



*Buku Ajar*

# MARITIME ENGLISH

## FOR RATINGS FORMING

*Based on IMO Model Course 3.17*

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Wibisana Pranata, S.S.T.Pel., M.Pd.

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Ditulis oleh:

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# PRAKATA

**P**uji syukur kepada Tuhan Yang Maha Esa, Allah SWT atas berkah dan rahmatNya, sehingga penulis dapat menyelesaikan pembuatan Buku Ajar Mata Kuliah Bahasa Inggris Maritim dengan judul *Specialized Maritime English (SME) for ratings forming*. Pembuatan buku ajar ini dilakukan untuk membantu taruna/i dalam mengikuti perkuliahan dan memahami materi terkait *Maritime English for ratings forming part of a navigational watch*.

buku ajar ini terdiri dari dua bab yang didalam masing-masing bab berisikan kompetensi, hasil yang diharapkan, kinerja yang dibutuhkan, indikator, materi konten, rangkuman, latihan, penilaian formatif, dan glossarium. Penyajian materi, latihan, daftar rujukan dan glosarium sesuai dengan masing-masing topik yang dibahas dalam setiap bab/unit.

Besar harapan penulis agar buku ajar ini dapat menjadi salah satu rujukan bagi dosen dan taruna/i dalam mengikuti proses belajar mengajar dikelas. Pada kesempatan ini penulis juga menghaturkan

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Padang Pariaman, Februari 2024

Penulis

# DAFTAR ISI

<b>PRAKATA</b> .....	<b>i</b>
<b>DAFTAR ISI</b> .....	<b>iii</b>
<b>DAFTAR TABEL</b> .....	<b>v</b>
<b>DAFTAR GAMBAR</b> .....	<b>vi</b>
<b>PETUNJUK PENGGUNAAN BUKU</b> .....	<b>vii</b>
A. Competence.....	1
B. Training Outcomes.....	1
C. Required Performance .....	1
D. Indicators.....	2
E. Content Materials.....	2
F. Summary .....	9
G. Activities .....	10
A. Competence.....	24
B. Training Outcomes.....	24
C. Required Performance .....	24
D. Indicators.....	25

E. Content Materials .....	27
F. Summary.....	89
G. Activities.....	91
<b>REFERENCES .....</b>	<b>117</b>
<b>GLOSSARY .....</b>	<b>120</b>
<b>INDEKS .....</b>	<b>137</b>
<b>BIOGRAFI PENULIS.....</b>	<b>140</b>



# DAFTAR TABEL

Tabel 1. 1	The Standard Wheel Orders .....	3
Tabel 1. 2	Orders by a Wheel Angel .....	7
Tabel 1. 3	Order, Reply and Acknowledge .....	9
Tabel 2. 1	The Standard Engine Orders .....	27
Tabel 2. 2	Orders for Bow Thrusters.....	28
Tabel 2. 3	Engine Order = Speed + Direction + Engine .....	29
Tabel 2. 4	Safety Signs on Board (Safe Condition) .....	3
Tabel 2. 5	Safety Signs on Board (Fire Control).....	9
Tabel 2. 6	Safety Signs on Board (Mandatory IMO).....	24
Tabel 2. 7	Riggings on Board (Faculty of Maritime Studies, 2013).....	63

# DAFTAR GAMBAR

Picture 1. 1	Orders by a Wheel Angel.....	6
Picture 1. 2	Orders by a Compass Course.....	8
Picture 2. 1	Relative Bearings.....	33
Picture 2. 2	Ship Gangway.....	48
Picture 2. 3	Safety Signs.....	30
Picture 2. 4	Direction Signs.....	53
Picture 2. 5	Fire Control Signs.....	31
Picture 2. 6	Hazard Signs.....	53
Picture 2. 7	Fire Equipment Signs.....	31
Picture 2. 8	Mandatory Signs.....	54
Picture 2. 9	Prohibitory Signs.....	31
Picture 2. 10	Combination Signs.....	54
Picture 2. 11	ISPS Code Signs.....	32
Picture 2. 12	Desk and Engine Room Signs.....	1
Picture 2. 13	Galley & Accommodation Signs.....	32
Picture 2. 14	Temporary Hazard & Identification Tags.....	1
Picture 2. 15	Market Dots & Taps.....	32
Picture 2. 16	Safety Awareness & Training Posters.....	2
Picture 2. 17	Safety First Posters.....	33
Picture 2. 18	DO's & Don't's Safety Awareness Posters.....	2
Picture 2. 19	Hazard Diamonds.....	33
Picture 2. 20	Nylon Seals & Fire Plan Holder.....	3

# PETUNJUK PENGUNAAN BUKU

Sebelum menggunakan buku ajar ini, pembaca perlu memahami petunjuk ini untuk memudahkan dalam memahami isi dari buku ini. Selamat belajar!

1. **Competence**, adalah bentuk penguasaan taruna/i terhadap pengetahuan, perilaku, keterampilan dan sikap setelah mendapatkan materi pelajaran dalam buku ajar ini.
2. **Training Outcomes**, adalah deskripsi pencapaian kompetensi; pengetahuan, keterampilan, dan sikap yang diperoleh taruna/i dalam satu unit kegiatan pembelajaran.
3. **Required Performance**, adalah deskripsi kegiatan, penampilan dan kinerja belajar taruna/i yang diharapkan dalam satu unit pembelajaran.

4. **Indicators**, merupakan penanda pencapaian kompetensi secara spesifik yang dapat dijadikan ukuran untuk mengetahui ketercapaian tujuan pembelajaran.
5. **Content Materials**, adalah konten dan konsep utama yang perlu dipelajari taruna/i dan dipahami di akhir sebuah pembelajaran.
6. **Summary**, adalah inti materi dari setiap unit pada buku ajar yang berisi tentang poin-poin penting dari materi yang dipelajari.
7. **Activities**, adalah latihan-latihan untuk mengevaluasi pengetahuan taruna/i tentang materi setiap unit.
8. **Formative Assessment Unit 1**, adalah penilaian tentang materi pada setiap unit yang bertujuan untuk memantau dan mengevaluasi pencapaian tujuan pembelajaran.
9. **References**, adalah rujukan dalam penulisan materi pelajaran yang digunakan sebagai landasan dari buku ajar yang dibuat.
10. **Glossary**, adalah kumpulan daftar kata atau istilah penting yang tersusun secara alphabet dengan tujuan untuk menjelaskan arti dari kata tersebut.

# UNIT ONE

## Helm Orders

### A. Competence

“Steer the ship and also comply with helm orders in the English language; Use English to communicate and perform the rating’s routine and emergency duties” (IMO, 2014).

### B. Training Outcomes

Demonstrates a knowledge and understanding of:

1. Complying with helm orders in the English language and communicating with officers and other crew members when steering the ship.

### C. Required Performance

- 1.1 Communicate with officers and other crew members when steering the ship.

## **D. Indicators**

At the end of the learning, students are able to:

- 1.1.1 Understand the standard wheel orders
- 1.1.2 Role-play the standar wheel orders
- 1.1.3 Practise the standard procedure of repetition, execution, report and acknowledgement
- 1.1.4 Identify the differences between orders to be steered by a wheel angel and orders to be steered by a compass course

## **E. Content Material**

### **General Rules of Wheel Orders**

1. Only the person who has the Con can give conning, helm or wheel orders
2. The Conning Orders (CO) can take the Con anytime by giving a conning, helm or wheel orders
3. If in doubt, ask the CO if they have the Con
4. Compass directions are always given by using three numbers (e.g. Course of 067 is 0-6-7)
5. Helm orders are always spoken in whole numbers (e.g Port 35)

6. Speed is given using two numbers, (e.g Speed 12 id Speed 1-2)

**Wheel Orders Sequence**

The sequence of wheel orders are: *order, repeat, report and acknowledge.*

For example:

OOW : (*order*) “Starboard, Steer two-eight-zero”

Helmsman : (*repeat*) “Starboard, Steer two-eight-zero”

Helmsman : (*report*) “Course two-eight-zero, Sir/Ma’am”

OOW : (*acknowledgement*) “Very good”

**Tabel 1. 1 The Standard Wheel Orders**

<b>Steering Orders</b>	<b>Meaning</b>
Stand by!	Siap-siap!
Slow ahead!	Maju pelan!
Dead slow ahead!	Maju pelan sekali!
Steady!	Tahan haluan!
Steady as she goes!	Terus begitu!
Hard to starboard!	Cikar kanan!
Hard to port!	Cikar kiri!
Check her!	Balas!
Midship!	Tengah-tengah!
Ahead!	Maju!
Astern!	Mundur!
Half astern!	Mundur setengah
Full astern!	Mundur penuh!
Full Ahead	Maju penuh!
Port fifteen!	Kiri 15 <sup>o</sup> !

Starboard thirty!	Kanan 30 <sup>o</sup> !
Ease to five!	Kurangi (Kanan/kiri) 5 <sup>o</sup> !
Steer one three o!	Kemudi 130 <sup>o</sup> !
Meet her!	Cek arah!
Finished with wheel!	Selesai dengan kemudi!

**Role-Play the Standar Wheel Orders**

- OOW : Starboard twenty!
- Helmsman : Starboard twenty... Starboard twenty now, Sir.
- OOW : Ease to five!
- Helmsman : Ease to five ... Starboard five now, Sir.
- OOW : Steady as she goes!
- Helmsman : *(looks at the gyro compass and responds),*  
Steady as she goes 0-8-9,  
Vessel steady now on 0-8-9.
- OOW : Hard to port!
- Helmsman : Aye, Hard to port, sir.
- OOW : Whay is your heading?
- Helmsman : My heading is one-three-five degrees.
- OOW : Midship the wheel!
- Helmsman : Wheel's amidships, Sir



### **The Standard Procedures of Wheel Orders**

A common form of wheel orders and procedures are as follows: (Conning, 2019)

- a. The wheel orders are given by the Officer of the Watch (OOW) to the helmsman.
- b. The helmsman repeats the order back to the OOW and then carries it out. This is done to ensure that the helmsman has heard and understood the order.
- c. Once he has carried them out he reports back to the OOW that he has done so.
- d. The OOW acknowledges the report.
- e. The types of report are: (Ridwan & Ulfa, 2018)

#### **1) Repetition**

For example:

OOW : Hard to port!

Helmsman : Aye, Hard to port, sir.

#### **2) Execution**

For example:

OOW : Steady as she goes!

Helmsman : *(looks at the gyro compass and responds),*

Steady as she goes 0-8-9, Vessel steady now on 0-8-9.

### **3) Report**

For example:

OOW : Whay is your heading?

Helmsman : My heading is thirty five degrees.

### **4) Acknowledgement**

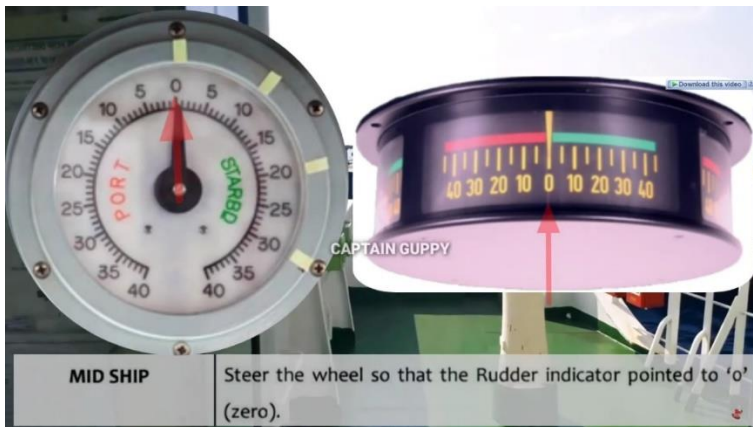
For example:

OOW : Starboard twenty!

Helmsman : Starboard twenty... Starboard twenty now,  
Sir.

OOW : Very good!

### **Orders by a Wheel Angel**



**Picture 1. 1 Orders by a Wheel Angel**

**Tabel 1. 2 Orders by a Wheel Angel**

<b>No.</b>	<b>Order</b>	<b>Meaning</b>
1	Midships	Rudder to be held in the fore and aft position
2	Port / starboard five	5° of port / starboard rudder to be held
3	Port / starboard ten	10° of port / starboard rudder to be held
4	Port / starboard fifteen	15° of port / starboard rudder to be held
5	Port / starboard twenty	20° of port / starboard rudder to be held
6	Port / starboard twenty-five	25° of port / starboard rudder to be held
7	Hard -a-port / starboard	Rudder to be held fully over to port / starboard
8	Nothing to port/starboard	Avoid allowing the vessel's head to go to port/starboard
9	Meet her	Check the swing of the vessel's head in a turn
10	Steady	Reduce swing as rapidly as possible
11	Ease to five / ten / fifteen / twenty	Reduce amount of rudder to 5°/10°/15°/20° and hold
12	Steady as she goes	Steer a steady course on the compass heading indicated at the time of the order. The helmsman is to repeat the order and call out the compass heading on receiving the order. When the vessel is steady on that heading, the

		helmsman is to call out: "Steady on ..."
13	Keep the buoy/ mark/ beacon/ ... on port side / starboard side	
14	Report if she does not answer the wheel	
15	Finished with wheel, no more steering	



**Picture 1. 2 Orders by a Compass Course**

When the officer of the watch requires a course to be steered by compass, the direction in which s/he wants the wheel turned should be stated followed by each numeral being said separately, including zero, for example:

On receipt of an order to steer, for example, 182°, the helmsman should repeat it and bring the vessel round steadily to the course ordered. When the vessel is steady on the course ordered, the helmsman is to call out:

"Steady on one eight two".

The person giving the order should acknowledge the helmsman's reply.

If it is desired to steer on a selected mark the helmsman should be ordered to:

"Steer on ... buoy / ... mark / ... beacon".

The person giving the order should acknowledge the helmsman's reply.

**Tabel 1. 3 Order, Reply and Acknowledge**

<b>No.</b>	<b>Order</b>	<b>Course to be steered</b>	<b>Reply</b>	<b>Acknowledge</b>
1	Port, steer one-eight-two	182 <sup>o</sup>	"Steady on one-eight-two"	"Aye"
2	Starboard, steer zero-seven-four	074 <sup>o</sup>	"Steady on zero-seven-four"	"Good"
3	Port, steer three-zero-five	182 <sup>o</sup>	"Steady on three-zero-five"	"Very good"

## **F. Summary**

1. The "Conn" is the status of being in control of a ship's movements while at sea. "Conn" is also a verb describing the act of controlling a ship.
2. The "Conning Officer" is such an individual that has the title "Officer of the Deck (OOD)" who are selected by the Captain to perform the role of conning.

3. The conning officer may be the captain, the deck officer, the pilot, or another warrant officer.
4. All wheel orders given should be repeated by the helmsman and the officer of the watch should ensure that they are carried out correctly and immediately.
5. All wheel orders should be held until countermanded. The helmsman should report immediately if the vessel does not answer the wheel.

## G. Activities



**Complete the blank column with the correct answers!**

No.	Order	Course to be steered	Reply	Acknowledge
1		(port) 030°		
2		(port) 055°		
3		(starboard) 068°		
4		(port) 090°		
5		(starboard) 099°		
6		(starboard) 105°		
7		(port) 207°		

8		(starboard) 234°		
9		(port) 300°		
10		(starboard) 340°		

**Activity 2**

***Write the types of sequence in each statement from the dialog below!***

- OOW : (.....) “Port fifteen”
- Helmsman : (.....) “Port fifteen”
- Helmsman : (.....) “Port fifteen wheel on, Sir”
- OOW : (.....) “Very good”
- OOW : (.....) “Ease to five”
- Helmsman : (.....) “Ease to five”
- Helmsman : (.....) “Steady on Port five wheel, Sir”
- OOW : (.....) “Good job”



Activity 3

**Choose one of the dialog below and present it with your partner!**

**1. Conning Orders**

*Scenario* : Conning Orders are used for course alterations of less than 10°

*Conning Order* : Direction + Course to steer

Course Alteration of 272 to 280

OOW : (order) "Starboard Steer two eight zero"

Helmsman : (repeat) "Starboard Steer two eight zero"

Helmsman : (report) "Course two eight zero, Sir/Ma'am"

OOW : (acknowledgement) "Very Good"

*Note: The direction is not required but it is common practice to use it when making a course alteration between 5-10°.*



## **2. Helm Orders; 1**

*Scenario* : Helm orders are used to change course by more than 10°.

*Standar helm = 15°*

*Double standar helm = 30°*

*Helm Order* : Direction + Rudder angle

OOW : (order) "Port fifteen"

Helmsman : (repeat) "Port fifteen"

*(Applies 15° of port helm, once the rudder angle indicator displays the ordered helm then reports)*

Helmsman : (report) "Fifteen of port wheel on, Sir/Ma'am"

OOW : (acknowledgement) "Very Good"

## **3. Helm Orders; 2**

*Scenario* : To decrease the amount of Helm during a course alteration use the words "Ease to"

OOW : (order) "Port fifteen"

Helmsman : (repeat) "Port fifteen"

*(Applies 15° of port helm, once the rudder angle indicator displays the ordered helm then reports)*

Helmsman : *(report)* "Fifteen of port wheel on, Sir/Ma'am"

OOW : *(acknowledgement)* "Very Good"

OOW : *(order)* "Ease to five"

Helmsman : *(repeat)* "Ease to five"

*(Slowly turns the wheel to 5° of port helm, once the rudder angle indicator displays the ordered helm then reports)*

Helmsman : *(report)* "Five of port wheel on, Sir/Ma'am"

OOW : *(acknowledgement)* "Good"

#### **4. Midships**

*Scenario : Midships is the order to bring the rudder to 0°  
Midships is used when an incorrect order or action is taken and is always followed by either a Conning order, Helm order or the order Steady.*

OOW : *(order)* "Midships"

Helmsman : *(repeat)* "Midships"

Helmsman : *(report)* "Wheel's amidships, Sir/Ma'am"

OOW : *(acknowledgement)* "Very Good"

## **5. Steadying Helm on New Course**

- OOW : *(order)* “Midships”
- Helmsman : *(repeat)* “Midships”
- Helmsman : *(report)* “Wheel’s amidships, Sir/Ma’am”
- OOW : *(acknowledgement)* “Very Good, Steady”
- Helmsman : *(report)* “Steady, One Three Seven”
- OOW : *(acknowledgement)* “Very Good, Steer One Three Seven”
- Helmsman : *(repeat)* “Steer One Three Seven”  
*(Executes the order and reports once the ship is on course)*
- Helmsman : *(report)* “Course One Three Seven, Sir/Ma’am”
- OOW : *(acknowledgement)* “Very Good”

## **6. Counter Helm**

*Scenario* : *Counter Helm is a helm order given in the opposite direction of a previous helm order to stop the ship’s turn faster, this order is given several degrees before the ship head reaches the desired course.*

- OOW : *(order)* “Midships”
- Helmsman : *(repeat)* “Midships”
- Helmsman : *(report)* “Wheel’s amidships, Sir/Ma’am”

- OOW : (*order*) "Port fifteen"
- Helmsman : (*repeat*) "Port fifteen"
- Helmsman : (*report*) "Fifteen of port wheel on, Sir/Ma'am"
- OOW : (*acknowledgement*) "Very Good, Midships"
- Helmsman : (*repeat*) "Midships"
- Helmsman : (*report*) "Wheel's amidships, Sir/Ma'am"
- OOW : (*acknowledgement*) "Very Good, Steer One Three Seven"
- Helmsman : (*repeat*) "Steer One Three Seven"  
(*Executes the order and reports once the ship is on course*)
- Helmsman : (*report*) "Course One Three Seven, Sir/Ma'am"
- OOW : (*acknowledgement*) "Very Good"

### **FORMATIVE ASSESSMENT UNIT 1**

**A. Choose one correct answer from the five options; a, b, c, d or e below on your answer sheet.**

1. "Bow thrust half to port" means ....
  - a. Move the ship's head to port on 50% power
  - b. Move the ship to portside
  - c. Move the bow of the ship to port

- d. Move the bow from starboard to port
  - e. Move the ship slowly
2. "Midships" means....
- a. Hold rudder in the middle
  - b. Hold rudder in the position
  - c. Standby rudder in the middle
  - d. Standby rudder in the aft
  - e. Hold rudder in the fore and aft position
3. "Easy to twenty" means .....
- a. Reduce the amount rudder to 12°
  - b. Reduce the amount rudder to 20°
  - c. Reduce the amount rudder
  - d. Easy to portside
  - e. 20° to starboard
4. "Steady as she goes" means....
- a. Reduce swing as rapidly as possible
  - b. Steer the ship's course to port
  - c. Stay on the heading given earlier
  - d. Standby on the portside
  - e. Standby on the starboard

**The text for No. 5 – 8**

OOW : “Portside steer one-two-five” (.....)

**(1)**

Helmsman : “Portside steer one-two-five” (.....)

**(2)**

Helmsman : “Course one-two-five, Sir” (.....) **(3)**

OOW : “Excellent” (.....) **(4)**

5. What is the type of order number 1?

- a. Acknowledge
- b. Report
- c. Repeat
- d. Order
- e. Warning

6. What is the type of order number 2?

- a. Acknowledge
- b. Report
- c. Warning
- d. Repeat
- e. Order

7. What is the type of order number 3?

- a. Acknowledge
- b. Warning
- c. Report
- d. Repeat
- e. Order

8. What is the type of order number 4?

- a. Report
- b. Warning
- c. Acknowledge
- d. Repeat
- e. Order

OoW            Steer starboard five.  
Helmsman (.....) starboard five sir.

9. The correct word in the bracket is .....

- a. To steer
- b. Steering
- c. Steered
- d. Has been steered
- e. Will be steering

OoW      Hard-(.....)-port.

10. The correct word in the bracket is .....
- a. to
  - b. a
  - c. an
  - d. the
  - e. on

OoW      (.....) to one-five and steady as she goes.

11. The correct word in the bracket is .....
- a. Easy
  - b. Reduce
  - c. Lower
  - d. Go
  - e. Move

Helmsman      Steady (.....) one-five sir.

12. The correct word in the bracket is .....
- a. to
  - b. by
  - c. on
  - d. in
  - e. at



OoW            Keep the buoy on the port side.  
Helmsman (.....) buoy on port side sir.

13. The correct word in the bracket is .....

- a. Keep
- b. Kept
- c. Keeping
- d. Will keep
- e. Yes, sir

14. "My present speed is 14 knots".

How to read number in the sentence?

- a. "My present speed is one four knots"
- b. "My present speed is fourteen knots"
- c. "My present speed is 14 knots"
- d. "My present speed is forty knots"
- e. "My present speed is one fourteen knots"

15. Wheel order: "Starboard 25"

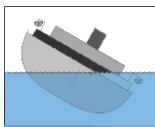
How to read number in the wheel order above?

- a. "Starboard 25"
- b. "Starboard twenty five"
- c. "Starboard two five"
- d. "Starboard two and five"
- e. "Starboard two point five"

**B. Match the following steering orders/commands with their meaning!**

- |                        |                       |
|------------------------|-----------------------|
| 1. Stand by!           | a. Balas!             |
| 2. Slow ahead!         | b. Tahan haluan!      |
| 3. Dead slow ahead!    | c. Cikar kiri!        |
| 4. Steady!             | d. Siap-siap!         |
| 5. Steady as she goes! | e. Maju pelan!        |
| 6. Hard a-starboard!   | f. Tengah-tengah      |
| 7. Hard a-port!        | g. Maju pelan sekali! |
| 8. Check her!          | h. Mundur penuh!      |
| 9. Amidship!           | i. Cikar kanan        |
| 10. Ahead!             | j. Terus begitu!      |
| 11. Astern!            | k. Mundur!            |
| 12. Half astern!       | l. Maju penuh!        |
| 13. Full astern!       | m. Mundur setengah!   |
| 14. Full ahead!        | n. Maju               |

**C. Read this report and answer the questions!**



On July 18, 2006, the cruise ship Crown Princess left Port Canaveral, Florida. One hour after leaving harbour the vessel's automatic steering system began a turn to port. The Second Officer disengaged the automatic mode. He took manual control of the steering. He turned the wheel first to port and then to starboard. He did this several times. This caused the vessel to list to port and starboard at angles of 24°. The movement of the ship threw passengers and crew about and many were hit and injured by flying objects. The vessel's structure was not damaged.

1. What was the approximate position of the Crown Princess?
2. Who was in command of the ship?
3. Why did the ship list?
4. What caused injuries to passengers and crew?
5. How much damage was done to the ship?

## **UNIT TWO**

# **Rating's Routine & Emergency Duties**

### **A. Competence**

“Steer the ship and also comply with helm orders in the English language; Use English to communicate and perform the rating's routine and emergency duties”.

### **B. Training Outcomes**

Demonstrates a knowledge and understanding of:

2. Using English to communicate and perform the rating's routine and emergency duties.

### **C. Required Performance**

- 2.1 Understand the standard engine orders
- 2.2 Report to the officers of the watch relevant information

- 2.3 Communicate with the officer of the watch and other crew on matters related to watchkeeping, relieving and handling over the watch
- 2.4 Communicate (using the SMCP when relevant) and acknowledge orders during emergency situations
- 2.5 Get to know about marine environmental protection
- 2.6 Communicate with multilingual crew members when performing duties

## **D. Indicators**

At the end of the learning, students are able to:

- 2.1 Understand the standard engine orders
  - 2.1.1 Be familiar with the standard engine orders
  - 2.1.2 Role play by using standard engine orders
- 2.2 Report to the officers of the watch relevant information
  - 2.2.1 Report the bearing of the sound signals, lights, or other objects at sea by degrees or points
  - 2.2.2 Report to the officer on watch the information about a ship in vicinity, such as bearing, range, aspect, etc

- 2.3 Communicate with the officer of the watch and other crew on matters related to watchkeeping, relieving and handling over the watch
  - 2.3.1 Role play with the phrases for routine safety watch and hand over
  - 2.3.2 Read out the phrases used for gangway watch
  - 2.3.3 Read out the phrases for ship security in a given scenario
  - 2.3.4 Role play with the phrases used for cargo watch
- 2.4 Communicate (using the SMCP when relevant) and acknowledge orders during emergency situations
  - 2.4.1 recognise the safety symbols on board
  - 2.4.2 name the major riggings, tools and materials on board
  - 2.4.3 use the phrases for emergency situations
  - 2.4.4 role play the words and phrases for emergency situations such as fire-fighting, life-saving, anti-piracy, etc.
- 2.5 Get to know the basic marine environmental protection
  - 2.5.1 discuss the reason why the sea should be protected

- 2.6 Communicate with a multi-lingual crew when performing duties
  - 2.6.1 role play information exchange
  - 2.6.2 identify and discuss the issues and solutions regarding multicultural and multi-lingual crews when performing duties
  - 2.6.3 be aware of the common practices of seamen at sea

## **E. Content Materials**

### **Standard Engine Orders**

Any engine order given should be repeated by the person operating the bridge telegraph(s) and the officer of the watch should ensure the order is carried out correctly and immediately (C.M, 2020).

**Tabel 2. 1 The Standard Engine Orders**

<b>Orders</b>	<b>Meaning</b>
Full ahead	Maximum manoeuvring engine revolutions for ahead propulsion.
Half ahead	Revolutions as indicated in ship's orders.
Slow ahead	Revolutions as indicated in ship's orders.
Dead slow ahead	Revolutions as indicated in ship's orders.
Stop engine/s	No engine/s revolutions
Dead slow astern	Revolutions as indicated in ship's orders.
Slow astern	Revolutions as indicated in ship's orders.

Half astern	Revolutions as indicated in ship's orders.
Full astern	Revolutions as indicated in ship's orders.
Emergency full ahead / astern	Revolutions as indicated in ship's orders.
Stand by engine	Engine-room personnel fully ready to manoeuvre and bridge manned with personnel to relay engine orders.
Finished with engine/s	Movement of engineer/s no longer required

In vessels fitted with twin propellers, the word "both" should be added to all orders affecting both shafts.

e.g.

- "Full ahead both"
- "Slow astern both"

Except that the words "Stop all engines" should be used, when appropriate. When required to manoeuvre twin propellers independently, this should be indicated, i.e. :

- "Full ahead starboard"
- "Half astern port"

Where bow thrusters are used, the following orders are used:

**Tabel 2. 2 Orders for Bow Thrusters**

<b>Orders</b>	<b>Meaning</b>
Bow thrust full / half to port	Ship's head to move to port with power as specified
Bow thrust full / half to starboard	Ship's head to move to starboard with power as specified
Stern thrust full / half to port	Ship's stern to move to port with power as specified



Stern thrust full / half to starboard	Ship's stern to move to starboard with power as specified
Bow/stern thrust stop	No bow/stern thrust revolutions

**Role play by using Standard Engine Orders**

**Tabel 2. 3 Engine Order = Speed + Direction + Engine**

<b>Speed</b>	<b>Direction</b>	<b>Engine</b>
Slow Half Full speed Stop	Ahead or Astern	Both engines = Port & Starboard engine Port = port engine only Starboard = starboard engine only

**Scenario 1**

OOW = Officer of the Watch

QM = Quartermaster (Ceptor, 2017)

OOW : "Half ahead both engines"

QM : "Half ahead both engines"

QM : "Both engines half ahead set, Sir/Ma'am"

OOW : "Very good"

**Scenario 2: Opposed engine orders with helm**

*Helm order + Engine 1 Order + Engine 2 Order*

OOW : "Starboard fifteen, Half ahead port, slow astern starboard"

QM : “Starboard fifteen, Half ahead port, slow astern starboard”

QM : “Fifteen of starboard wheel on, port engine half ahead,  
starboard engine slow  
astern, Sir/Ma’am”

OOW : “Very good”

**Scenario 3:** *Setting Speed*

OOW : “Set speed One Two”

QM : “Set speed One Two”

QM : “Speed One Two Ahead set, Sir/Ma’am”

**Scenario 4:** *Miscellaneous Order : Check Telegraphs*

*Check Telegraphs is used to report the state of the engines*

OOW : “Check Telegraphs”

QM : “Port Half ahead, starboard stopped, Sir/Ma’am”

**Scenario 5** *Miscellaneous Order : Passing Through a Cardinal Point*

*When the ship passes through a cardinal point, the helmsman makes a report.*

*This can be done using the cardinal point or degrees.*

Helmsman : “Ship’s Head Passing through South, 15 of port wheel on Sir/Ma’am”

Helmsman : “Ship’s Head Passing through one eight zero, 15 of port wheel on Sir/Ma’am”

**Scenario 6** *Miscellaneous Order : Passing the Con*

*To give or receive the Con, the following sequence must be followed*

*The OOW passing the con gives the following information*

Passing : Course Steered, Speed rung on, Current Engine Configuration, “You Have the con”

Receiving : Repeat Course Steered, Speed rung, Engine Configuration, “Rank Last Name, I Have the con,”

**Bearings**

The bearing is the direction of an object from a ship. Bearing is measured in degrees clockwise around a circle, from 000° to 360°.

There are three types of bearings:

- Relative bearings : have the ship’s bow as a reference point;
- True bearings : use true, or geographic north, as a reference point;
- Magnetic bearings : use the magnetic North Pole as their reference point

Bearings are always reported in three digits, and spoken digit by digit, except that objects dead ahead or astern (000°, 180°); on either beam (090°, 270°); or on either bow (045°, 315°), or quarter (135°, 225°) may be indicated as such. For example, a ship bearing 315° could be reported as being broad on the port bow, although the bearing itself can be used.

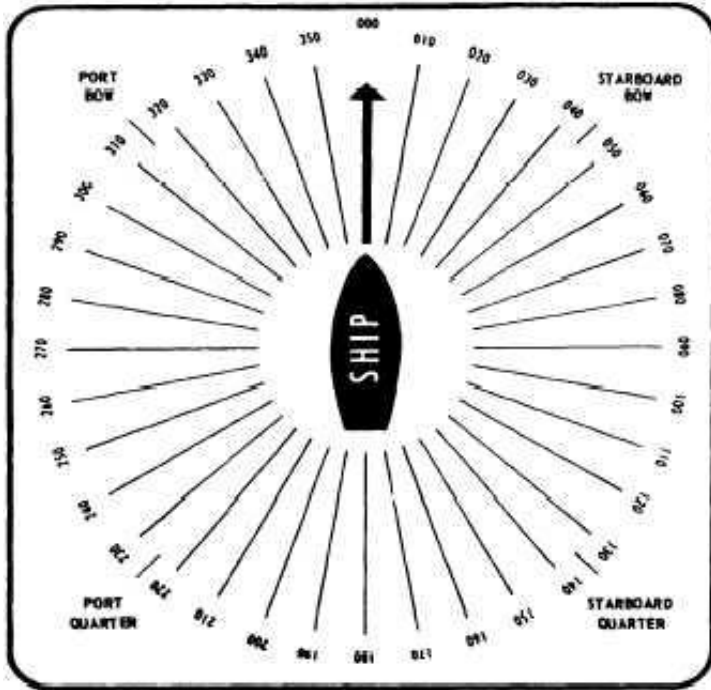
The bearing of the mark or vessel concerned, is the bearing in the 360 degree notation from north (true north unless otherwise stated), except in the case of relative bearings. Bearings may be either from the mark or from the vessel.

Examples: “Pilot boat is bearing 215 degrees from you”.

Note: vessels reporting their position should always quote their bearing from the mark.

Relative bearings can be expressed in degrees relative to the vessel's head. More frequently this is in relation to the port or starboard bow.

Example: “Buoy 030 degrees on your port bow”



**Picture 2. 1 Relative Bearings**

**Initial Report**

Give the initial report when you first sight a contact. Include in the initial report:

1. **WHAT YOU SEE:** Describe the contact quickly and briefly. Name the type or class of ship or aircraft if you recognize it; otherwise, simply report “ship”, “plane” and so forth.
2. **BEARING:** always report contacts in relative bearings. These are given as three digits, spoken digit by digit.

3. RANGE: ranges are reported in yards/miles and spoken digit by digit, except that multiples of hundreds and thousands are spoken as such.
4. TARGET ANGLE: report target angle on all ships. It will be given in three digits, spoken digit by digit.
5. POSITION ANGLE: report position angle on all aircraft. It will be given in one or two digits, spoken as a whole, not digit by digit.

Example:

Position angle: 85

Spoken: "Position angle eighty five"

6. MOVEMENT: report whether the contact is moving from right to left, left to right, opening, closing, paralleling, high speed, slow speed, dead in the water, and so forth.

Following are some examples of initial reports: (Navedtra, 2007)

- Bridge – Port Lookout – Surface contact bearing Two Eight Zero – Two Thousand Yards – Target Angle Zero Nine Zero – Moving From Left to Right Slowly.
- Bridge – Starboard Lookout – Destroyer Bearing One Zero Zero – Six Miles – Target Angle Zero One Zero – Closing Rapidly.

- Bridge - Starboard Lookout – F-14 Jet Fighter Bearing Zero Four Zero – Position Angle Thirty Three – Moving From Right to Left Very Rapidly.

### **Handing Over The Watch**

When handing over the watch the Watchkeeping Officer must first ensure that the Relieving Officer is fit for duty. If there is reason to believe that the latter is not capable of carrying out the watchkeeping duties effectively, the master shall be notified. It is vital that all relevant information is exchanged between the Watchkeeping Officer and the Relieving Officer (Communications, 2013).

**When changing over the watch, relieving officers should personally satisfy themselves regarding the following (B12, 2020):**

1. Standing orders and other special instructions of the master relating to navigation of the ship.
2. Position, course, speed and draught of the ship.
3. Prevailing and predicted tides, currents, weather and visibility and the effect of these factors upon course and speed.

4. Procedures for the use of main engines to manoeuvre when the main engines are on bridge control, and the status of the watchkeeping arrangements in the engine room.
5. The ship security status.
6. Sufficient time has been allowed for night vision to be established and that such vision is maintained.
7. Navigational situation.

If, at any time, the officer in charge of the navigational watch is to be relieved when a manoeuvre or other action to avoid any hazard is taking place, the relief of that officer shall be deferred until such action has been completed.

**Phrases for Stating Position** (IMO SMCP, 2000)

1. The present position is:
  - Latitude ....., longitude .....
  - Bearing ..... degrees, distance .... Kilometers / nautical miles.
  - Buoy .... (*charted name*)
  - Between .... And ....
  - Way point / reporting point ....
2. The next way point / reporting point is ....
3. ETA at .... is ..... UTC



4. We are passing / we passed buoy .... (*charted name*) on port side / starboard side
5. We are approaching buoy .... (*charted name*) on port side / starboard side
6. Buoy ... (*charted name*) is .... kilometers / nautical miles ahead
7. We are entering / entered area ....
8. We are leaving / we left area ....

### **Phrases for Stating Movements**

1. True course / gyro compass course / magnetic compass course is .... degrees.
2. Gyro compass error is .... degrees plus / minus.
  - Magnetic compass error is .... degrees east / west
3. Speed over ground / through water is .... knots
4. Set and drift is .... degrees, ..... knots.
5. We are making ..... degrees leeway.
6. The course board is written up.
7. The next chart is within .... Hours.

### **Phrases for Stating Draft**

1. Draft forward / aft is ..... metres.
2. Present maximum draft is ..... meters.

3. Underkeel clearance is ..... meters.

**Phrases for Stating Traffic Situation in the Area**

1. A vessel is:

- Overtaking ... (cardinal points) of us.
- On opposite course.
- Passing on port side / starboard side.

2. A vessel is crossing from port side.

The vessel:

- Will give way
- Has given way
- Has not given way yet.
- Is standing on.
- Need not give way

3. A vessel is crossing from starboard side.

3.1 We:

- Need not give way
- Will stand on
- Will alter course to give way
- Have altered course to give way

3.2 The vessel will pass .... Kilometres / nautical miles ahead / astern.

3.3 I will complete the manoeuvre

4. A vessel .... (cardinal points) of us is on the same course.
5. The bearing to the vessel in .... degrees is constant.
6. There is heavy traffic / .... In the area.
  - There are fishing boats / .... In the area
7. There are no dangerous targets on the radar.
  - Attention. There are dangerous targets on the radar.
8. Call the Master if any vessel passes with a CPA of less than ... miles.
  - Call the Master if ....

### **Phrases for Stating Navigational Aids and Equipment**

#### **Status**

1. Port side / starboard side radar is at .... miles range scale.
2. The radar is:
  - Relative head-up / north-up / course-up
  - True-motion north-up / course-up
3. GPS / LORAN is / is not in operation.
4. Echo sounder is at .... metres range scale.
  - The echo sounder recordings are unreliable
5. I changed to manual / automatic steering (at .... UTC)
6. Navigation lights are switched on / off

**Phrases for Radio Communications**

1. INMARSAT .... (*type of system*) is operational / is not operational.
2. VHF DSC Channel 70 / VHF Channel ... / DSC controller is switched on.
  - DSC frequency 2187.5 kHz is switched on
3. NAVTEX is switched on.
4. Following was received on .... at .... UTC
5. Shore based radar assistance / VTS / Pilot station is on VHF Channel
6. The pilot station / VTS station requires
  - Flag state
  - Call sign / identification
  - Draft
  - Gross tonnage
  - Length overall
  - Kind of cargo
  - ETA at ....
  - MAREP POSREP / ....

**Phrases for Stating Meteorological Conditions**

1. A weak / strong (tidal) current is setting ... degrees.
  - The direction of the (tidal) current will change in .... hours.
2. Fog / mist / dust / rain / snow / .... is in the area.
3. Automatic fog signal is switched on.
4. The wind increased / decreased (within last ... hours).
  - The wind is .... (*cardinal points*) force Beaufort .....
  - The wind changed from ..... (*cardinal points*) to ... (*cardinal points*).
5. The sea state is expected to change (within .... hours).
6. A smooth / moderate / rough / heavy sea / slight / moderate / high swell of ... metres from .... (*cardinal points*) is expected (within .... hours).
7. A tsunami / an abnormal wave is expected by .... UTC.
8. Visibility is .... kilometres / nautical miles.
9. Visibility is reduced by fog / mist / dust / rain / snow / .....
10. Visibility is expected:
  - To decrease / increase to .... Kilometres / nautical miles (within .... hours).
  - Variable between .... and .... Kilometres / nautical miles (within .... hours).
11. Next weather report is at .... UTC.

12. Atmospheric pressure is ... millibars / hPascal.
13. Barometric change is .... millibars / hPascal per hour / within the last .... hours.
  - Barometer is steady / dropping (rapidly) / rising (rapidly).
14. There was a gale warning / tropical storm warning for the area .... at .... UTC.

**Phrases for Standing Orders and Bridge Organization**

1. Standing orders for the period from .... to .... UTC .... are: ....
2. Standing orders for the area .... are: .....
3. Take notice of changes in the standing orders.
4. Do you understand the standing orders?
  - Yes, I understand the standing orders.
  - No, I do not understand, please explain.
5. Read / sign the standing orders.
6. The latest fire patrol was at ... UTC.
7. The latest security patrol was at ... UTC.
  - Everything is in order.
  - The following was stated: ....
  - The following measures were taken: ....
  - The following requires attention: ....
8. The lookout is standing by.

9. The helmsman is standing by.
10. Call the Master at ... UTC / in position ....

**Phrases for Special Events: Safety communications**

1. There was an engine alarm at ... UTC due to ....
2. Speed was reduced at .... UTC due to ....
3. Engine(s) was / were stopped at .... UTC due to ....
4. Course was altered at ... UTC due to ...
5. The Master / Chief Engineer was called at .... UTC due to ....

**Phrases for Stating Temperatures, Pressures and Soundings**

1. The ... (equipment) temperature minimum / maximum is
  - .... degrees (centigrade) / to maintain.
  - .... above / below normal.
  - Critical.
  - 1.1 Do not exceed a minimum / maximum temperature of  
.... Degrees.
2. The ... (equipment) pressure minimum / maximum is
  - .... Kiloponds / bars / to maintain.
  - .... above / below normal.
  - Critical.
  - 2.1 Do not exceed a pressure of ... kiloponds / bars.

3. Ballast / fresh water / fuel / oil / slop sounding is .... metres / cubic metres.
  - 3.1 sounding of
    - no ... cargo tank is .... metres / cubic metres.
    - no ... cargo hold is .... centimetres.

**Phrases for Operation of Main Engine and Auxiliary Equipments**

1. (present) revolutions of the main engine(s) are ... per minute.
2. (present) output of the main engine(s) / auxiliary engine(s) are ... kilowatts.
3. (present) pitch of the propeller(s) is .... degrees.
4. There are no problems.
5. There are problems with ....
  - With the main engine(s) / auxiliary engine(s)
  - With ....
6. Call the watch engineer (if the problems continue)
  - Call the watch engineer ... minutes before the arrival at ... / at ... UTC.

**Phrases for Stating Pumping Fuel, Ballast Water, etc**

1. There is no pumping at present.



2. We are filling / we filled (no.) ... double bottom tank(s) / the ballast tanks / the ... tank(s).
  - Fill up ... tonnes / sounding .... / ullage ... / level .... To the alarm point.
3. We are discharging / we discharged (no.) ... double bottom tank(s) / the ballast tanks / the ... tank(s).
4. We are transferring / we transferred fuel / ballast / fresh water / oil from (no.) ... tank(s) to (no.) ... tank(s).
5. We require a further generator to operate an additional pump.

**Phrases for Stating Special Machinery Events and Repairs**

1. There was a breakdown of the main engine(s) (at ... UTC / from ... to ... UTC).
  - There was a breakdown of ... (at ... UTC / from ... to ... UTC).
2. There was a total blackout (at ... UTC / from ... to ... UTC).
  - There was a blackout in .... (at ... UTC / from ... to ... UTC).
3. Main engine(s) was / were stopped (at ... UTC / from ... to ... UTC) due to ...
4. Speed was reduced (at ... UTC / from ... to ... UTC) due to ....

5. Call the Master / Chief Engineer if the revolutions of the main engine(s) are below ... per minute.
  - Call the Master / Chief Engineer / watch engineer if ....

**Phrases for Stating Record Keeping**

1. The log books / record books are completed and signed.
  - The note book entries will be copied (into the log books / record books) after the watch.
2. Change the paper of the data logger / echo sounder / ... recorder.
  - Refill the toner / ink of the data logger / echo sounder / ... recorder/

**Phrases for Handing and Taking Over the Watch / Conn**

The Master / Chief Engineer or an (engineer) officer handing over the watch should say:

1. You have the watch now

The relieving officer should confirm and say:

- I have the watch now

The Master / Chief Engineer when called to the bridge / engine (control) room and formally taking over the watch, should confirm and say:

2. I have the watch now.

The officer of the watch should confirm and say:

- You have the watch now

### **Gangway Watch**

Sometimes there is a small gangway with rails on both sides connecting the pier and the tender. Since the gangway sways and rocks, we do not want the crew or passengers to have an accident. Despite the hot or cold weather, sailors work hard to help them embark or disembark safely (MOL, 2020).

Useful expressions:

- Good afternoon, Sir
- Welcome on board
- Welcome back on board
- ID card ready, please
- ID card, please
- Please be careful. The gangway is slippery
- Please watch your step
- Can I help you, Sir? (offer your hand)
- Let me help you, Ma'am
- Can I take your bag, Ma'am
- Let me take your bag, Ma'am

- Please hold on to the rail
- Big step up, please
- Big step down, please
- Please watch your head



**Picture 2. 2 Ship Gangway**

### **Guide for Gangway Watch Training**

First words – good morning, welcome on board. We require to go through some safety requirements for the vessel.

Items to check:

1. Visitor Identity Card – Sir / Ma'am can I please check your Identity Card?
2. Random check of bags - Sir / Ma'am, is it okay if I check your bag? It is a requirement for the Security of the vessel. Thank you.

3. Please be advised that use of mobile phones and cameras is prohibited outside safe areas within the accommodation.
4. The use of portable lighters is prohibited. If you have any lighters please keep them away. Only safety matches available on board may be used.
5. Please enter your details in the visitor register.
6. This is your visitor Identity Card. Please keep it with you at all times during your stay on board. Please return the card when you disembark.
7. This is a safety card for your reference and guidance for safety procedures on vessel. Please read it and return it when you disembark.
8. Have a very safe and pleasant stay on board – thank you.

### **Ship Security**

SMCP – Signals: Distress, Urgency and Safety Signals, (Grice, 2009).

1. **Mayday** : is used to announce a ***distress message***.  
Example: “Mayday, Mayday, Mayday. I am sinking after collision”
2. **Pan-Pan** : is used to announce an ***urgency message***.  
Example: “Pan-Pan, Pan-Pan, Pan-Pan. I have damage above waterline”
3. **Securite** : is used to announce a ***safety message***

Example: “Securite, Securite, Securite. Risk of grounding at low water”

To compose a distress message:

- 1) Use Channel 16.
- 2) Repeat the word “MAYDAY” three times.
- 3) Say: “This is ... (name of vessel)”. Repeat ship name three times.
- 4) Describe your vessel (size, colour, numbers of persons on board, etc).
- 5) Explain the nature of the distress (sinking, fire, etc).
- 6) Give position by latitude and longitude or by bearing and distance to a well-known landmark.
- 7) Explain that you need assistance.
- 8) End with “over”.

### **Cargo Watch**

SMCP phrases about cargo:

1. I have / MV ..... has lost dangerous goods of IMO-Class .... In position ....
2. Containers / barrels / drums / bags / .... with dangerous goods of IMO-Class .... Adrift near position .....
3. I am / MV .... Is spilling:
  - dangerous goods of IMO-Class ... in position ....
  - crude oil / .... in position ....
4. I require / MV ... requires oil clearance assistance – danger of pollution.
5. I am / MV ... is dangerous source of radiation.

SMCP phrases about Tanker transshipment:

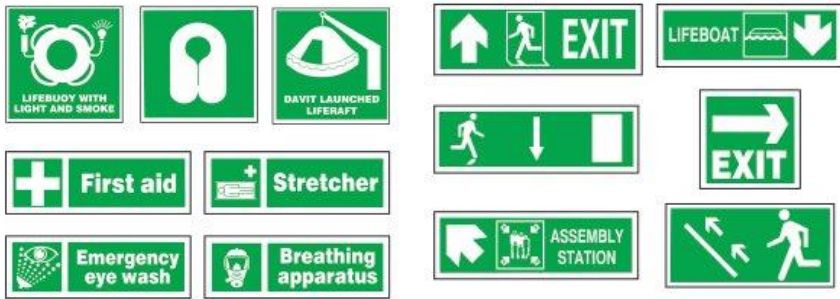
1. Transshipment of .... (*kind of cargo*) in position ..... Wide berth requested.
2. I am / MT .... spilling oil / chemicals / .... in position .... Wide berth requested.
3. I am / LNG-tanker .... leaking gas in position .... – do not pass to windward.
4. Oil clearance operations near MT ... in position ..... Wide berth requested.

**Describing Damage to the Cargo**

1. The .... (*cargo*) is in a bad condition.
2. The packages of ... (*cargo*) are:
  - Wet / damp / mouldy.
  - Marked by fresh water / sea water.
3. The metal of ... (*cargo*) is rusty.
4. The bands of .... (*cargo*) are broken / missing / rusty.
5. The crates / cases with .... (*cargo*) are railed.
  - The boards of crates / cases with .... (*cargo*) are loose.
6. The marks / labels on .... (*cargo*) are unclear / illegible / false.
7. The contents of drums / barrels / ... are unknown.
8. The weight of the ... (*cargo*) is unknown.
9. The boxes / crates / cases / .... with .... (*cargo*) are damaged.
10. The bags / bales with .... (*cargo*) are torn / resewn / spilling.
11. The drums / barrels / ... with .... (*cargo*) are deformed /  
spilling
12. The bozes / cartons / cases / .... with .... (*cargo*) are crushed.
13. The bags / boxes / cartons / .... with .... (*cargo*) are not full /  
slack / empty.

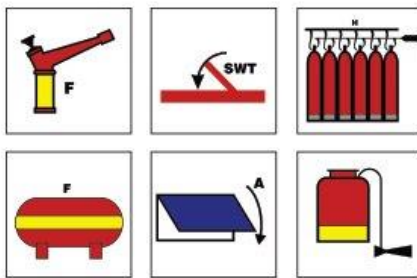


**Safety Symbols on Board**



**Picture 2. 3 Safety Signs**

**Picture 2. 4 Direction Signs**



**Picture 2. 5 Fire Control Signs**



**Picture 2. 6 Hazard Signs**



**Picture 2. 7 Fire Equipment Signs Picture**

**2. 8 Mandatory Signs**



**Picture 2. 9 Prohibitory Signs**

**Picture 2. 10 Combination Signs**



Picture 2. 11 IŞPŞ Code Signs



Picture 2. 12 Deck and Engine Room Signs



Picture 2. 13 Galley & Accommodation Signs

Picture



2. 14 Temporary Hazard & Identification Tags



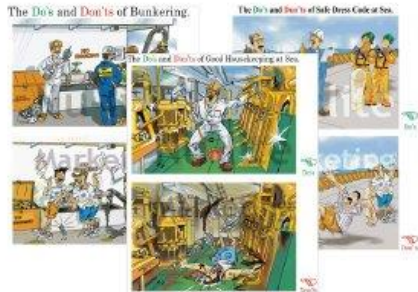
**Picture 2. 15 Market Dot; & Tap;**



**Picture 2. 16 Safety Awareness & Training Posters;**



**Picture 2. 17 Safety First Posters;**



**Picture 2. 18 DO's & Don't's, Safety Awareness Posters;**































**Picture 2. 19 Hazard Diamonds;**















**Picture 2. 20 Nylon  
Seals & Fire Plan  
Holder**

**Tabel 2. 4 Safety Signs on Board (Safe Condition)**















N o.	Safety Sign	Picture	N o.	Safety Sign	Picture
1	Thermal Protective Aid		43	Slide to open right	
2	Survival Suit		44	Slide to open left	
3	Stretcher		45	Smoke Hood	















4	Stretcher		46	Smoking Area	
5	Emergency Eyewash Symbol		47	Stairs	
6	Emergency Eyewash		48	Emergency ladder	
7	Emergency Shower Symbol		49	Secondary Escape Route	
8	Signal Lamp 24V		50	Safety First	
9	Safety Arrow Right Down		51	Safety Arrow Right	
10	Safety Arrow Left Down		52	Safety Arrow Left	








11	Safety Arrow Down		53	Safety Arrow Ahead	
12	Safety Arrow Ahead Left		54	Safety Arrow Ahead Right	
13	Rocket Parachute Flares		55	Rescue Boat	
14	Radar Transponder		56	Primary Escape Route	
15	Pollution Control Equipment		57	Portable Radio Symbol	
16	Muster Station Right		58	Muster Station Left	
17	Muster Station Down Left		59	Muster Station Down Right	

18	Muster Station Down		60	Muster Station Ahead	
19	Muster Station Ahead Right		61	Muster Station Ahead Left	
20	Assembly Station Symbol		62	Breathing Apparatus	
21	Childs Lifejacket		63	Craft Portable Radio	
22	Davit Launched Liferaft		64	Distress Signals Symbol	
23	Embarkation Ladder		65	Line Throwing Appliance	
24	Liferaft		66	Lifejacket	








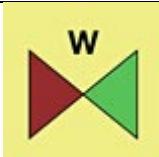







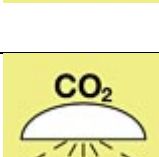
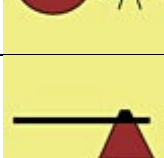


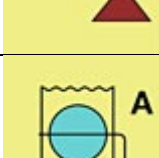
25	Lifebuoy		67	Lifejackets under Seats	
26	Lifebuoy with line		68	Lifebuoy with light Smoke	
27	Lifebuoy with light		69	Lifeboat	
28	Lifeboat left		70	Lifeboat down	
29	Lifeboat right		71	Lifeboat Ahead	
30	Lifeboat down Right		72	Lifeboat down Left	
31	Lifeboat Ahead Right		73	Lifeboat Ahead Left	

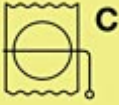
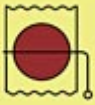












32	Immersion Suit		74	Helicopter Pickup Area	
33	First Aid		75	Helicopter Landing Area	
34	First Aid Kit		76	Fire Proof Line	
35	Evacuation Slide		77	Escape Up stairs right	
36	Emergency Exit		78	Escape Up stairs Left	
37	Escape Down stairs Left		79	Escape Down stairs right	
38	Emergency Telephone		80	Escape Ladder	






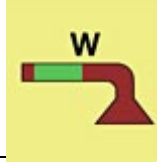





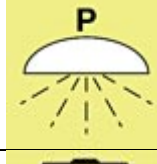


39	Emergency Shower		81	EPIRB	
40	Emergency Stop		82	Emergency Escape Breathing Device	
41	Emergency Equipment		83	Assembly Station Symbol	
42	Megaphone				





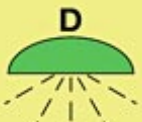









**Table 2. 5 Safety Signs on Board (Fire Control)**

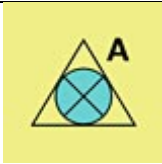

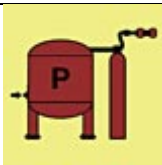
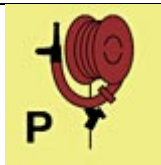
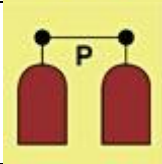







No.	Safety Sign	Picture	No.	Safety Sign	Picture
1	Remote Shut Off Fuel Pump		99	Remote Shut Off Lube Oil Pump	
2	Safety Control Plan		100	Section Valves Drenching	

3	Section Valves Foam		101	Section Valves Fire Main	
4	Section Valves Powder		10 2	Section Valves Sprinkler	
5	Ships Bell		10 3	Smoke Detector	
6	Space Monitored by Gas Detector		10 4	Space or group of space monitored by heat detector(s)	
7	Space protected by automatic fire alarm		10 5	Space protected by CO2	
8	Fire axe		10 6	Space protected by CO2	
9	Fire control plan		107	Fire Damper Accomodati on Service	




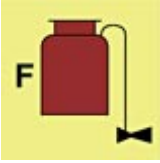


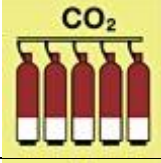
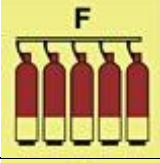
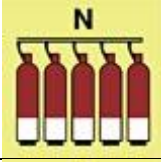
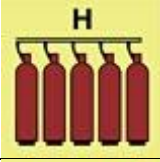
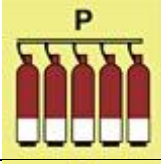

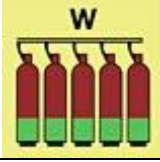

10	Fire Damper cargo		108	Fire damper in Vent Duct	
11	Fire Damper Machinery		109	Remote Control for Fire Pump(s)	
12	Remote Control for Skylight		110	Remote Control for Watertight Doors	
13	Remote Control Fuel Oil Valves		111	Remote Control Lube Oil Valves	
14	Remote Control ME		112	Remote Fuel Oil Valves	
15	Remote Release Station Foam		113	Remote Release Station CO2	
16	Remote Release Station Halon		114	Remote Release Station Nitrogen	




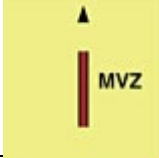






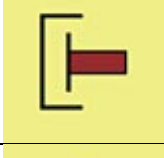

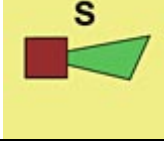

17	Remote Release Station Powder		115	Remote Release Station Water	
18	Space Protected by Water Mist		116	Space Protected by Water	
19	Sprinkler Horn		117	Space Protected by Water	
20	Sprinkler Instalation		118	Valve Foam	
21	Sprinkler Section Valve		119	Water Fog Applicator	
22	Watertight Door		120	Space Protected by Powder	
23	Space Protected by Halon		121	Space Protected by Sprinkler	

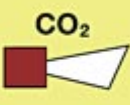





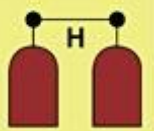





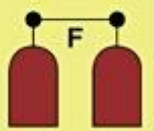

24	Space Protected by Halon		122	Space Protected by Foam	
25	Space Protected by Drenching System		123	Space Protected by Foam	
26	Space Protected by Drenching		124	Space Protected by Foam	
27	Space Protected by Drenching		125	Space Protected by CO2	
28	Remote Controlled Fire Pumps		126	Remote Controlled Skylights	
29	Remote Control for Fire Dampers Machinery		127	Remote Control for Fire Dampers Cargo	
30	Remote Control or Shut Off Machinery Ventilation		128	Remote Control or Shut Off Cargo Ventilation	






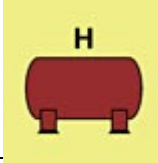

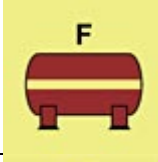

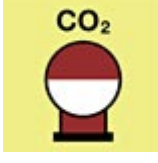
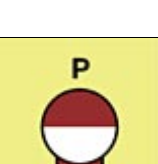
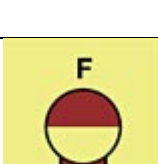
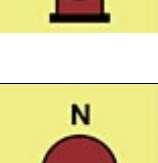
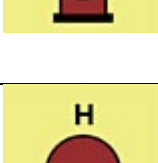
31	Remote Control or Shut Off Accomodati on Service Vent		129	Remote Control for Fire Doors	
32	Powder Installation		130	Powder Hose and Hand Gun	
33	Powder Release Station		131	Push Button Switch for Fire Alarm	
34	Remote Control Fire Pump Valves		132	Remote Control for Bilge Pump(s)	
35	Remote Control for Closing Device Ventilation Inlet		133	Remote Control for Closing Device Ventilation Inlet	
36	Remote Control for Closing Device Ventilation Inlet		134	Remote Control for Emergency Bilge Pump(s)	





























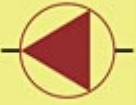

37	Remote Control for Fire Dampers Accomodati on Service		135	Remote Control for Emergency Fire Pump	
38	Portable Applicator Unit Foam or Spare Tank(s)		136	Portable Foam Applicator	
39	PA Speaker for Alarms Information		137	Oil Pollution Equipment	
40	Fixed Fire Extinguishing Battery CO2		138	Fixed Fire Extinguishing Battery Foam	
41	Fixed Fire Extinguishing Battery Nitrogen		139	Fixed Fire Extinguishing Battery Halon	
42	Fixed Fire Extinguishing Battery Powder		140	Monitor (Gun) Water	
43	Fixed Fire Extinguishing Battery Water		141	Monitor (Gun) Water	


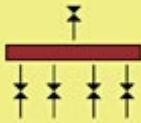
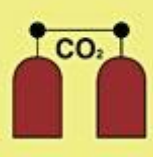



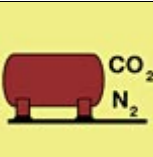





44	Monitor (Gun) Foam		142	Monitor (Gun) Powder	
45	Monitor (Gun) Foam		143	Main Vertical Zone	
46	Manually Operated Call Point		144	Locker with Firemans Outfit	
47	Manually Operated Call Point		145	Locker with Additional Protective Clothing	
48	Inert gas Installation		146	Locker with Additional Breathing Apparatus	
49	International Shore Connection		147	Hose Box with Fire Nozzle	
50	Horn Sprinkler		148	Light Signal Column	


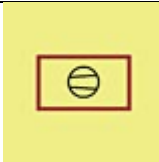
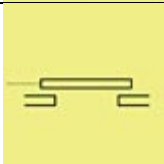
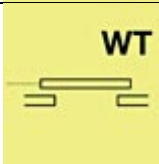
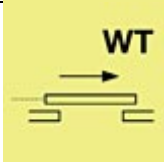
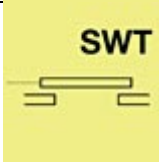
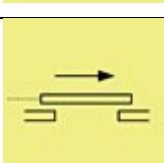
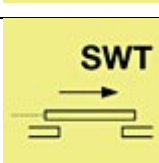
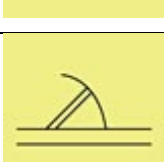
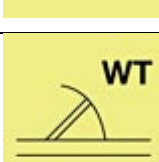
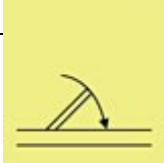
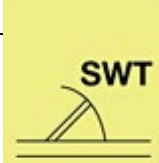
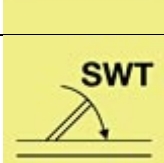
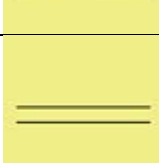
51	Horn CO2		149	Horn FM-200	
52	Horn Fire Alarm		150	High Expansion Foam Supply Trunk (Outlet)	
53	Halon Horn		151	Heat Detector	
54	Halon Release Station		152	Halon Bottles in Protected Area	
55	Halon Battery		153	Fog Valve Water	
56	Gas Detector		154	Foam Nozzle	
57	Foam Release Station		155	Foam Nozzle	

58	Foam Installation		156	Flame Detector	
59	Fixed Fire Extinguishing Installation Water		157	Fixed Fire Extinguishing Installation Powder	
60	Fixed Fire Extinguishing Installation Nitrogen		158	Fixed Fire Extinguishing Installation Halon	
61	Fixed Fire Extinguishing Installation CO <sub>2</sub>		159	Fixed Fire Extinguishing Installation Foam	
62	Fixed Fire Extinguishing Bottle Placed in Protected Area		160	Fixed Fire Extinguishing Bottle Placed in Protected Area	
63	Fixed Fire Extinguishing Bottle Placed in Protected Area		161	Fixed Fire Extinguishing Bottle Placed in Protected Area	
64	Fixed Fire Extinguishing Bottle Placed in		162	Fixed Fire Extinguishing Bottle Placed in	




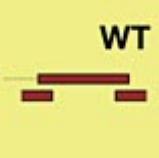
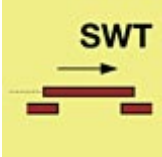
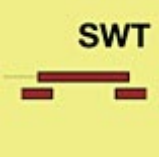

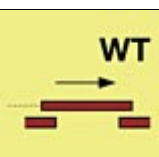

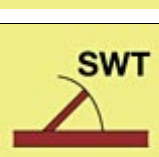

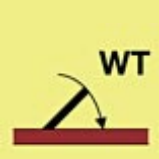
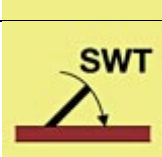

	Protected Area			Protected Area	
65	Fire Station		163	Fire Locker	
66	Fire Main with Fair Valves		162	Fire Pump(s)	
67	Fire Hose Nozzle		165	Fire Hydrant	
68	Fire Hose Nozzle		166	Fire Hydrant	
69	Fire Hose Nozzle		167	Fire Extinguisher Wheeled Water 50L	
70	Fire Extinguisher Water 6L		168	Fire Extinguisher Wheeled Powder 50	
71	Fire Extinguisher Water 9L		169	Fire Extinguisher Wheeled CO2 50	

72	Fire Extinguisher Refill		170	Fire Extinguisher Wheeled Foam 50L	
73	Fire Extinguisher Halon 6		171	Fire Extinguisher Powder 12	
74	Fire Extinguisher CO2 6		172	Fire Extinguisher Powder 6	
75	Fire Extinguisher Foam 6L		173	Emergency Telephone Station	
76	Emergency Switchboard		174	Emergency Source of Electrical Power (Battery)	
77	Emergency Fire Pump		175	Emergency Source of Electrical Power (Generator)	
78	Emergency Fire Pump		176	Control Station	

79	Emergency Bilge Pump		177	Drenching Installation	
80	Corelease Station		178	Control Panel for Fire Detection and Alarm System	
81	Cohorn		179	Closing Device Ventilation Inlet or Outlet Machinery	
82	Conitrogen Bulk Installation		180	Closing Device Ventilation Inlet or Outlet Cargo	
83	Breathing Apparatus		181	Closing Device Ventilation Inlet or Outlet Accomodation	
84	Bilge Pump		182	Closing Device for External Ventilation	


85	Bell Fire Alarm		183	Air Compressor for Breathing Devices	
86	B Class Sliding Fire Door		184	B Class Sliding Fire Door Watertight	<b>WT</b> 
87	B Class Sliding Fire Door Self Closing Watertight	<b>WT</b> 	185	B Class Sliding Fire Door Semi Watertight	<b>SWT</b> 
88	B Class Sliding Fire Door Self Closing		186	B Class Sliding Fire Door Self Closing Semi Watertight	<b>SWT</b> 
89	B Class Fire Door		187	B Class Fire Door Watertight	<b>WT</b> 
90	B Class Fire Door Self Closing		188	B Class Fire Door Semi Watertight	<b>SWT</b> 
91	B Class Fire Door Self Closing Semi watertight	<b>SWT</b> 	189	B Class Division	



92	B Class Fire Door Self Closing Watertight		190	A Class Sliding Fire Door	
93	A Class Sliding Fire Door Self Closing		191	A Class Sliding Fire Door Watertight	
94	A Class Sliding Fire Door Self Closing Semi Watertight		192	A Class Sliding Fire Door Semi Watertight	
95	A Class Fire Door		193	A Class Sliding Fire Door Self Closing Watertight	
96	A Class Fire Door Watertight		194	A Class Fire Door Semi Watertight	
97	A Class Fire Door Self Closing		195	A Class Fire Door Self Closing Watertight	
98	A Class Fire Door Self Closing Semi Watertight		196	A Class Division	

**Table 2. 6 Safety Signs on Board (Mandatory IMO)**

No.	Safety Sign	Picture	No.	Safety Sign	Picture
1	Start Water Spray		13	Start Air Supply	
2	Start Engine		14	Secure hatches	
3	Release Falls		15	Release Grips	
4	Lower Rescue Boat		16	Lower Liferaft	
5	Fasten Seat Belts		17	Lower Lifeboat	
6	This Door Must be Kept Closed		18	This Door Must be Kept Closed at Sea	

7	Staircase Must be Kept Clear at All Times		19	Kepp Locked Shut When not in Use	
8	Keep Clear		20	Escape Route keep clear	
9	Fire Doot Keep Shut		21	Gangway Keep Clear	
10	Keep Clear When Door is Closing		22	Keep Clear Exit for Escape Route	
11	Automatic Fire Door Keep Clear		23	Close This Door at Night	
12	This Hatch Must be Kept Closed at Sea				

**Riggings, Tools and Materials on Board** (Sayed, 2019)

**1. Maintenance Tools**

**a. Hand Tools**

**1) Hand Spanner/Wrenches**



**Adjustable Wrench**



**Adjustable Pipe Wrench**



**Ring Slogging Spanner**



**Open Ended Slogging Spanner**



**Single Open Ended Spanner**



**Combination Box & Open End**



**Double Open Ended**



**Socket Wrench Ratchet Handle**



**Double Ended Offset Ring**



**Claw Bar**



**Square Drive Wrench**



**6 & 12 Points Socket Wrench**



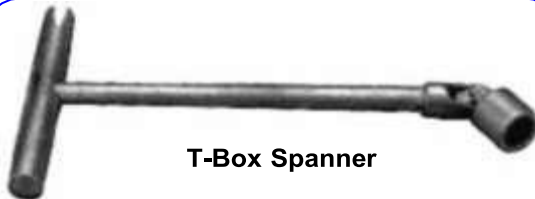
**Manual Reading Torque Wrench**



**Automatic Reading Torque Wrench**



**Hook Spanner**



**T-Box Spanner**

**2) Pliers**



**Vise Grip**



**Side Cutting Pliers**



**End Cutting Pliers**



**Water Pump Pliers**



**Combination Pliers**



**Snap Ring Pliers**



**Long Nose Pliers**



**Crimping Pliers**

### **3) Scissors / Tin Snips**



**Cloth Scissors**



**Left Hand Snip**





**Straight Hand Snip**



**Right Hand Snip**

**4) Hammers**



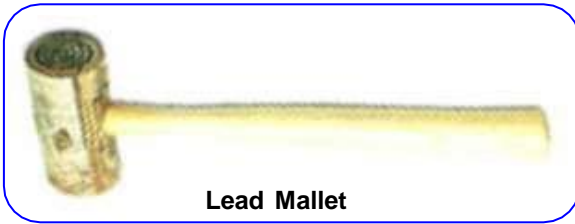
**Sledge Hammer**



**5) Saw**



**Ballpein Hammer**



**Lead Mallet**



**Rubber/Plastic Mallet**



**Cross Cut Saw**



Hack Saw

**6) Bearing and Gear Puller**



3 Jaw Gear Puller



2 Jaw Gear Puller

**7) Tape**



**Metric Tape Measure**



**Surveyor Tape Measure**

**8) Screwdriver**



**Plastic Handle Screwdriver**



**Impact Screwdriver**

**9) Cutter**



**Heavy Duty Pipe Cutter**



**Tube Cutter**



**Bolt Cutter**



**Cable or Wire Rope Cutter**

**10)Others**



**Hydraulic Hand Pump**



**Portable Jack Cylinders**



**Gun and Silicon Tube**



**Sealant and Adhesives**



**Cold Chisels**



**Pin Puncher**

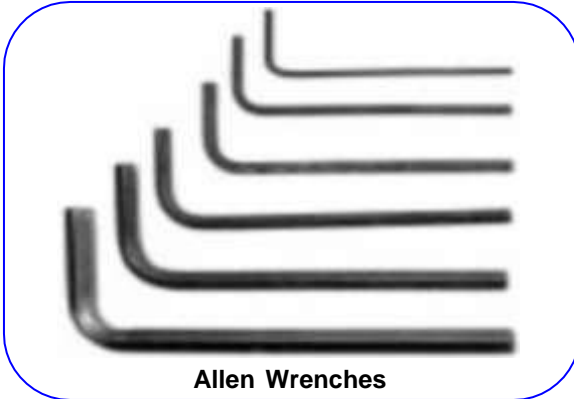


**Allen Key Set**



**Needle Files**





**Allen Wrenches**



**Hand Files Set**



**Table Gasket Hole**



**Gasket Hole**



**Table Hand Vice**



**Anvil**

**b. Power Tools**



**Electric Bench Grinder**



**Electric Drill Bench Press**



**Portable Electric Angle Grinder**



**Portable Electric Drill**



**Pneumatic Impact Wrench**

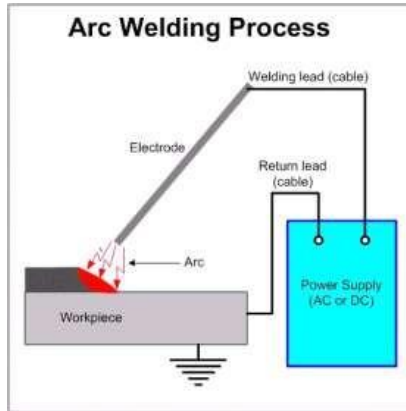


### **c. Lathe Machine**



## d. Welding and Cutting Equipment

### 1) Arc Welding Equipment



### 2) Plasma Cutting Equipment



Head Stock



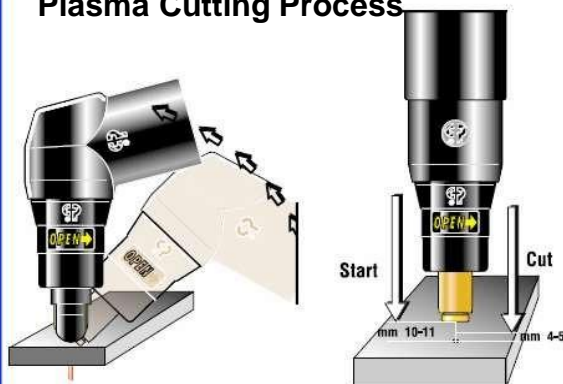
Tool Post



**Tail Stock**



### Plasma Cutting Process



**3) Oxy-Acetylene Welding and Cutting Equipment**



**OXIDISING FLAME**



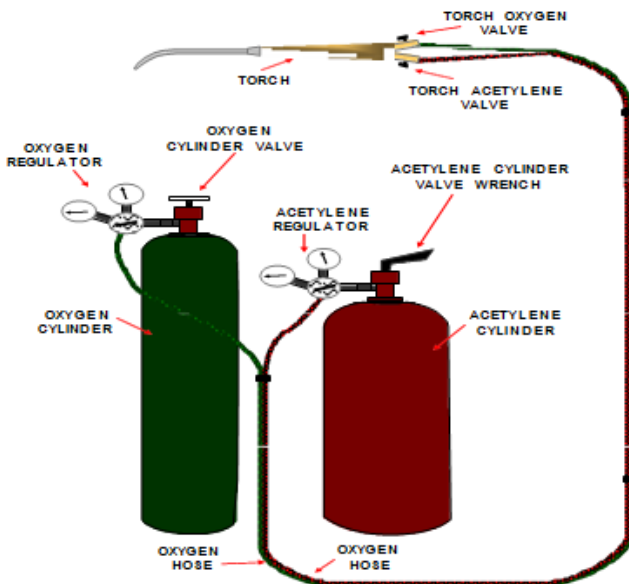
**NEUTRAL FLAME**





**CARBURIZING FLAME**

**OXY-ACETYLENE GAS WELDING OUTFIT**



**e. Measuring Tools**

**1) Micrometer**



**How to Read Metric Micrometer**

Determine the number divisions visible on the scale of the sleeve and add the total to the particular division on the thimble coincided with the axial line on the sleeve.

Thus;

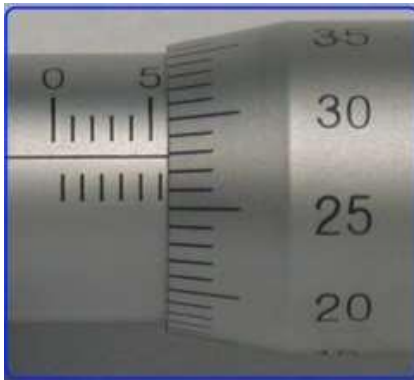
Micrometer Reading = No. on the sleeve + No. on the thimble

$$\begin{aligned} &= 5 + 0.5 + 0.28 \\ &= 5.78 \text{ mm} \end{aligned}$$

## 2) Vernier Caliper



## 3) Thickness of Feeler Gauge



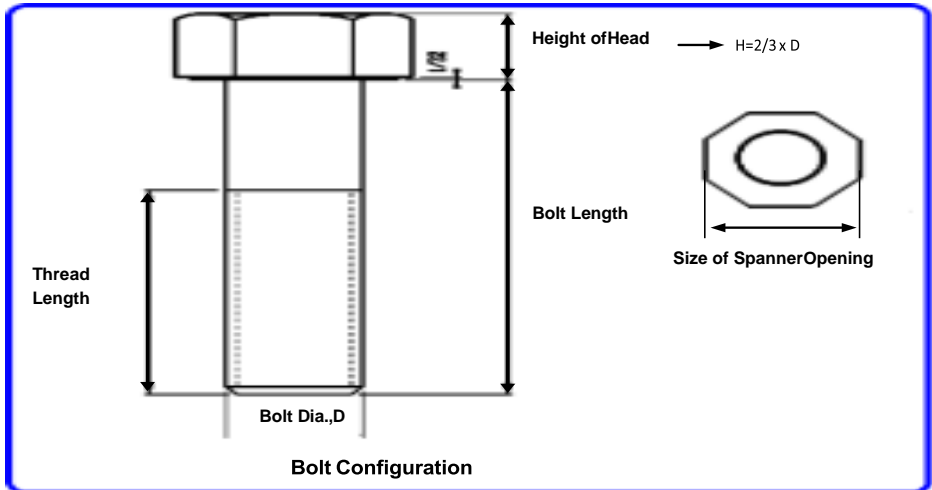
#### **4) Calipers;**



## **2. Parts for Maintenance**

### **a. Bolt; and Nut;**

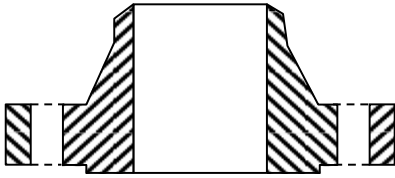




## b. Steel Weld Flanges



Type of Flanges:



**WELD NECK**



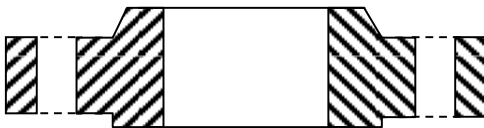
**THREADED**



**LAP JOINT**



**SOCKET WELD**

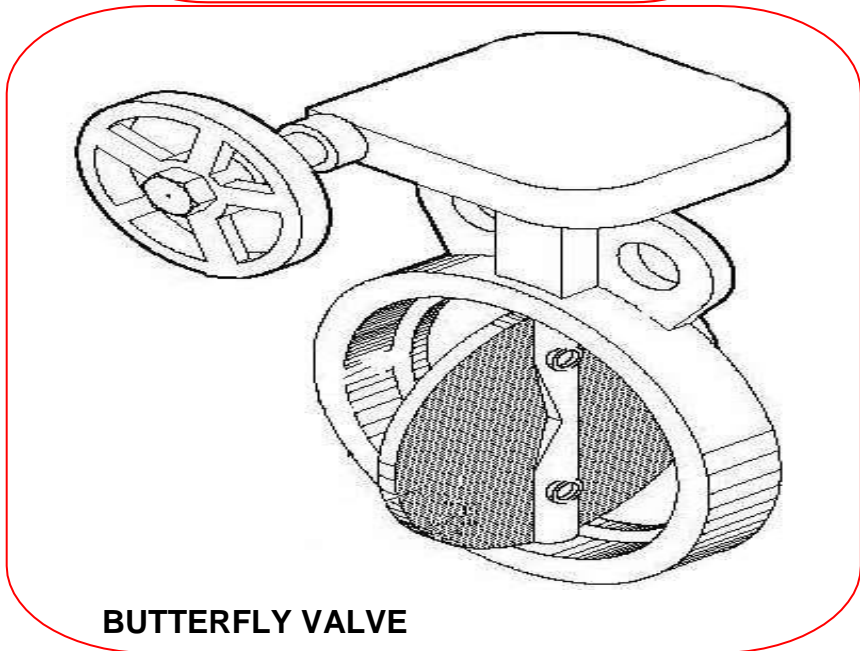
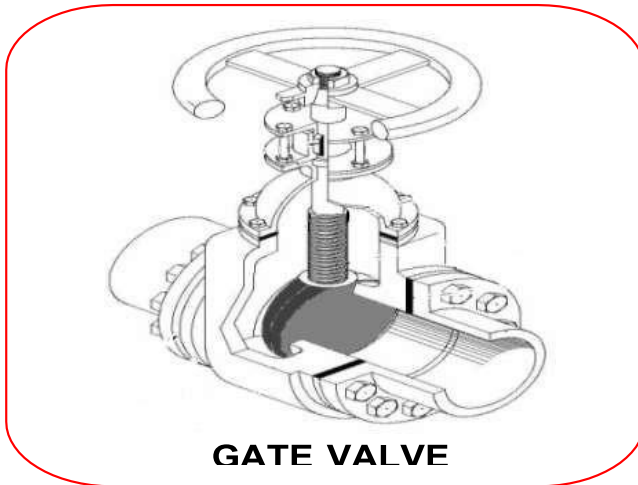


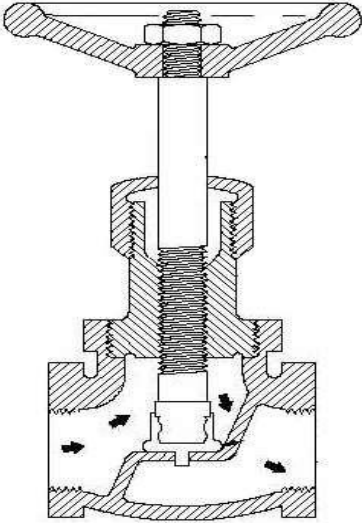
**SLIP- ON**



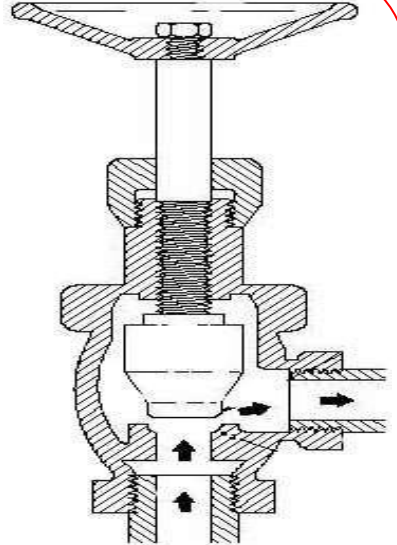
**BLIND**

**c. Type of Valves**

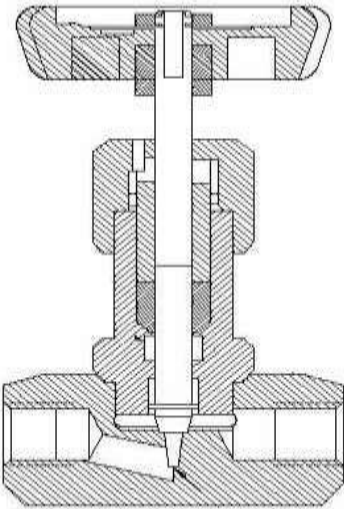




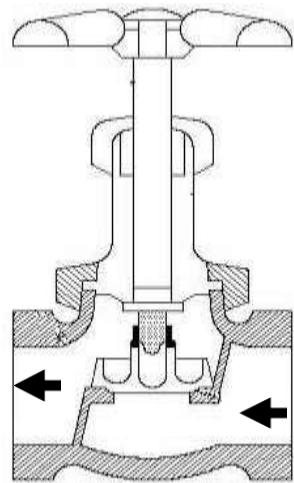
**STRAIGHT GLOBE VALVE**



**ANGLE GLOBE VALVE**

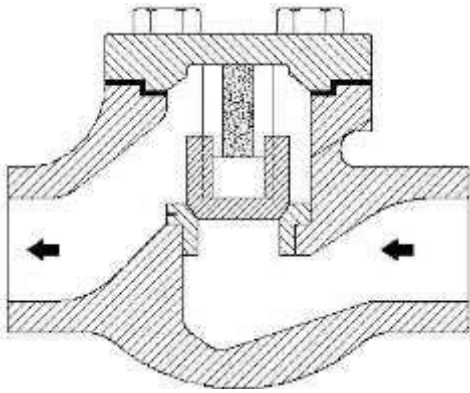


**NEEDLE VALVE**

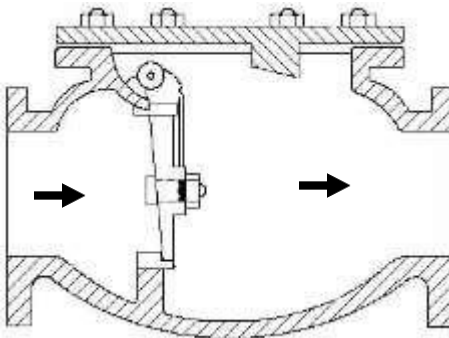


**STOP CHECK VALVE**

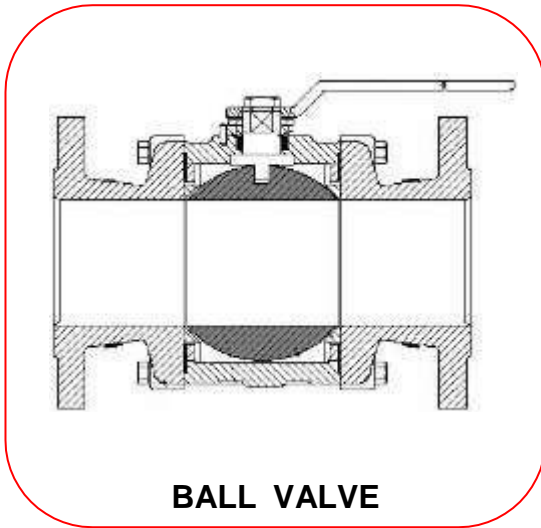
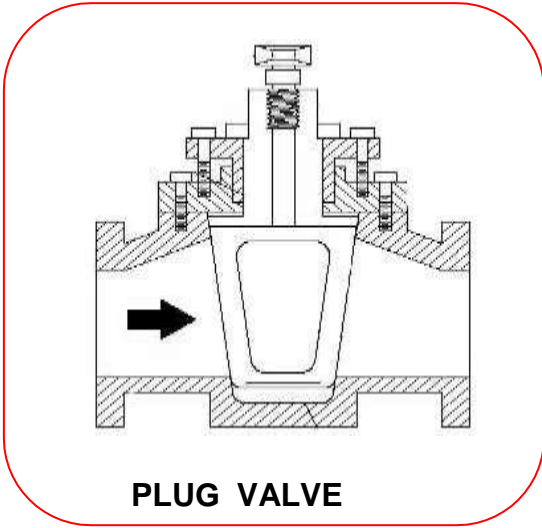




**LIFT CHECK VALVE**



**SWING CHECK VALVE**



**d. Pipe Fittings**



**e. Taps and Dies**



**f. Bearings**



**BALL BEARINGS**



### **3. Fabrication Materials**

#### **a. O-ring;**



**b. Oil Seal**



**c. Packing and Gasket Sheets**



**d. Packing Glands;**



**e. Pipes and Tubes;**





**f. Other Materials**



**STEEL PLATES**











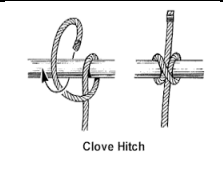

**STEEL BARS**




**STEEL ANGLE BARS**



**Tabel 2. 7 Riggings on Board (Faculty of Maritime Studies, 2013)**

No.	Name	Picture	No.	Name	Picture
1	Wire Rope		9	Synthetic Webbing Slings	
2	Chain Slings		10	Metal Mesh Slings	
3	Spreader Beams		11	Rigging Hardware	
4	Inspection Tag		12	Hand Signals	
5	Hitch	 Clove Hitch	13	Overhead and Gantry Cranes	

6	Mobile Cranes		14	Rings	
7	Eyebolt s		15	Hooks	
8	Turnbu ckles		16	Hoists	

**Emergency Situations**

**Types of Emergency Onboard**



**Fire on Deck**



**Electrical Fire**



**Collision**



**Man Overboard**



**Grounding**



**Piracy**



Adrift

### **The General Emergency Alarm**

1. In case of emergency, seven short blasts and one prolonged blast will be given with the ship's whistle and the alarm system.
2. Remain calm when you hear the general emergency alarm.
3. Passengers will be taught how to act and behave in cases of emergency.

### **General Alarm Instructions**

1. The general alarm is sounded in case of emergency which may necessitate leaving the ship. Be alert to instructions over the loudspeaker and from the crew.



**( 7 short + 1 Long)**

2. Follow the escape route signs to the muster station.

- Put on your outdoor clothes
- Go to the Muster Station
- Escape routes are clearly marked
- Do not use the elevators
- Leave your luggage behind
- In case of smoke: Proceed on all fours

3. Follow the crew's instructions at all times.

In case of a General Alarm, each member has a specific task. Staff whose job is to guide passengers will be wearing a green jacket.

4. Life jackets are available at the Muster Station. They will be distributed by the crew.
5. In case of emergency situations: "stay calm"

### **Fire – Fighting**

Attention please! Attention please!

This is you captain with an important announcement. I repeat, this is you captain with an important announcement. We have a minor fire

in the engine room. There is no immediate danger to our passengers or the ship – and there is no reason to be alarmed. For safety reasons we request all passengers to go to their assembly stations on deck 2 and wait there for further instructions. Please follow the instructions given by the officers and crew. The ship's fire fighting team is fighting the fire. We also have radio contact with radio coast stations. The fire is under control. As soon as I have further information I will make another announcement. I ask you kindly to remain calm. There is no danger at this time.

### **PA (Public Address) Announcements on Emergency**

1. Attention please! Attention please!

This is your captain with an important announcement.

I repeat, this is your captain with an important announcement.

- We have grounded / a minor flooding (in ...) / a minor fire (in ...)
- There is no immediate danger to our passengers or the ship and there is no reason to be alarmed
- For safety reasons we request all passengers to go to their assembly stations on deck ... and wait there for further instructions.
- Please follow the instructions given by the officers and crew.

- The ship's fire fighting team / damage control team is fighting the fire / flooding.
  - We also have radio contact with other ships / radio coast stations.
  - The fire / flooding is under control.
  - As soon as I have further information, I will make another announcement. I ask you kindly to remain calm. There is no danger at this time.
2. This is your Captain speaking. I have another announcement.  
The fire / flooding is not under control yet.
- There is smoke formation / flooding in ..... access to this area is prohibited.
  - For safety reasons we request all passengers to prepare to go to their assembly stations. Access to the assembly stations will be via ..... Do not forget to take your life jackets and blankets with you.
  - All passengers of deck no. .... are requested to follow the crew members who will escort you to your assembly stations.
  - When you get to your assembly stations put on your life jackets and wait for further orders.
  - Do not go to the lifeboat stations until you are ordered to do so.
  - Go to your lifeboat station.

- Follow the escape routes shown.
- Do not enter the lifeboats / liferaft. The order to enter the lifeboats / liferafts will be given from the bridge or by the officers.
- We have just received a message from shore / other vessels that assistance is on the way. Assistance should arrive within approximately ... hours.

### **Person Overboard**

If you see anybody fall overboard, act as follows:

- Call out “Man overboard”
- Throw lifebuoys overboard
- Keep your eyes on the person in the water
- Show / tell an officer / crew, the person’s position in the water, or telephone the bridge immediately, the number is .....

### **Life-Saving**

#### 1. Informing on present situation

- The vessel was abandoned in position ..... due to fire / grounding / collision / flooding / heavy list / serious damage / .....
- Keep calm. There is no reason to panic.  
The officers / lifeboatman know exactly what to do.



- There are enough life-saving appliances for everyone on board.
  - The Maritime Rescue Co-ordination Centre / vessels in the vicinity have already been informed of our situation.
  - Vessels / helicopters / airplanes are coming to our rescue.
  - Vessels / helicopters / airplanes will reach us within .... hours.
  - We have radio contact with rescue craft.
  - There are enough provisions and drinking water for 48 hours.
  - You obtain medicine for seasickness from the lifeboatman.
2. Escorting helpless passengers
- ..... persons are missing.
  - Search all cabins / WC / showers for missing persons.
  - Assist those who need help.
  - Help children, elderly, disabled, injured or sick persons with lifejackets.
  - Give assistance when entering lifeboats / liferafts.
  - We require warm clothing and blankets for the children / elderly / disabled / injured / sick.
  - All persons, please move closer
    - The elderly / disabled / injured / sick need room to lie down.

- Everyone, please, be quiet. The children / the sick need rest.

### **The Basic Marine Environmental Protection**

Marine Environmental Protection in Indonesia, is regulated in Chapter IX, Article 123 of Law 17/2008 (UUD No. 17, 2008), which stated that “Marine Environmental Protection” is a condition for its fulfillment procedures and prevention requirements and control pollution from activities:

- Port
- Ship operations
- Disposal of waste, hazardous materials, and toxins in the waterways
- Waste disposal in the waterways
- Ship closure

Furthermore, Marine Environmental Protection for domestic area in Indonesia is specially regulated in Chapter XII about: “Marine Environmental Protection”, which consist of six parts:

1. Marine Environmental Protection Organizer
2. Pollution Prevention and Control from Ship Operations
3. Pollution Prevention and Control from Port Activities
4. Waste Disposal in Waterways
5. Ship closure
6. Administrative penalty

**Environmental Protection Communications**

1. Located oil spill in position .... extending .... (*length and width in metres*) to .... (*cardinal points*).
2. Located oil spill
  - In your wake
  - In the wake of MV ....
3. I have / MV .... has accidental spillage of oil / .....
4. Can you / MV ..... stop spillage?
  - Yes, I / MV .... can stop spillage.
  - No, I / MV .... cannot stop spillage
5. What kind of assistance is required?
  - I require / MV ..... requires:
    - Oil clearance assistance.
    - Floating booms / oil dispersants / .....
6. Stay in vicinity of pollution and co-operate with oil clearance team.
7. .... (*number*) barrels / drums / containers with IMDG – Code marks reported adrift near position .....
8. Located a vessel dumping chemicals / waste / .... in position .....
  - Located a vessel incinerating chemicals / waste / .... in position .....
9. Can you identify the polluter?

- Yes, I can identify the polluter – polluter is MV ....
  - No, I cannot identify the polluter
10. What is course and speed of the polluter?
- Course of the polluter ..... degrees, speed ..... knots
  - The polluter left the scene.

### **Causes of Marine Pollution**

The sources of marine pollution are divided into six categories under Section 5 of Part XII of the 1982 United Nations Convention on the Law of the Sea. They are:

1. Pollution from land based sources
2. Pollution from sea based activities
3. Pollution from activities in the area
4. Pollution by dumping
5. Pollution from or through the atmosphere
6. Pollution from vessels

### **Why the sea should be protected?**

1. The ocean regulates our climate and provides the air for breathing
2. The ocean feeds human
3. The sea provides jobs and livelihoods
4. The ocean is a tool for economic development
5. A healthy ocean is a need to survive

**The Regulation Related to Marine Environmental  
Protection** (Htet, 2017)

1. The International Convention for the Prevention of Pollution from Ships, “Marpol (Marrine Pollution)” from ships, 1973 as modified by the protocol 1978. It includes six technical annexes:
  - Annex I : Prevention of pollution by oil from ships  
(entered into force 2 October 1983)
  - Annex II : Control of pollution by noxious liquid substances in packaged from  
ship.  
(entered into force 6 April 1987)
  - Annex III : Prevention of pollution by harmful sunstances in packaged from  
ship.  
(entered into force 1 July 1992)
  - Annex IV : Prevention of pollution by sewage from ships.  
(entered into force 27 September 2003)
  - Annex V : Prevention of pollution by garbage from ships.  
(entered into force 31 December 1988)
  - Annex VI : Prevention of Air pullotion from ships  
(entered into force on May 2005)
2. International Conventions for Prevention of Marine Pollution by Oil (OILPOL), 1954. (Addis, 1998)

3. The International Convention on Oil Pollution Preparedness, response and Cooperation (OPRC), 1990. (Johnston, 1981)
4. International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (Intervention Convention).
5. The Convention on the Prevention of Marine Pollution by the Dumping of Wastes and other Matter, 1972.
6. International Convention for the Control and Management of Ships Ballast Water and Sediments, 2004 (BMW Convention).
7. The International Convention on the Control of Harmful Anti Fouling System on Ships, 2001.
8. International Convention on the Removal of Wrecks, 2007.

### **The Information Exchange when Performing Duties**

Captain : What is the latest ice information?

OOW :

- Ice warning. Ice / iceberg(s) located in position .... / reported in area around .....
- No ice located in position .... / reported in area around .....

Captain : What ice situation is expected in this position / area around .....

OOW :

- Ice situation is:

- Not expected to change in this position / area around .....
- Expected to improve / deteriorate in this position / area around .....
- Thickness of ice is expected to increase / decrease in this position / area around.....

### **The Issues of Multi-cultural & Multi-lingual Crews**

(Clements, 1996)

1. Languages
2. Cultures (foods, emotions, etc)
3. Backgrounds work
4. Challenges in diversity
5. Cultural speed of communication
6. Body language dynamic
7. Religions
8. Lifestyle (as a group or individual)
9. Behavior
10. Technology

### **The Solutions regarding the Issues**

1. Language training programs
2. Multilingual crew management (Daniels, 2017)

3. Standardization of communication protocols
4. Use of technology
5. Cultural awareness and sensitivity training
6. Cross-cultural awareness

## **The Common Practices of Seamen at Sea**

### **Fire Fighting and Drills**

#### **1. Reporting Fire**

- a. Fire on board!
  - Smoke / fumes / fire / explosion
    - In engine room
    - In no. .... hold(s) / tank(s)
    - In superstructure / accommodation
    - In .... space
    - On deck / .....
  - Smoke / fumes from ventilator(s)
  - Burnt smell / fumes in ..... / from .....
- b. Report injured persons / casualties:
  - No person injured
  - Number of injured persons / casualties is: ....
- c. What is on fire?
  - Fuel / cargo / car(s) / truck(s) / wagon(s) / containers (with dangerous goods) / .... on fire.



- No information (yet).
- d. Is smoke toxic?
  - No, smoke not toxic
  - Yes, smoke toxic
- e. Is fire under control?
  - Yes, fire (in ....) under control.
  - No, fire (in ...) not under control (yet)
    - Fire spreading (to ...)
    - Fire (in ....) not accessible.
- f. Report damage
  - No damage
  - Minor / major damage in ... / to .....
  - No power supply ( in ...)
  - Making water in .....
- g. Pressure on fire mains!
- h. Shut down main engine(s) / auxiliary engine(s) / .... and report.
  - Main engine(s) / auxiliary engine(s) / .... shut down.
- i. Stop fuel and report.
  - Fuel stopped.
- j. Close all openings (in .... / in all rooms) and report.
  - All openings (in .... / in all rooms) closed.

- Openings in ... not accessible.
- k. Switch off ventilator(s) (in ....) and report.
  - Ventilator(s) (in ....) switched off.
- l. Turn bow / stern to windward.
- m. Turn port side / starboard side to windward.
- n. Alter course to .....

## **2. Reporting Readiness for Action**

- a. Stand by fire fighting team / rescue team / first aid team / support team and report.
  - Fire fighting team / rescue team / first aid team / support team standing by.
- b. Stand by main engine and report.
  - Main engine standing by.
- c. Stand by CO2 station / ..... station / emergency generator.
  - CO2 station / ..... station / emergency generator standing by.
- d. Close all openings (in .... / in all rooms) and report.
  - All openings (in .... / in all rooms) closed.
    - Openings in .... not accessible.

## **3. Orders for Fire Fighting**

- a. Start fire fighting

- Take one / two / ..... fire fighting teams / ..... team(s) to scene.
- b. Go following route:
  - Go through engine room / no. .... hold(s) / tank(s) / superstructure / accommodation / .... space / manhole(s) to ... space / funnel / .....
  - Go from:
    - Outside / inside to ....
    - Portside / starboard side to .....
    - ..... to .....
- c. Take following (additional) safety measures and report.
  - Have two / .... members in one team.
    - Number of members in fire fighting team / .... team is: .....
  - Have lifeline between each other / to outside.
    - ..... team members have lifelines to each other.
    - ..... team has lifelines to outside.
  - Have rescue team on stand by.
  - Maintain visual contact / radio contact on walkie – talkie.
- d. Fire fighting team must have following outfit:
  - Fire fighting team must have protective clothing / smoke helmets / breathing apparatus / .....
- e. Manning of fire fighting team / .... team(s) as follows:

- Chief Officer / Chief Engineer / ..... in command of fire fighting team / .... team (no. ....)
- Following officer(s) / crew member(s) in fire fighting team / .... team: ....
- f. Restrict action (in .... / on .....) to ..... minutes.
  - Agree on retreat signal and report.
    - Retreat signal for fire fighting team / .... team .... is .....
- g. Use water / foam / powder / CO<sub>2</sub> / sand / .... in .....
- h. Run out fire hoses and report.
  - Fire hoses run out
- i. Water on!
  - Water is on.
- j. Cool down .... with water and report.
  - .... cooled down.

#### **4. Cancellation of Alarm**

- a. Is the fire extinguished?
  - Yes, fire (in ....) extinguished.
  - No, fire (in ....) not extinguished (yet)
  - Fire restricted to .... space / area.
- b. Post a fire watch and report.
  - Fire watch posted (in .... space / area).
- c. Fire extinguishing systems / means remain on stand-by.

- d. Fire fighting team / .... team remain on stand-by.
- e. Rope-off the fire area and report.
  - Fire area roped-off
- f. Check the fire area every .... minutes / hour(s) for re-ignition and report.
  - Fire area checked, no re-ignition.
  - Fire area checked, re-ignition in .... space / area.
    - Re-ignition extinguished.
- g. The fire alarm is cancelled (with following restrictions: .....

### **Checking Equipment Status and Drills**

1. Check the openings in all spaces / in .... and report
  - All openings in .... are closed.
  - Openings in .... are not closed (yet)
  - Openings in .... are not accessible.
2. Check the watertight door control and report.
  - Watertight door control:
    - is operational.
    - (in .....) is not operational (yet)
    - (in ....) will be operational in .... minutes.
  - Watertight door(s) (in ....) is / are not accessible.
3. Check the pumps / emergency generator and report.
  - (bilge) pump(s) in .... / emergency generator.

- is / are operational.
  - is / are not operational (yet)
  - will be operational in .... minutes
4. Check the power supply and report.
- Power (in / at ....)
    - is available
    - is not available (yet)
    - will be available in .... minutes.
5. Check the damage control equipment and report.
- All damage control equipment is complete and available.
  - Damage control equipment is not complete.
    - Complete the damage control equipment.

### **Checking Equipment Status**

1. Check the lifebuoys and report.
- All lifebuoys are complete.
  - Lifebuoy(s) at .... is / are damaged / missing.
    - Replaced the damaged / missing lifebuoy(s)
2. When was the last man overboard drill?
- Last man overboard drill was on .... (*date*).
3. Prepare a plan for man overboard drill.
- Prepare a plan for:
    - An announced / not announced drill.

- A daytime / nighttime drill.
  - A muster (at all stations)
  - A recovering manoeuvre (with dummy / buoy)
4. Have a drill / manoeuvre / muster on .... (*date*).

### **Evacuation and Boat Drill**

1. Allocating / directing to assembly stations, describing how to escape
  - a. When the general emergency alarm is sounded which consists of seven blasts and one prolonged blast, all passengers have to go to their assembly station. Take your lifejackets and blankets with you. Lifejackets are stored in your cabins under your beds and at your assembly stations. You are encouraged to try on your lifejackets.
  - b. All passengers must put on:
    - Warm clothing
    - Long trousers, long-sleeved shirts / jackets
    - Strong shoes and head covering
  - c. All passengers with their lifejackets and blankets are requested to go to their assembly stations / the lounge / the ... immediately.
  - d. From your assembly stations you will be escorted to your lifeboats / liferafts.

- e. All passengers are requested to carefully study the safety instructions behind their cabin doors.
  - f. All passengers are requested to follow the escape routes shown
  - g. Do not use lifts / elevators.
  - h. All passengers are requested to strictly obey the instructions given by the officers or crew.
  - i. When you hear the abandon ship alarm which consists of *one prolonged and one short blast repeated continuously*, please act in the same manner as under the general emergency alarm.
  - j. During the voyage you may hear some other sound signals. There are exclusively for the information of the crew. Please, act only if you hear the general emergency alarm or the abandon ship alarm.
  - k. If you have any questions regarding safety, do not hesitate to ask any of the officers or crew.
2. Briefing on how to dress and what to take to assembly stations
- a. Take your lifejacket and a blanket.  
You will find your lifejacket under your bed.
  - b. Put on warm clothing, long-sleeved shirts, strong shoes and head covering whatever the weather. No high-heeled shoes.
  - c. Do not forget personal documents, your spectacles and medicine if necessary.



- d. Do not return to your cabin to collect your property.
3. Performing roll call
  - a. At your assembly station one of the officers / crew will perform a roll call.
  - b. The officer / crew will say “this is a roll call”, and s/he will call out the passengers individually by their names.
  - c. When your name is called out, please answer loudly “here”.
  - d. If one of your cabinmates is not able to attend the roll call, please inform the officer / crew immediately.
4. Briefing on how to put on lifejackets
  - a. *(dependent on type of lifejacket used)*
    - Pull the lifejacket over your head
    - Tighten the strings well
    - Pull the strings around your waist and tie in front
  - b. Follow closely the demonstration given by the officer / crew. The crew members will help you if necessary.
  - c. Carefully study the demonstration in the pictures in your cabins.
  - d. Carefully study the demonstration in the diagram at the assembly station.
5. Instructions on how to embark and behave in lifeboats / liferafts
  - a. Enter the lifeboat / liferaft only when ordered by an officer / lifeboatman.

- b. Clear the entrance of the lifeboat / liferaft immediately after entering.
  - c. Do not push each other when entering the lifeboat / liferaft.
  - d. Hold on to ropes or to your seat when lowering / hoisting.  
(TR244C, 2002)
  - e. Sit down in the lifeboat / liferaft immediately.
  - f. Keep your lifejackets on.
  - g. Provisions and drinking water will be distributed by an officer / lifeboatman only.
  - h. Strictly obey all instructions given by the officer / lifeboatman.
  - i. Discipline in the lifeboat / liferaft is of vital importance.
6. On-scene measures and actions in lifeboats / liferafts.
- a. Keep a sharp lookout for persons in the water.
  - b. Have a line / hook / knife / lifebuoy ready.
  - c. Do not take off your shirts / long trousers / head covering whatever the weather.
  - d. Pump out the water / free the lifeboat / liferaft from water.
  - e. Who needs medical first aid?
  - f. Everybody will get the same ration of provisions and water.
  - g. Warning! Do not drink sea water whatever the situation
  - h. We will send a MAYDAY
  - i. We will fire rockets / use smoke buoys / ..... to attract attention.
  - j. We will join the other lifeboat / liferaft.

## **F. Summary**

1. All three types of bearings may sometimes coincide, but such a situation is rare and of a temporary nature. Lookouts report objects in degrees of relative bearing.
2. An Officer On Watch / Officer of the Watch (OOW) is a deck officer who is assigned the duties of watchkeeping and navigation on a ship's bridge.
3. The relieving officer is an officer being entrusted to taking over the duties from OOW which familiarize with the ship's position, course, speed and engine controls.
4. Underway is the term used to express that the vessel is actually moving through the water, i.e making way through the water and thus responding to her rudder. (Rijeka, 2018)
5. A logbook (a ship's logs or simply log) is a record of important events in the management, operation, and navigation of a ship.
6. Rigging can be defined as everything on a sailboat or ship that holds the sails up, typically includes masts and ropes.
7. A coast (or coastal) radio station (short: coast station) is an on-shore maritime radio station which monitor radio distress frequencies and relays ship-to-ship and ship-to-land communications.

8. Assembly station has the same meaning as “muster station”, which means the location where crew / passengers must gather in emergency situations or when the order has been given by officers in charge. The assembly station is situated on the upper deck close to the rescue stations.
9. Lifeboatman means a seafarer who is qualified to take charge of, lower, and operate survival craft and related survival equipment on vessel.
10. The Maritime Rescue Co-ordination Centre (MRCC) is a co-ordination centre that has role to co-ordinate all available SAR resources to perform a maritime search and rescue mission.
11. Superstructure is the name given to the part of the ship that emerges from the deck. The superstructure on a ship’s front is commonly referred to as the “forecastle” or “foredeck”.
12. Manhole is a hole in a tank, boiler or compartment on a ship, designed to allow the entrance of a man for examination, cleaning and repairs. Manhole is a framed opening in the deck of a vessel which primarily provides access for a man.
13. Overboard means outside, over the side of a ship into the water. (Keimeno & Naytikoy, 2018)
14. Manoeuvre is defined as the inherent ability of a vessel to change its course/path.

15. Roll call refers to the process of calling out a list of names to determine who is present or absent.

## G. Activities

### Activity 1

**Write the types of sequence in each statement from the dialog below!**

- OOW : (.....) "Full astern starboard engine"  
QM : (.....) "Full astern starboard engine"  
QM : (.....) "Starboard engine full astern set, Sir/Ma'am"  
OOW : (.....) "Good job"

### Activity 2

**Complete the dialog below by using proper response!**

- OOW : "Dead slow ahead port engine"  
QM : (.....)  
QM : "Port engine dead slow ahead set, Sir/Ma'am"

OOW : (.....)

Activity 3

**Report the bearings "from the mark"!** (Committee, 1985)

Example:

Bearings	Mark	Report
127°	The signal station	"Your bearing is one-two-seven degree from the signal station"

No.	Bearings	Mark	Report
1	215°	The pilot boat	
2	035°	The sound signal	
3	147°	Barr Head lighthouse	
4	350°	Off-shore installation	
5	090°	Port entry	
6	115°	Canal transit	
7	268°	Ice-breaker escort	
8	020°	Receiving point	
9	125°	Reporting point	
10	300°	Sea buoy	

Activity 4

**Report the relative bearing "from the vessel"!**

Example:

<b>Mark</b>	<b>Bearing</b>	<b>Part of Vessel</b>	<b>Report</b>
The buoy	040°	Port bow	"The buoy is zero-four-zero degree on your port bow"

<b>No.</b>	<b>Mark</b>	<b>Bearing</b>	<b>Part of Vessel</b>	<b>Report</b>
1	Shallow water	015°	Starboard bow	
2	Submerged wreck	000°	Ahead	
3	Dangerous obstruction	180°	Astern	
4	Unknown object	270°	Port bow	
5	Floating ice	225°	Port quarter	
6	Towing line	135°	Starboard bow	
7	A boat	045°	Starboard quarter	
8	A vessel	315°	Port quarter	

9	An obscured area	060°	Port bow	
10	The inshore pilot station	075°	Starboard quarter	

Activity 5

**Practice the dialog below and present it in front of the class with your partner!**

*Script: Handing Over the Watch (Theodoridis & Kraemer, 2020)*

Outgoing: Chiefmate (C/M) Smith

Incoming: Thirdmate (3/M) Mark

*Scenario: It is now already 0745H and the Chiefmate is nearly done with his watch and the 3<sup>d</sup> mate is already on the bridge to do the relieving with the Chiefmate.*

3/M : Good morning Sir!

Mark

C/M : Good morning 3/m, you are right on time to relieve to our duty. I will brief you now the present condition of the vessel.

C/M : The vessel present position is latitude seven three degrees two one decimal nine minutes North, longitude zero zero eight degrees four four minutes East.



- 3/M : Copy Sir, the vessel's present position is latitude seven  
Mark three degrees two one decimal nine minutes North,  
longitude zero zero eight degrees four four minutes  
East.
- C/M : The vessel movement's True course is two seven zero  
Smith degrees. Gyro compass course is two seven zero  
degrees. Magnetic compass course is two seven zero  
degrees.
- 3/M : Copy Sir, the vessel movement's True course is two  
Mark seven zero degrees. Gyro compass course is two seven  
zero degrees. Magnetic compass course is two seven  
zero degrees.
- C/M : The vessel's draft is Draft forward is eight metres.  
Smith Draft aft is eight meters.
- 3/M : Copy Sir, Draft forward is eight metres. Draft aft is  
Mark eight meters
- C/M : We are currently in the traffic and always on your  
Smith guard.
- 3/M : Yes Sir!  
Mark
- C/M : A vessel is crossing from starboard side.  
Smith
- 3/M : Copy Sir, a vessel is crossing from starboard side. What  
Mark action should we take Sir?
- C/M : We will stand on.  
Smith
- 3/M : Yes Sir, we will stand on Sir.  
Mark
- C/M : Call the Master if any vessel passes with a CPA of less  
Smith than one decimal five miles.
- 3/M : Copy Sir, I'll call the Master if any vessel passes with a  
Mark CPA of less than one decimal five miles.
- C/M : Port and Starboard side radar is at three miles range  
Smith scale.

3/M : Copy Sir, Port and Starboard side radar is at three  
Mark : miles range scale.



## Activity 6

**Practice the dialog below and present it in front of the class with your partner!**

*Script: Pilotage*

*Scenario: The Captain (Capt) and the Third Officer (3/O) are on the bridge, while the Engine Room (E/R) is standing by on the radio.*

Capt : Have heaving line ready at pilot ladder.  
3/O : Copy Sir, heaving line ready at pilot ladder.  
Capt : Put on lights at pilot ladder position.  
3/O : Copy Sir, Put on lights at pilot ladder position.  
Capt : Stand by the pilot ladder.  
3/O : Copy Sir, the pilot ladder has Stood by.  
Capt : Lift up the pilot hoist.  
3/O : Yes Sir, the pilot hoist has lifted up.  
Capt : Make a lee on the starboard side.  
3/O : Copy Sir, Make a lee on the starboard side.  
Capt : Stop the engines until the pilot boat is clear.  
E/R : Aye, Capt. Stop the engines until the pilot boat is clear.  
  
Capt : Keep the pilot boat on the starboard side.  
3/O : Copy Sir, Keep the pilot boat on the starboard side.  
Capt : Rig pilot ladder on starboard side.  
3/O : Copy Sir, Pilot ladder is rigged on starboard side.  
Capt : Rig gangway combined with pilot ladder on starboard side.

3/O : Copy Sir, gangway is rigged combined with pilot ladder on starboard side.

**Activity 7**

***Put a Check on 'True' or 'False' about the Materials  
Related Hoisting and Rigging Below!*** (IHSA, 2020)

<b>No.</b>	<b>The Materials</b>	<b>True</b>	<b>False</b>
1	The core of wire rope is the center and serves to provide support and maintain the position of outer strands.		
2	When the red yarn shows through a worn area on the sling it is still useable.		
3	Synthetic web slings cannot be cut if used around sharp-cornered objects without a protective cover.		
4	Prior to use, the chain sling shall be visually inspected by conducting a link-by-link inspection.		
5	Shortening chain slings by bolting or inserting the tip of the hook into a link is permitted.		
6	To avoid brittle fractures, in temperatures less than 0°F, sudden loading of chain slings should be avoided.		
7	The operator/rigger when using a spreader beam, can have it loaded unequally, as a standard practice.		

8	Side pulls using a spreader beam is an acceptable practice.		
9	Prior to use the operator should visually inspect the lifteing device.		
10	The shackle pin should go on the crane hook whenever possible.		
11	The shackle shall not be used if the pin cannot be completely seated with hand pressure.		
12	Shouldered eyebolts can be used with angles to 45 degrees with a decrease in its capacity.		
13	Unshouldered eyebolts can be used for vertical and angular lifts.		
14	Eyebolts should have a minimum thread engagement between the eyebolt and its tapped hole of 1-1/2 times the diameter of the thread.		
15	Eyebolts should be pulled or loaded in the plane of the eye.		
16	To prevent tip loading, when using a sling with a hook attachment, the hook tip should point out and away from the load.		
17	To carry the rated load of a hook, the load should sit in the saddle of the hook.		
18	It's a good practice to use a shackle when two or more sling eyes are used on a hook to center the load on the hook.		
19	Wire rope clips must have the U-bolt section on the dead or short end of the rope.		
20	Wire rope clips will develop approximately 80 percent of the rope strength.		

21	Wire rope clips can be reused numerous times.		
22	When turnbuckles are used, they are designed as part of the rigging system.		
23	A person-in-charge (PIC) is required for a critical lift.		
24	To avoid additional stresses, quick changing of the velocity of the load should be performed when hoisting.		
25	To control the load, hand contact should be maintained.		
26	Protectors, softeners and blocking shall be used at sharp corners.		
27	The inspection tag is not required to be attached to sling.		
28	The weight of the load is not needed prior to the lift.		
29	High winds do not have any effect on outdoor rigging operations.		
30	Loads can be carried of left suspended over personnel.		
31	The lifting capacity of a synthetic web sling is the same for a straight, choker or basket hitch.		
32	When using a three or four legged bridle sling, the load is carried equally on each leg.		
33	High temperatures or very low temperatures (below 0 degrees F) have no effect on wire or synthetic slings when lifting loads.		
34	A hoist wire rope can be used as a ground for welding		

35	The hoist wire rope or chain can be used to wrap around the load for a lift.		
36	All controls shall be tested by the operator prior to operation of the hoist or crane at the beginning of the shift.		
37	When there is any question as to the safety of the activity, the crane operator has the authority to stop or refuse to handle loads.		
38	To avoid a side pull, the hook should be centered over the center of gravity of the load.		
39	Prior to use of the hoist or crane each day the operator shall perform a daily check of the equipment.		
40	If a load becomes unbalanced, lower and rebalance the load, it should not be lifted more than a few inches until it is properly balanced.		
41	The hoist-limit switch which controls the upper limit of travel of the load block shall never be used as a normal operation control.		
42	Load can be moved over personnel in the hoisting area.		
43	Work can be conducted under suspended loads under normal conditions.		
44	To reduce the load swinging when lifted the hook should be positioned over the center of gravity of the load.		
45	An ordinary lift with more than one person requires a designated leader.		



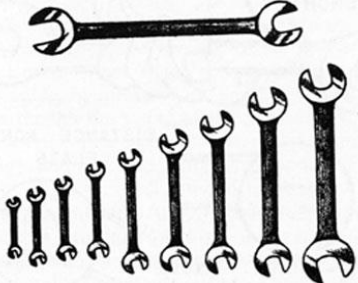
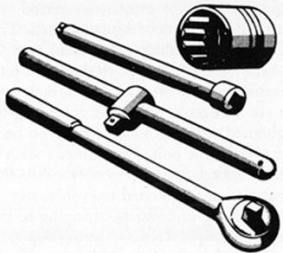
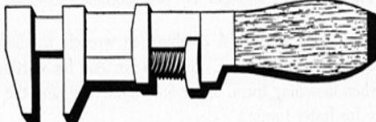

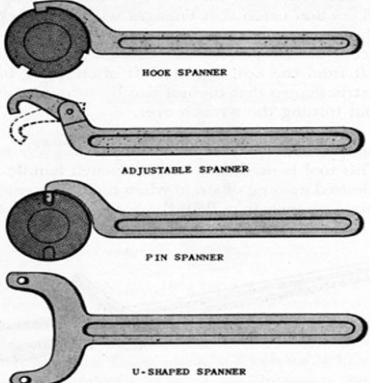
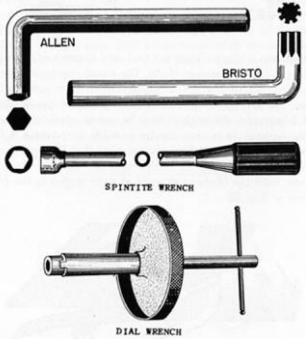
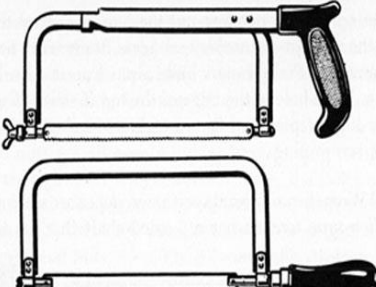
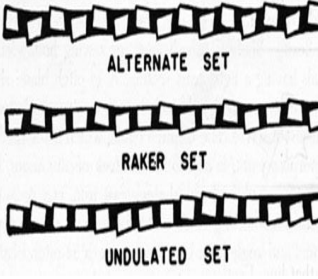
**Activity 8**

***Match these pictures with their descriptions!*** (Pekelney, 2020)

- a. Types of Pliers
- b. Screw Clamps
- c. Set of Open-End Wrenches
- d. Box-End Wrench
- e. Types of Screwdrivers
- f. Spanner Wrenches
- g. Punches
- h. Special Wrenches
- i. Shears and Snips
- j. Hacksaws
- k. Monkey Wrench
- l. Types of Hammers
- m. Types of Set
- n. Socket Wrenches
- o. Vises
- p. Nippers





5		13	
6		14	
7	 <p>HOOK SPANNER</p> <p>ADJUSTABLE SPANNER</p> <p>PIN SPANNER</p> <p>U-SHAPED SPANNER</p>	15	 <p>ALLEN</p> <p>BRISTO</p> <p>SPINTITE WRENCH</p> <p>DIAL WRENCH</p>
8		16	 <p>ALTERNATE SET</p> <p>RAKER SET</p> <p>UNDULATED SET</p>

Activity 9

***Practice the dialog of emergency situation below and present it in front of the class with your partner!***

- Ship : MAYDAY, MAYDAY, MAYDAY  
This is Manok, Manok, Manok.  
Call sign Hotel, Alpha, November, Sierra 5  
MMSI Number 256789347  
How do you read me? Over.
- Port Service : Motor Vessel manok, This is Port Service man. I read you excellent, loud and clear. Please switch to channel 1-2, over.
- Ship : Port Service man, I am going to switch to channel 1-2. (Switch to channel 1-2)  
Port Service, this is Motor Vessel Manok Call sign Hotel, Alpha, November, Sierra 5. Over
- Port Service : Motor Vessel Manok, this is port service go ahead.  
Over
- Ship : Port service, I'm on fire on engine room at position 3-2 degrees 1-5 minutes north, 1-2-4 degrees 2-4 minutes east. Over
- Port Service : Motor vessel Manok, do you carry dangerous goods? Over
- Ship : Port service, I do not carry dangerous goods, my cargo is steel products. Over
- Port Service : Motor vessel Manok, this is port service, is fire under control? Over
- Ship : Port service, the fire not under control and danger of explosion. Over
- Port Service : Manok, what is the assistance required? over

- Ship : Port service, we need firefighting and medical assistance. Over
- Port Service : Manok, we will send firefighting and medical assistance immediately and how many killed and injured person? Over
- Ship : Port service, no crew was killed, but 5 crew were injured. Over
- Port Service : Manok, your message understood. You must standby at channel 1-6 and 1-2. Over
- Ship : Standby at channel 1-6 and 1-2. Out



**Activity 10**

***Practice the emergency announcement below and present it in front of the class individually!***

Attention please! Attention please!

This is your captain speaking. I have an important announcement. The fire is not under control yet. There is smoke formation in the engine room – acces to this area is prohibited. For safety reasons, we request all passengers to prepare to go to their assembly stations. Access to the assembly stations will be via stair A. do not forget to take your lifejackets and blankets with you.

All passengers of deck no.2 are requested to follow the crew members who will escort you to your assembly stations. When you get to your assembly stations, put on your lifejackets and wait for further orders.

Go to your lifeboats stations. Follow the escape route shown. The order to enter the lifeboats will be given from the bridge by the officers. We have just received a message from other vessel that assistance is on the way. Assistance should arrive within approximately 2 hours.



**Activity 11**

***Choose a topic from the list below and develop it to be presented in front of the class!***

Why the sea should be protected?

1. The sea provides climate regulation
2. The sea provides foods
3. The sea provides jobs
4. The sea provides livelihoods
5. The sea provides economic progress
6. The sea is essential for the health of planet Earth
7. The sea is protecting biodiversity
8. The sea generates about half of the planet's oxygen
9. Every person in the planet relies on the sea
10. The ocean absorbs more than 90% of the world's heat and a quarter of global greenhouse gas emissions.

## Activity 12

***Choose one of the topics below, make a dialog, and role play information change about the dialog as a crew on board!***

1. Travel and destination: Discussing the various favorite travel experiences, ports destinations, recommendations activities in different destination places, etc.
2. Cultural exchange: Share stories and insights about your own culture, discuss traditions, festivals and cultural customs.
3. Food and cuisine: talk about the different types of cuisine from your countries or regions.
4. Language learning: discuss language learning experiences, exchange language tips, speaking in different languages.
5. Crew life: share experiences and challenges of working on a ship, discuss work schedules, job roles, and tips for managing the demands of ship life.
6. Career aspirations: talk about career goals, share insights on career advancement and opportunities.
7. Wellness and fitness: exchange tips on staying healthy and fit while working on the ship, discuss exercise routines, nutrition and stress management techniques.

8. Crew events and parties: talk about upcoming events, themes, and ways to get involved.
9. Music and dance: discuss musical preferences, dance styles, favorite songs, and so on.
10. Hobbies and interests: share your hobbies and interests outside of work, share your passions.

### **FORMATIVE ASSESSMENT UNIT 2**

***A. Choose one correct answer from the five options; a, b, c, d or e below on your answer sheet.***

1. “Full ahead both” means ....
  - a. Minimum speed for two engines
  - b. Operating two engines
  - c. Maximum speed for two engines
  - d. Starboard and portside engines
  - e. Both engines turn on
  
2. “Dead slow astern” means ....
  - a. Engines are slow
  - b. Reverse very slow
  - c. Stop the engines
  - d. Stop portside engine
  - e. Stop starboard engine

3. "Stand by engine" means .....
- a. Get ready
  - b. Turn on portside engine
  - c. Turn on starboard engine
  - d. Turn off portside engine
  - e. Turn off starboard engine
4. "No engine revolution".  
What is the type of order above?
- a. Wheel order
  - b. Compass order
  - c. Bridge order
  - d. Deck order
  - e. Engine order
5. Who is reporting bearing on a vessel?
- a. OOW
  - b. QM
  - c. Master
  - d. Lookouts
  - e. Cadet

6. To whom relative bearing is reported?
  - a. The officer of the engine
  - b. The captain
  - c. The chief engineer
  - d. The officer of the deck
  - e. The superintendent
  
7. The gangway is slippery. What do you say to passenger?
  - a. One by one, please
  - b. Big step up, please
  - c. Hang on, please
  - d. Be careful, please. The gangway is slippery
  - e. Watch your step, please
  
8. In case of emergency situation, how does the abandon ship alarm sound?
  - a. 1 short and 7 long blast
  - b. 1 short and 1 long blast
  - c. 7 short and 7 long blast
  - d. 7 long and 1 short blast
  - e. 7 short and 1 long blast



9. What is the name of Personal Protective Equipment below?



- a. Welding shield
- b. Breathing apparatus
- c. Safety goggles
- d. Helmet
- e. Safety glasses

10. Protects from: non-toxic, heavy dust particles such as some cargo dusts and abraded paint dust.

What is the PPE suitable for description above?



- a.



b.



c.



d.



e.

11. What is the function of PPE below?



- a. Protects from: non-toxic, heavy dust particles such as some cargo dusts and abraded paint dust.
- b. Protects from: falling objects, swinging lines, hair entanglement, chemical, paint and hot water drips.
- c. Protects from: arc welding light, radiation and splatter (also, a flame retardant scarf and apron should always be worn when arc welding).
- d. Protects from: insufficient oxygen environments, harmful dusts, fogs, smokes, mists, gases, vapors, and sprays.
- e. Protects from: loud noise by reducing the level of sound reaching the ears.

***The text for No. 12 & 15***

**Pan pan, Pan pan, Pan pan**

**All stations, all stations, all stations**

**This is** two-five-nine-eight-nine-six-zero-zero-zero Motor Tanker Doris

**Call sign** lima alfa golf papa five

**Position** four five degrees four six minutes north zero zero one degrees three zero minutes west

I have problems with engines, heavy fishing net has fouled my propeller, I am drifting towards mile rock due to a current of three decimal five knots

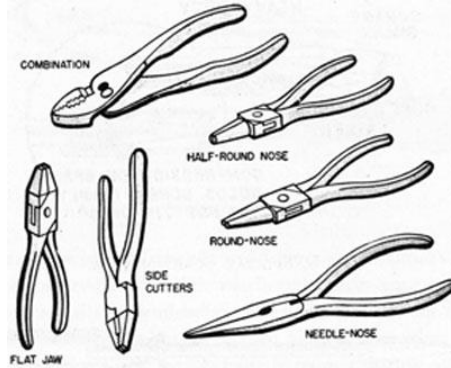
**Out**

12. What kind of signal does the text about?
  - a. Distress message
  - b. Safety message
  - c. Urgency message
  - d. Emergency message
  - e. Short message
  
13. What is the type of communication happened in the text above?
  - a. Shore to ship communication
  - b. Ship to ship and shore communication
  - c. Internal communication
  - d. Ship to shore communication
  - e. On board communication
  
14. What type of emergency situation stated in the text?
  - a. Grounding
  - b. Electrical problem
  - c. Collision
  - d. Man overboard
  - e. Drifting

15. Is MT. Doris waiting for stations to reply her message?
- No, she is not
  - Yes, she is
  - No, he is not
  - Yes, he is
  - No, it is not

***B. Fill the blanks with the correct answers on your answer sheet.***

- The sequence in giving standard wheel orders or standard engine order is .....
- An example of 'acknowledgement' given by the Con is .....
- Message marker of SMCP which indicates that the following message implies the intention of the sender to influence the recipient(s) by a regulation is called .....
- The engine order for "no engine revolutions" is .....
- Emergency messages (distress, urgency and safety message) repeated ..... times
- Bearing may be either from ..... or from .....
- The bearing that expressed to the vessel's head or bow is called .....
- The tool below is called .....



9. One of the challenges for multi-cultural crew on board is ....
10. One of the solutions for multi-cultural crew problems on board is ....

**C. Answer the questions below by your own words.**

1. Why the sea should be protected? Mention 3 reasons!
2. What are the issues regarding multicultural crew on board? Mention 3 issues!
3. What are the solutions for the issues regarding multicultural crew on board? Mention 3 solutions!
4. What are the common practices of seamen at sea? Mention 3 practices!
5. What information should be reported by the lookout to the OOW when performing watch duty? Mention 3 things!

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# GLOSSARY

No	Term	Description
1	Acknowledgment	An expression of appreciation to person who complete the order
2	Adrift	Floating without being either moored or steered
3	Ahead / Bow	In front of the ship/vessel/boat
4	Astern	Behind a ship/vessel/boat
5	Ballast	Give stability to a ship by putting a heavy substance in its bilge
6	Beam	The entire breadth of the vessel or a measure of the width of the ship
7	Blackout	A situation where the main engine and auxiliary machinery installations, including the main power supply, are out of operation
8	Breakdown	A system or a mechanical failure on board

No	Term	Description
9	Cardinal point	One of the four principal points of the compass
10	Centigrade	A scale for measuring temperature, in which water freezes at 0 degrees and boils at 100 degrees
11	CO (Conning Orders)	It is used for course alterations of less than 100. Conning Order = Direction + Course to steer
12	Course alteration	To bring a sailing vessel into the wind and change to another tack
13	CPA (Closest Point of Approach)	An estimated point in which the distance between the own ship and another object target will reach its minimum value
14	Cross-Cultural	Dealing with comparison between two or more different cultures or cultural areas
15	Damp	Slightly wet

No	Term	Description
16	Disembark	To remove to shore from a ship To unload (passengers or goods) from a ship
17	Draught	The draught or draft of a ship's hull is the vertical distance between the waterline and the bottom of the hull (keel)
18	Duty	A responsibility, a task or action that someone is required to perform
19	Embark	To begin a journey on a ship
20	ETA	Estimated Time of Arrival
21	Execution	The carrying out or putting into effect of a plan, order, or course of action
22	GPS	Global Positioning System, that is a U.S.-owned utility that provides users with positioning, navigation, and timing services

No	Term	Description
23	GT	Gross Tonnage, that is a nonlinear measure of a ship's overall internal volume
24	Handling	The art of proper control of a ship while underway, especially in harbours, around docks and piers.
25	Hazard	Any source of potential damage, harm or adverse health effects on something or someone
26	Helmsman	A person who steers a ship, sailboat, submarine or other type of maritime vessel (a.k.a steersman)
27	Hoisting	To lift something heavy by means of ropes and pulleys
28	hPascal	(Hectopascal) The modern replacement unit for the millibar. 1 hPa = 1 millibar = 1000 of a bar
29	ID Card	Identification Card / Identity Card

No	Term	Description
30	Illegible	A card that has your name and other information about someone that often includes the photograph Impossible, not legible, unreadable or hard
31	IMDG Code	(International Maritime Dangerous Goods) Code, was developed as an international code for the maritime transport of dangerous goods in packaged form
32	IMO	International Maritime Organization
33	IMO Class	International Maritime Organization classes for Dangerous Goods
34	Incinerating	To burn something, especially waste material, until it is completely destroyed

No	Term	Description
35	INMARSAT	INTERNATIONAL MARITIME SATELLITE COMMUNICATIONS (between a ship and a land station or between ships)
36	ISPS Code	International Ship and Port Facility Security Code, that is a comprehensive set of measures to enhance the security of ships and port facilities
37	Kilopond	The force exerted by a mass of one kilogram in the standard gravitational field (e.g. at the surface of the earth)
38	Kilowatt	A unit of power. One kilowatt is a thousand watts.
39	Knot	In reference to currents, is defined as 1 Nautical Mile (NM) per hour It is used to measure speed. 1 NM = 1.15 Miles = 1.85 KM

No	Term	Description
		1 Knot = 1.15 miles/hour = 1.85 KM/hour
40	Landmark	A prominent or conspicuous object on land that serves as a guide, especially to ships at sea
41	Latitude	A measure of relative position north or south on the Earth's surface which measured from 0 <sup>0</sup> to 90 <sup>0</sup>
42	Latter	The second one of two person that have been mentioned  (of a container or covering)
43	Leaking	accidentally losing or admitting contents, especially liquid or gas, through a hole or crack
44	Leeway	The distance (or angle) a boat drifts off course to leeward due to the sideways force of the wind
45	Livelihood	A means of making a living



No	Term	Description
46	LNG-Tanker	A tank ship designed for transporting Liquefied Natural Gas (LNG)
47	Longitude	A measurement east or west of the prime meridian
48	Lookout	A place from which to keep watch or view landscape A person stationed to keep watch for danger or trouble
49	LORAN	(LONg RANge Navigation), is long-based system of radio navigation
50	Luggage	The suitcases and bags that you take with you when travel
51	Mandatory	Required by law or rules; Compulsory; Authoritatively ordered; obligatory;
52	MAREP POSREP	(MARitime REPort; POSition REPort)

No	Term	Description
53	MARPOL	(MARine POLLution), is the main international convention that addresses the different types of pollution from ships operating around the world
54	Master	(a.k.a Captain), person who is in overall command of all personnel and operations aboard the ship
55	Millibars	(mbar) A unit of air pressure in the metric system
56	Miscellaneous	Composed of or containing a variety of things; mixed; varied
57	Mouldy	Covered with a mold/fungal growth that causes decay, due to age or damp conditions
58	MT	(Motor Tanker), Tanker ships that carry any kind of liquid
59	Multicultural	Consisting of or relating to people of many different nationalities and cultures

No	Term	Description
60	Multilingual	Able to speak more than two languages
61	MV	(Motor Vessel, a.k.a MS = Motor Ship), A ship propelled by an internal combustion engine. (Merchant Vessel), is a ship that operates under commercial means
62	Navigation	The act of directing a ship from one place to another; planning, managing and directing a vessel's voyage
63	NAVTEX	(NAVigational TeLEX), The primary means for transmitting coastal urgent marine safety information to ships worldwide
64	NM	(Nautical Miles), It is used to measure the distance traveled through water; represents the distance of one of these minutes of latitude

No	Term	Description
65	Nylon seals	Category of indicative seals
66	OILPOL	The International Convention for the Prevention of Pollution of the Sea by Oil (1954)
67	OPRC	International Convention on Oil Pollution Preparedness, Response, and Co-operation (1990)
68	Overtaking	Coming up from a direction more than 22.5 <sup>0</sup> abaft of another vessel
69	PA Announcement	(Public Address) Announcement, that is an announcement comes from Public Address System (an equipment for command communication on a vessel)
70	Passing	Move or cause to move in a specified direction
71	Polluter	A person or thing responsible for contaminating the environment with harmful or poisonous substances

No	Term	Description
72	Portside	On the port side of a vessel
73	Propulsion	The mechanism or system used to generate thrust to move a watercraft through water
74	Quarter	The after parts of the ship on each side of the centerline
75	QM	(Quarter Master), is a navigational expert who assists the ship's chief navigator, keeps navigational charts and equipment in working order, and can serve as helmsman if called upon
76	Radio coast station	A radio station established on land and used for the purpose of carrying on a radio communication service with and for the benefit of ship stations
77	Ratings	Skilled seafarers who carry out support work for officers in all departments

No	Term	Description
78	Re-ignition	The act or process of something starting to burn again
79	Relieving	Release (someone) from duty by taking their place
80	Renailed	To nail something again
81	Repetition	The action of repeating something that has already been said or written
82	Report	To give a description of something or information about it to someone
83	Resewn	To sew (something) again or anew To unite (something) again with stitches
84	Rusty	(of a metal object) affected by rust
85	Seamen	(a.k.a. sailor/seafarer/mariner) a member of a marine watercraft's crew
85	Seasickness	Nausea and dizziness, something accompanied by vomiting, resulting from the rocking or

No	Term	Description
		swaying motion of a vessel in which one is travelling at sea
87	Slack	Loose or not tight
88	SMCP	Standard Marine Communication Phrases, Standardize the language used in communication for navigation at sea, in port-approaches, in waterways, harbours and onboard vessels with multilingual crews
89	Starboard	The right side of a ship
90	Stretcher	A device for transporting the ill, wounded, or dead, consisting of a frame covered by canvas or other material
91	Telegraph	A communicating device to transfer orders of change in speed or direction from the bridge to the engine control room

No	Term	Description
92	Thermal Protective Aid (TPA)	An aluminized polyethylene suit with heat sealed seams that protects from the elements and prevents hypothermia
93	Transshipment	The shipment of goods or containers to an intermediate destination, then to another destination
94	Ullage	The empty space in large containers transporting liquids or bulk solids. It is also called headspace.
95	Underkeel	The vertical distance between the bottom of the ship and the seabed
96	UTC	(Universal Time Coordinated) also stands for Coordinated Universal Time, a standard used to set all time zones around the world
97	VHF DSC	Very High Frequency Digital Selective Calling, marine radio which can be very useful for



No	Term	Description
		recreational boaters in routine communication between boats, and between boats and the Coast Guard
98	Vicinity	The area near or surrounding a particular place
99	VTS	(Vessel Traffic Services) are shore-side systems which range from the provision of simple information messages to ships
100	Walkie-Talkie	A small portable radio set for receiving and sending messages
101	Watchkeeping	The duty or function of keeping watch on a ship
102	Watchkeeping officer	(OOW), a deck officer who is assigned the duties of watch keeping and navigation on a ship's bridge

<b>No</b>	<b>Term</b>	<b>Description</b>
103	Waterway	A canal, river, or narrow channel of sea which ships or boats can sail along
104	Way point	A stopping place on a journey
105	Windward	The side or direction from which the wind is blowing

# INDEKS

---

## **A**

Acknowledgment · 105  
Adrift · 29, 70, 105  
Ahead / Bow · 105  
Astern · 2, 14, 17, 87, 105

---

## **B**

Ballast · 25, 26, 76, 105  
Beam · 105  
Blackout · 105  
Breakdown · 105

---

## **C**

Cardinal point · 105  
Centigrade · 105

---

## **D**

Damp · 105  
Disembark · 105  
Draught · 106  
Duty · 106

---

## **E**

Embark · 106  
ETA · 21, 23, 106  
Execution · 3, 106

---

## **G**

GPS · 23, 106  
GT · 106

---

## **H**

Handling · 106  
Hazard · iv, 31, 32, 33, 106  
Helmsman · 2, 3, 6, 7, 8, 9, 11,  
12, 13, 18, 106  
Hoisting · 89, 103, 104, 106  
hPascal · 24, 106

---

## **K**

Kilopond · 107  
Kilowatt · 107  
Knot · 107

---

**L**

Landmark · 107  
Latitude · 21, 107  
Latter · 107  
Leaking · 107  
Leeway · 107  
Livelihood · 107  
Longitude · 108  
Lookout · 20, 104, 108  
LORAN · 23, 108  
Luggage · 108

---

**M**

Mandatory · iii, iv, 31, 46, 108  
MAREP POSREP · 23, 108  
MARPOL · 108  
Master · 23, 25, 26, 27, 88, 98,  
108, 109  
Millibars · 108  
Miscellaneous · 18, 108  
Mouldy · 108  
MT · 29, 30, 101, 108  
Multicultural · 103, 108  
Multilingual · 77, 108  
MV · 29, 74, 75, 108

---

**N**

Navigation · 23, 108  
NAVTEX · 23, 109

NM · 107, 109  
Nylon seals · 109

---

**O**

OILPOL · 76, 109  
OPRC · 76, 109  
Overtaking · 22, 109

---

**P**

PA Announcement · 109  
Passing · 18, 22, 109  
Polluter · 109  
Portside · 11, 79, 109  
Propulsion · 109

---

**Q**

QM · 17, 18, 85, 86, 98, 109  
Quarter · 109

---

**R**

Radio coast station · 109  
Ratings · 110, 115  
Re-ignition · 81, 110  
Relieving · 20, 110  
Renailed · 110  
Repetition · 3, 110  
Report · 3, 4, 11, 15, 20, 78, 86,  
87, 110  
Resewn · 110

Rusty · 110

---

**S**

Seamen · 78, 110

Seasickness · 110

Slack · 110

SMCP · 15, 16, 21, 29, 101,  
103, 110

Starboard · 2, 3, 5, 7, 13, 17, 18,  
20, 85, 87, 88, 97, 110

Stretcher · 33, 34, 110

---

**T**

Telegraph · 110

Thermal Protective Aid (TPA) ·  
111

Transshipment · 111

---

**U**

Ullage · 111

Underkeel · 22, 111

UTC · 21, 23, 24, 25, 26, 111

---

**V**

VHF DSC · 23, 111

Vicinity · 111

VTS · 23, 111

---

**W**

Walkie-Talkie · 111

Watchkeeping · 20, 103, 111

Watchkeeping officer · 111

Waterway · 111

Way point · 21, 111

Windward · 111

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Buku Ajar

# MARITIME ENGLISH

FOR RATINGS FORMING

Based on IMO Model Course 3.17

Buku "Maritime English for Ratings Forming" adalah panduan komprehensif yang didasarkan pada Kurikulum Model IMO 3.17, dirancang khusus untuk ratings yang sedang membentuk karir mereka di industri maritim. Buku ini menawarkan berbagai materi yang mencakup situasi dan kosakata yang relevan dengan kehidupan di atas kapal, memungkinkan pembaca untuk mengembangkan keterampilan berbahasa Inggris mereka dengan mudah dan efektif. Dengan fokus pada kejelasan dan kemudahan komunikasi, buku ini bertujuan untuk mempersiapkan para ratings untuk tantangan dunia maritim dengan memberikan pemahaman yang kuat tentang bahasa Inggris yang diperlukan dalam lingkungan kerja mereka.

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