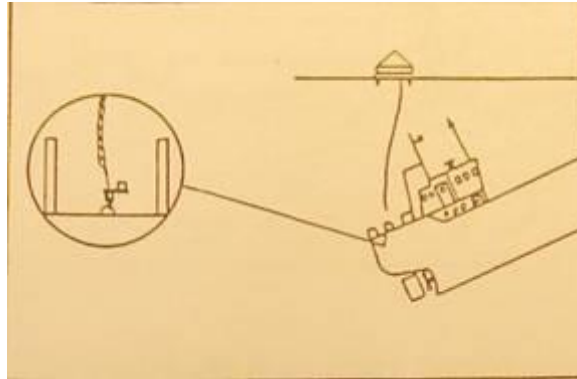
12.9.1. Releasing and using the life raft

The liferafts are fasten with a belt and a pelican hook. The releasing line is fasten permanently on the ship. When the liferaft are pushed in the water, only thing needed to do is to pull in the releasing line. After this the raft fills up automatically with air.



12.9.2. The hydrostatic releaser

The hydrostatic releaser contains a small knife that cuts the safety line when the liferaft is approximately 1,5-4 meters under the water. After this the raft starts to fill up with air. When the liferaft is full with air it pulls itself towards the surface breaking a weak link that frees the raft from the ship.



It is not possible to do maintenance work to the rafts aboard the ship. They need to be sent ashore once every year for maintenance. It is highly important to remember to fasten the releasing line firmly on the ship when the new rafts are put on place.

12.10. Procedures after the ship has been abandoned

12.10.1. Immediate procedures.

1. Get as far as possible from the sinking/burning ship. (Liferaft or MOB boat)
2. Take control of the situation; calculate the persons and chose a group leader. The most suitable leader would be the person with biggest experience. The chosen person will then lead the situation but can be changed later if the group decides so.
3. Rescue the persons from water. Use the oars and combine with the sea anchor.
4. Gather the rafts and boats together, this way it is easier to spot you on open sea.
5. Throw sea anchor in water
6. Give first aid to injured, first aid package can be found in the liferaft and MOB boat
7. Alarm help by starting SART, VHF and EPIRB. It is also recommended to use pyrotechnics emergency signals, but only when permission from the group leader. Use only when you know somebody can see them.
8. In first aid package can be found surviving instructions. These should be read as soon as possible.
9. **Surviving depends highly on your own knowledge about the survival gear and methods. You can improve these things by reading this manual.**

12.10.2. Procedures in the life raft/MOB boat

1. The command is always on the group leader.
2. Seasickness pills are to be given to everybody. Remember that the pill may cause different side effect such as tiredness.
3. Risk for hypothermia is always high, so remembers to keep immersion suit and other cloths on at all times. Take always good care of the injured and keep them as warm as possible.
4. Arrange the crew for watch keeping duties. Every watch should have minimum two persons and as duties to keep watch and take care of the raft.
5. Under the first twenty-four hours water should be given only to the injured after this 100ml per person per twenty-four hours. If possible try to gather rainwater.
6. **Remember not to drink water from the sea.**
7. Most likely there is no need for food portions in our traffic area. However if you decide to eat, remember that both salt and sweet food increases the need for water.
8. Keep the pyrotechnics signals dry and use only when needed (when rescue is near).
9. Keep the bottom of the raft dry and pump it full by using the hand pump located in the raft. The more air in the raft the better isolation against the cold seawater.
10. Adjusting the door hole into the raft does ventilation.

12.10.3. The equipment inside the life raft

There are several different items in the raft to help you to survive. Here is a list of few of them.



Floating throwing ring

Is to be used when rescuing people from the water.



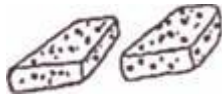
Floating knife

With this knife you can cut the raft free from the ship. Then you don't have to wait for the weak link to cut you loose and are able to keep safer distance to the sinking vessel.



Bailing device

Used for emptying the raft from excess water.



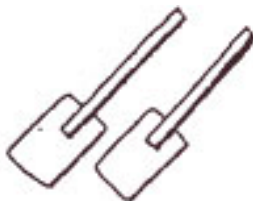
Toadstool

Used for drying the moist from the raft floor and collecting rain water.



[5.3.1.2.1](#) **Sea anchor**

Used to slow down the rafts movement. Can also be used to move the raft to desired position.



[Paddles](#)

These are used for paddling the raft, these can also be used to maintaining order in the raft.

[5.3.1.2.4](#)

[5.3.1.2.5](#)



[Repairing tools](#)

Repair tools can be used to repair smaller holes in the raft.

[Footpump](#)

For filling the raft with more air.

5.3.1.2.9

5.3.1.2.10



1.2.11 First aid package

Contains a small amount of first aid supplies, for example sea sickness tablets.

5.3.1.2.12

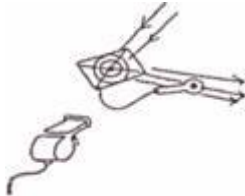


5.3.1.2.13 Cup for measuring the drinking water

For rationing the water (100 ml in twenty-four hours)



Waterproof flashlight with extra batteries and bulb.



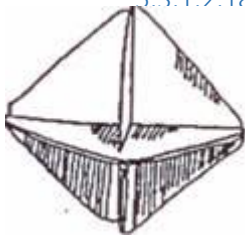
5.3.1.2.14 Signal mirror and whistle

In good weather the mirror can be seen in distance of 10 nautical miles. Whistle range 0,2 nm.

5.3.1.2.16

5.3.1.2.17

5.3.1.2.18



5.3.1.2.19 Radar reflector

Improves the radar reflection of the raft and makes it easier for the rescue team to find the raft.

5.3.1.2.21



Survival instructions

Can normally be found on the inside in top of the raft.



Hypothermic suit

Effective against the hypothermia.

5.3.1 2 22 1.1.1

5.3.: l.:



chnic signals

See chapter 13.6



13. Hypothermia

13.1. General

Hypothermia means that the body's temperature sinks below the normal level, which is approximately 35 C°. Cold wind or water or both can cause it. Water cools down 25 times more effectively than the air and if current is added to the water, it might be even 200 times more effective. Avoid always getting to the water, even if you are carrying an immersion suit.

You can minimize the risk of hypothermia by putting warm clothes under the immersion suit. Also the health plays a big role in this matter. If you are in good condition then you have better chances to survive against the cold and possible hypothermia.

Human body operates by keeping the most important functions (heart, lungs and inner organs) in drift at all times. It does this by concentrating the blood flow into these areas and leaving everything else outside. That is why the first signs of hypothermia is could feeling in both arms and legs. Another sign is shakes, (which is caused by the body that is trying to warm up in a scale, consisted of six stages). Also apathy and dizziness are signs that the hypothermia has already raised to a dangerous level. Normally when the body temperature sinks under 30°C it is followed by unconsciousness. When the body temperature sinks below 30 degrees it will follow by cardiac arrest.

Water temperature	Unconsciousness	Death
0° C	15 min	15-45 min
0-5° C	15-30 min	30-90 min
5-10° C	30-60 min	1-3 hours
10-15° C	1-2 hours	1-6 hours
15-21° C	2-7 hours	2-40 hours
21-27° C	3-12 hours	3 hours and up
Over 27° C	Undefined	Undefined

13.2. Different stages of hypothermia

1. **Light hypothermia** Cold skin, temperature still normal inside the body.
Symptom: The Patient is awake, talking normal, feels pain and is able to move himself. Might have shakes.
Aid: put more cloths on the patient and cover in immersion sheet if available. Also give him something warm to drink. **NO ALCOHOL** because it increases the cold blood circulation in the body and makes the hypothermia even worse.

2. **Hypothermia** — Body temperature has decreased.
Symptom: Patient awake but suffers from apathy and dizziness. Low control of body movements. Extreme coldness and hard shakes.

Aid: Stop hypothermia's evolving. Wrap the patient with warm cloths/ immersion sheet. Another person can try to warm up the patient. Do this with caution, too quick warm up might bring the cold blood from hands, legs etc to the inner organs. Rubbing is strictly forbidden.

3. **Difficult hypothermia** – Body temperature very low.
Symptoms: Patient unconsciousness, no shakes. The pulse and breathing very low or none. **Difficult hypothermia is a very dangerous state!**
Aid: Treat the patient with extreme caution. For example try not to remove patients clother the regular way, instead cut them off. If this is not possible, leave the wet clothes on. Put the immersion sheet on to the patient, this helps the remaining body temperature to stay within the body. Do not rub on massage the patient. Put the patient to side lying position to keep the airways open. If breathing assistance needed, do it carefully. No heart massage allowed as it may lead to heart failure. **NO SAUNA, NO BATHS, NO ALCOHOL OR MASSAGE.**

13.3. Avoiding hypothermia

The following points may reduce the risk of hypothermia:

1. Put wind- and waterproof clothes on.
2. Cover your head, arms and feet from the cold. An uncovered head relieves 70% of the body heat
3. Put the immersion suit on. It helps significantly surviving in the cold water.
4. Use immersion sheet if available as an extra measure.
5. Avoid getting in the water. Water cools down 25-200 times faster than the air.
6. If in water, avoid unnecessary movement. Use the HELP and HUDDLING positions to stay warm.

14. Fire fighting

14.1. General on fire safety

Fire onboard is one of the most dangerous situations that could occur. When the fire spreads out it leads often to uncontrolled situation that makes the crew, ship and environment in great danger. Best way to avoid fire is to prepare to different scenarios. This could be supervising hot works, general planning and risk assessment. Also keeping the ship clean and all the stores in good order reduces the risk for fire. Also the fire fighting drills are at great help, the team learns how to put out a fire and which are the most likely places to caught fire::

- Engine room
- Galley
- Washing room
- **Smoking indoors (Strictly forbidden aboard!!!)**
- Smoking in dangerous places and situations (bunkering etc.).

14.2. Crew's responsibilities.

Every crewmember has the responsibility to act in such a way that it doesn't cause risk for fire. This means good work planning and following safety instructions at all times. In addition it is every crewmembers duty to attend in fire drills and know how to use the fire fighting gear onboard

14.3. Hot works

Hot works is to be done and followed by ISM-manual instructions. Hot work permits are issued by the Chief Engineer.

14.4. Firefighting system

It consists of both movable and non-movable system and rescue gear. In the movable system includes fire extinguisher and fire filters. The non movable system includes fire pumps, fire lines (water lines), fire alarm and Inergen -system. Rescue gear includes for example emergency exits and the EEBD:s.

All fire fighting related systems can be found in the safety plan (Safety- and Fire Control Plan).

14.4.1. Fire Extinguisher

The ship has mainly 6kg ABC powder extinguishers. In the vicinity of electricity hazardous places there is also 6kg CO₂ extinguishers better suitable for electrical fires. The complete list can be found in the safety plan:

- Mess room and Galley – 6 kg powder and 6 kg CO₂
- Bridge – 6 kg CO₂
- Engine room – 6kg powder and 6 kg CO₂
- MOB boat – 3 kg pulver

Caution!

It is in your own responsibility to know how to find, and use fire extinguishers properly

14.4.2. Fireman's equipment

Fireman's equipment can be found in two different places onboard: Paint storage in the forecabin and the provision room in aft. There are two sets of equipment in both locations. Following equipment can be found in these locations:

- Fireman's outfit
- Pressured air breathing equipment
- Reserve bottles
- Helmet
- Axe
- Flashlight
- Rope
- Belt



14.4.3. Fire pumps and fire lines

Vessel has two ballast pumps, which operates also as fire pumps. There is also emergency fire pump, which operates directly from emergency generators shaft. It is connected and disconnected with mechanical lever, from the generator. Fire line valves should be open at all times when at sea, so that the line is ready for use. Pumps are switched on from the panel next to the pump, or from the bridge.

There is only one fireline on the vessel. So you can't close sections from the line.



Ballast pump and switchpanel

Emergency generator and fire pump

14.4.4. Fire alarm system

Ships fire alarm system consists of smoke detectors and pushing buttons and is divided to 4 areas. The areas are following: 1. boiler room, 2. engine room, 3. bow thruster 4. accommodation.

The fire alarm shows first at the fire central (bridge) and after this the emergency bells starts to ring.

The fire system must be tested at even intervals. Note that there is a special test spray for detectors.

Observe!

If you hear the fire alarm, contact the bridge immediately!

14.4.5. Engine room fixed fire extinguishing system

Engine room has a fixed fire extinguishing system. Inergen gas functions by replacing the air in the engine room. It is therefore highly important that the engine room is un-manned when the system is released.

The system is launched by Chief engineer and only by the masters order. Before launching check the following things:

- Engine room is unmanned
- Fire dampers are closed
- Engines in the engine room are stopped

Ventilation stops automatically when the Inergen launch box is opened. At the same time the Inergen alarm goes off.

Caution!

If you hear the Inergen alarm in the engine room, leave the room immediately!

14.4.6. EEBD
(Emergency Escape Breathing Device)

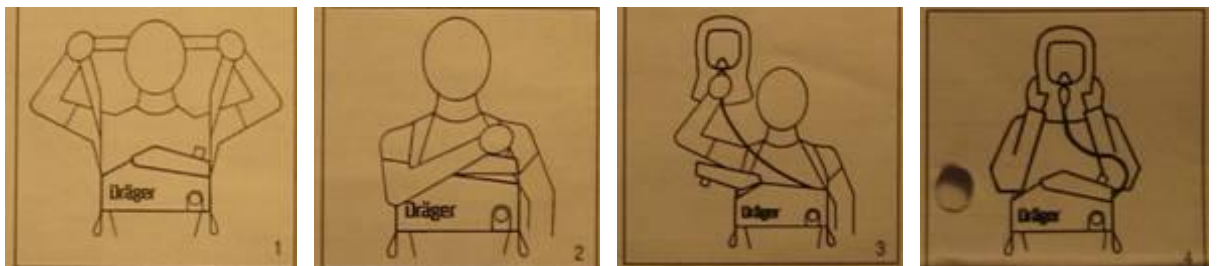
The ship has 4 EEBDs. They are located in following places:

- Engine room 2 pcs
- Cabin corridors 2 pcs



EEBDs are packed in special covers. When opened they give sufficient breathing air for 10-15 minutes and time for you to leave the dangerous area.

Caution! During familiarization read the instructions carefully. When opened EEBD starts giving air automatically, which can be stopped only by following the instructions given by the manufacturer.





M/V Corinne

Deck Handbook

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1 INTRODUCTION

1.1 GENERAL

This is the manual for safe working on board M/V Corinne. It contains the most commonly needed information for the ships every day operation, e.g. check-lists and maintenance instructions.

1.2 LOCATIONS

Deck department tools and supplies can be found from following locations:

- Small storage in the aft deck, small selection of tools for daily use
- Fore storage below the forecastle, larger tools and spare parts. Ropes and lashing equipment.
- Steering gear room, smaller spare parts

1.3 CHANGES AND UPDATES

This manual is part of Prima Shipping ISM-code. All changes and updates have to be checked in the office and marked in the ships ISM-manual. Every time when coming to you should check if there are changes or updates in the manual.

2 REGULAR OPERATION

From company ISM manual you can find the checklists to regular operations. In this section you can find this ships special orders.

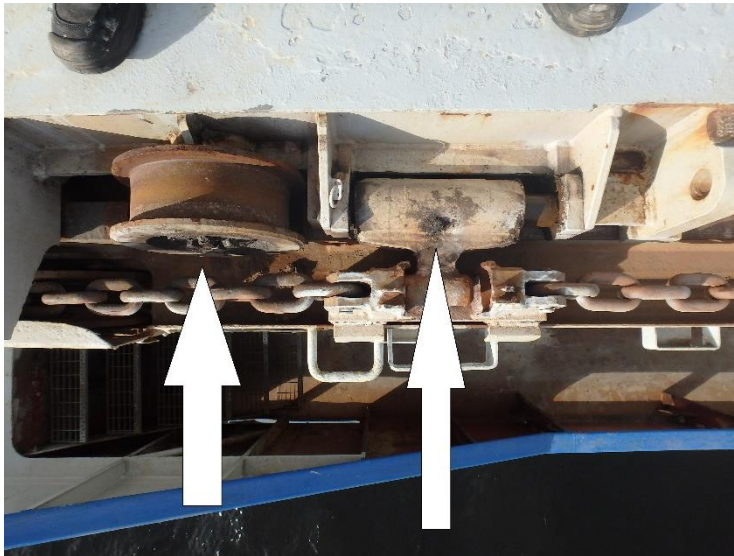
2.1 REGULAR MAINTENANCE

2.1.1 Greasing

Greasing intervals and -locations can be found from a checklist in the mess-room. For ensuring the normal operation of all the machinery greasing must be done according to the schedule.

Greasing points:

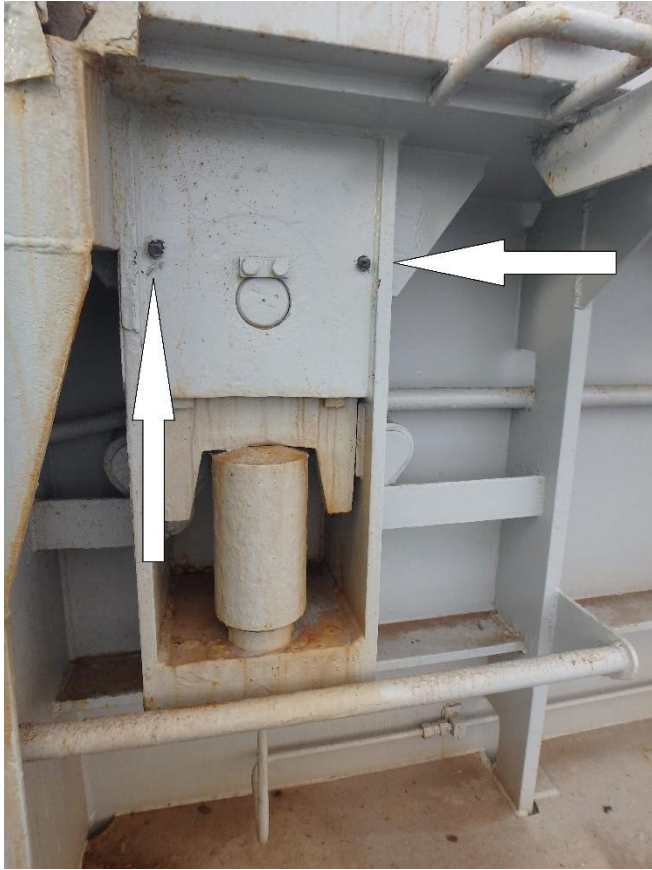
Hatch wheels (4/hatch) and chain connection (1/hatch)



Hatch lifting hydraulic cylinders in forward



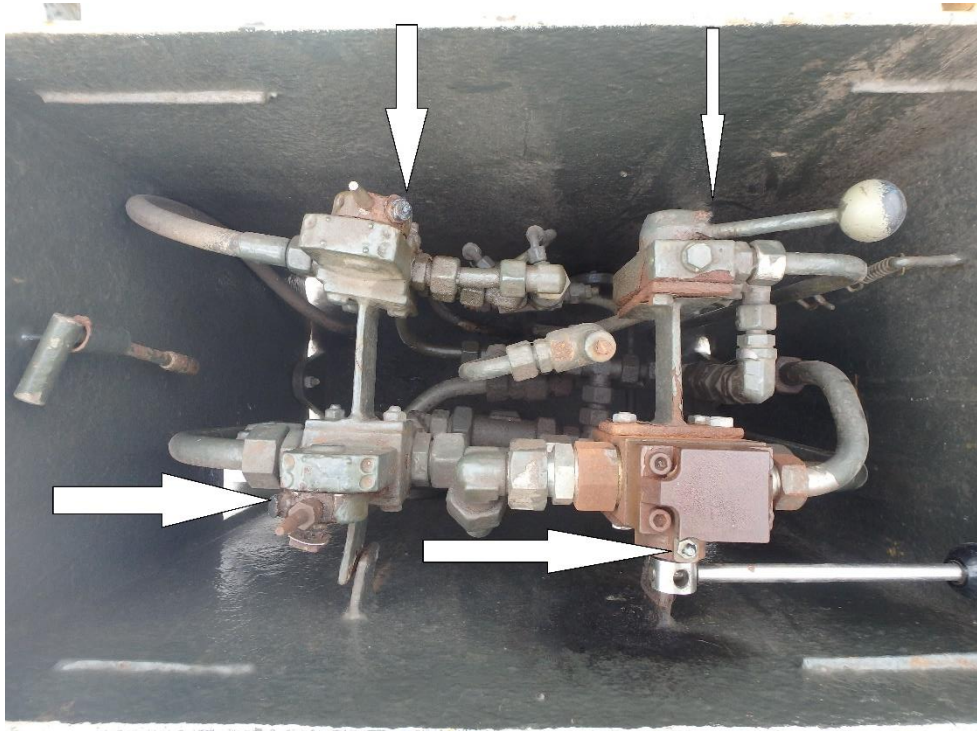
Hatch wheel elevators



Chain wheels



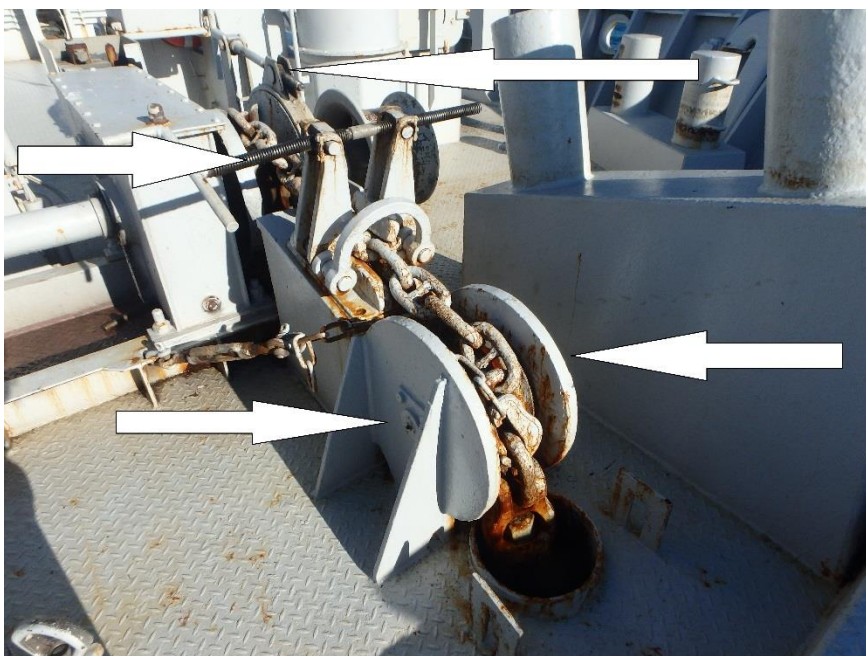
Control box for hatches and forward mast



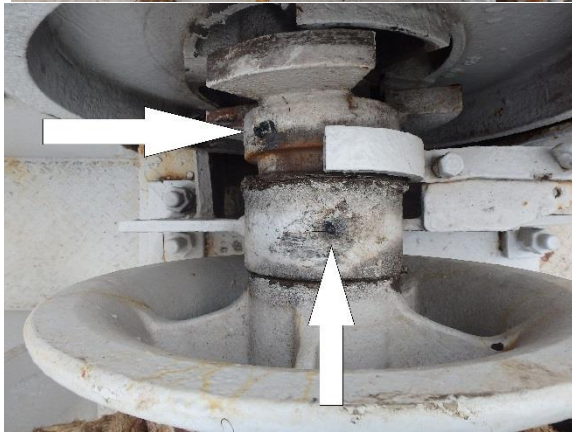
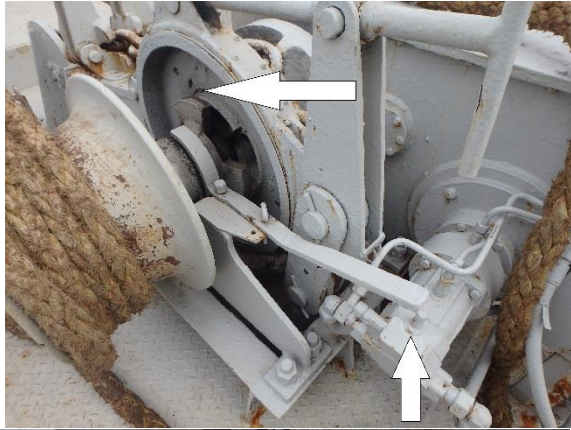
Forecastle capstan (stb and bb side):

Chain wheel axle

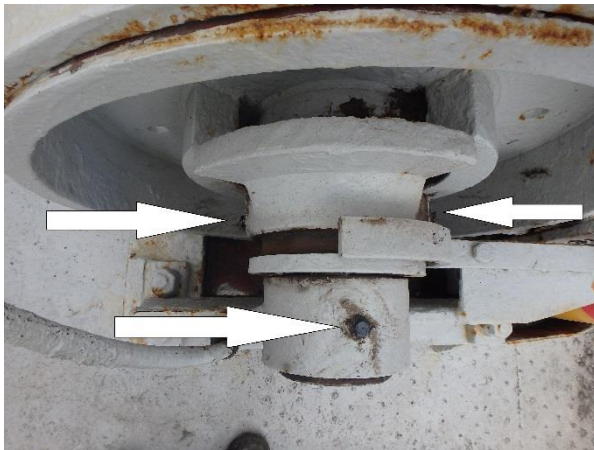
Greasing of the two threaded rods



Capstan axle stb and bb side (and hydraulic motor on bb side)



Aft capstan axle



Doors and small hatches

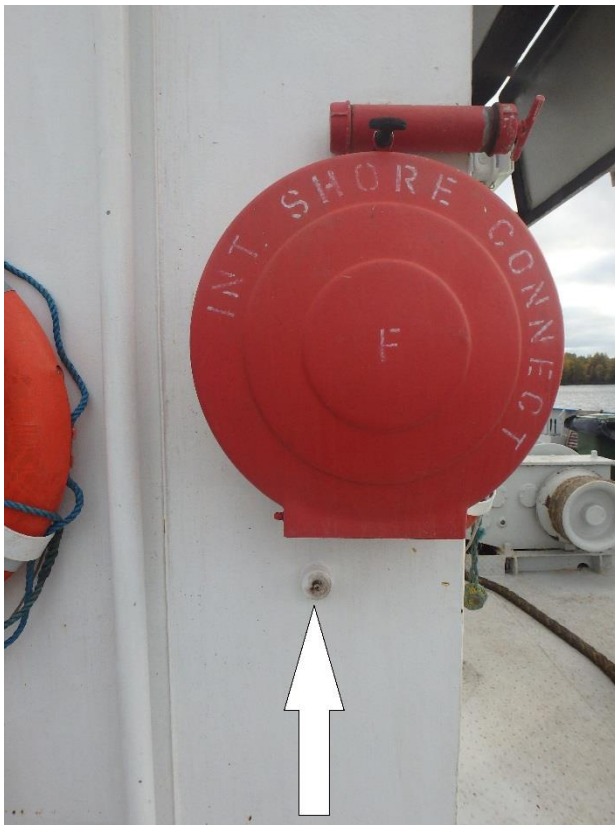
Hinges and levers



Cargo hold fan crank, stb and bb side



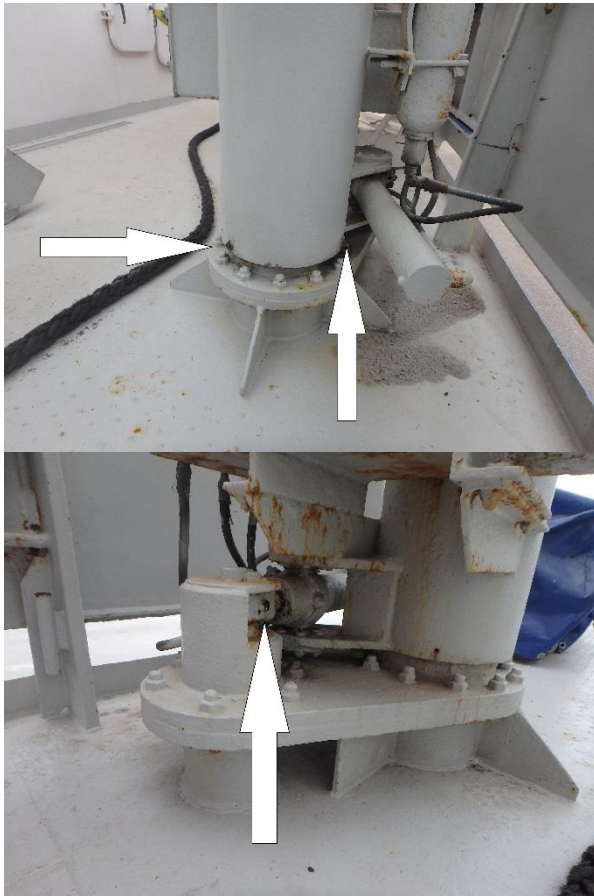
Engine room firedamper axle



Engine room ventilation flaps



MOB-boat davit



Provision crane



Liferaft light stb and bb side, greasing the rod mounting



Searchlight



2.1.2 Routine checks

Check following equipment every time you use them:

- Pilot ladder
- Gangway and the crane
- Mooring ropes and heaving lines
- Lifting equipment
- Lashing equipment

Monthly check following equipment:

- All cargo lashing equipment
- Air valves to the tanks
- Safety ladder
- MOB boat crane.

2.1.3 Monthly checks for hatches

In the ISM manual you can find a detailed list of checks to be done monthly to the hatches.

2.2 OPENING AND CLOSING HATCHES

Hatch hydraulics is started and stopped from fore deck under the paint storage hatch (top of the ladders). Normally two pumps are used, remember to ensure that two generators are working. Otherwise you might cause blackout. Before opening and closing hatches all cargo residues must be cleaned from the rails and hatch coamings. While operating the hatches always check that there is nothing on the way and the hatches do not unnecessarily bang or scrape anything. When operating hatches visually check hatch seals and hydraulic lines for leaks. If a malfunction is encountered while using the hatches remember to notify the master or chief officer as soon as possible.

2.3 CLOSED SPACES

Before entering closed spaces a working permit must be issued as stated in ISM manual. When entering closed spaces it is compulsory to ventilate the space before entering it and to keep the oxygen meter and safety harness on. Especially tanks not in active use can be dangerous, when the rusting process has removed all the oxygen from the space. If fore store has been closed for several days, all the fumes from the paints and thinners can cause danger if entered before thoroughly ventilated.

2.4 HOT WORK

Before starting hot work a working permit must be issued according the ISM manual. Before starting hot work all areas affected must be emptied from easily flammable items and chemicals. Remember that when welding the heat can travel in the construction for longer distances. Welding sparks can also keep sufficient heat needed for combustion for longer periods than other methods of hot work. When starting hot work two 6 kg powder extinguishers must be in the near vicinity.

2.5 MAST WORK

Before starting mast work a working permit must be issued according the ISM manual. Every time when climbing to a mast a safety harness must be worn. When up in the mast the safety harness must be secured to a solid place. If possible raise necessary tools with a bucket after you have climbed to the mast. Before climbing to the masts the radar must be switched off and a warning must be placed on the radar console.

2.6 DANGEROUS CARGO

All the organic cargoes for example timber, grain and pellets cause diminishing of oxygen level in the cargo hold. Entering the cargo hold is therefore strictly forbidden during the voyage and before discharging organic cargo.

When carrying chemically active cargoes for example ammonia and quicklime appropriate eye and mouth protection is to be used on the deck when loading and discharging. Quicklime can cause severe burns to the eyes and on skin if it gets in contact with water. When carrying quicklime use pressured air for personal cleaning.

2.7 ANCHORING

When lifting or lowering the anchor everyone on the fore deck must use eye and hearing protection. Flying rust and noise from the windlass may cause danger.

2.8 PILOT OPERATIONS

When engaged in pilot operations following safety rules must be followed:

- Person taking and leaving the pilot must have a life buoy and a heaving line with him.
- When the pilot has come aboard or has left the vessel it must be notified to the bridge immediately by handheld radio.
- When rigging the pilot ladder it is very important not to leave the ladder to the vessels side. When the pilot-vessel contacts ships side it is very likely that the ladder will break between the vessel and the pilot vessel.
- Lower the ladder when the pilot-vessel is already along the ships side.
- Help the pilot with his gear
- In harsh weather person leaving or taking the pilot must use inflatable life vest and a light reflecting outfit.

2.9 HANDLING MOORING ROPES AND WIRES

When handling mooring ropes it is very important to remember that all ropes can break and cause damage around them. Wires are exceptionally hazardous, because they can unravel when cut loose and cause heavy damage and even death in wide area. Therefore every time keep away from direct hitting line of ropes and wires. When using wires it is advisable to leave the whole area especially when a major immediate forces are focused to the wire. For example when towing.

3 EMERGENCY INFORMATION

3.1 EMERGENCY STOPS

Fuel lines emergency shut off, is in the inergen-closet in the accommodation corridor port side.

3.2 EMERGENCY FIRE PUMP

Emergency fire pump is located in the engine room, next to emergency generator.

3.3 EMERGENCY EXITS

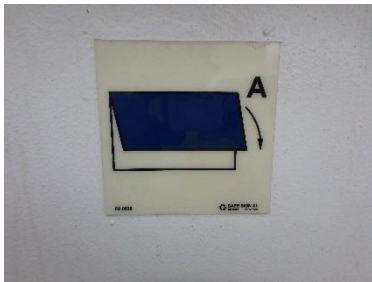
Accommodation emergency exit are the ladders in the provision storage.

Engine room emergency exits are the ladders to the main deck and the elevator shaft to the bridge.

The cargo hold has exit in both ends of the hold.

3.4 FIRE FLAPS TO ACCOMMODATION, ENGINE ROOM AND CARGO HOLD

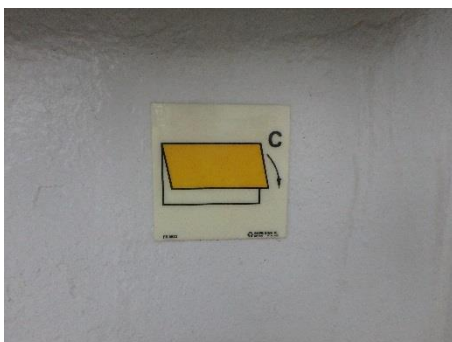
Accommodation fire flaps are located around the aft deck. They are marked with following IMO-sign.



Engine room fire flaps are located also around the aft deck and on the chimney deck. Engine room flaps are marked with following IMO-sign.



Cargo hold flaps are located on the aft deck stern side of the cargo hold. Also on the forecastle the ventilation flaps. Marked with following IMO-sign.



4 ORDERING TOOLS AND SUPPLIES

Everybody on board the ship is expected to make a note if something is needed. Actual ordering is made by the master, but also chief officer and chief engineer can be contacted if a tool or supplies are needed. A constant store of regular supplies is maintained

on board the ship and if the amount of any of these items is reduced below normal consumption in two weeks an order must be made. In following list there is a part of the regular consumption supplies:

- Paints and thinners
- Painting rolls and brushes
- Silver tape
- Needle gun needles
- Light bulbs and lighting spare parts

5 RISK ASSESSMENT

Official risk assessment can be found as an appendix of this handbook and from the bridge.