10.1 PROJECTS:
NAVIGATION
First Phase

Appendix 3

IMU

DECK CADET

STRUCTURED SHIP BOARD TRAINING PROGRAMME

PROJECT FILE

NAME: ANUPAM KUMAR SINGH

IMU ENROLMENT No. 1642813007

INDoS No. 16NL2240

Deck Cadet Record Book No. 29101815

DATE: From - 26.12.2018

To - 18.05.2019

Pl

PROJECT WORK

INDEX

Sr. No	PROJECT NAME	Page Nos.	Date
1.	Draw a plan showing the Layout of the Navigation Bridge and Equipment		25.01.2019
2.	Draw the radar shadow/blind sector and describe the procedure for testing the performance of the RADAR/ARPA. Observe and record the		
	performance monitor reading and compare them with the original reading.		12.04.2019

17.05.2019

STO Signature,date and stamp to be taken prior sign off from each ship:

Project Work

NAME:- Anupam Kumar Singh

BATCH NO:- IMU-36

ROLL NO:- 3607

E.C. NO:- 597520

CDC NO:- MUM280594

PHASE:- FIRST PHASE

PROJECT TOPIC:- 10.1 : NAVIGATION

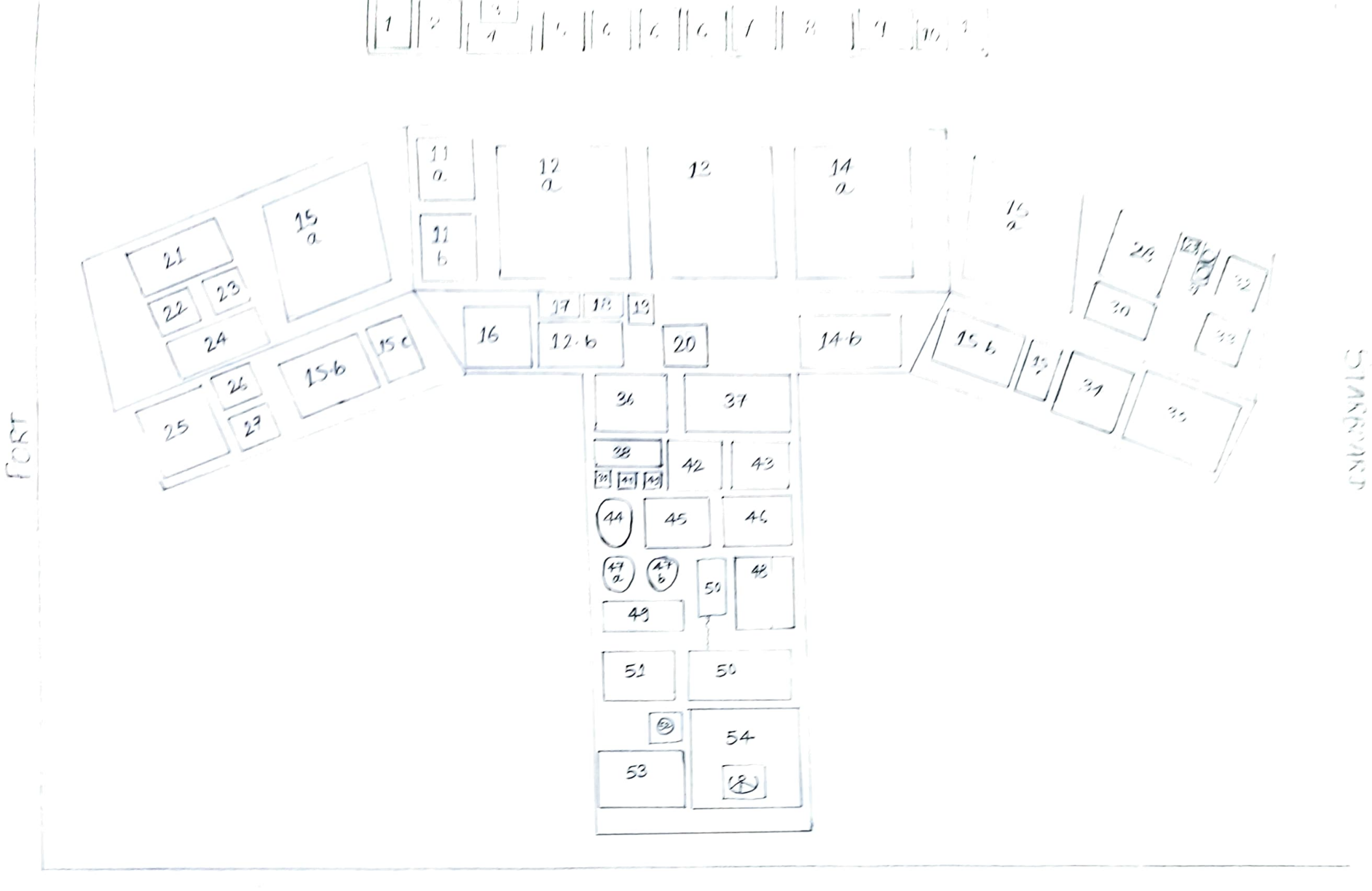
PROJECT NO:- 10.1(1)

STO SIGN

CHIEF OFFICER
SCI NALANDA

PROJECT NAME:-

(1) Draw a plan showing the layout of the Navigation Bridge and equipment


11 a
11 b
12 a
12
14 a
15 a
21
22
23
24
25
26
27
15 b
15 c
16
17
18
19
12 b
20
14 b
36
37
38
42
43
44
45
46
47 a
47 b
48
49
50
51
52
53
54
FOST

STARBOARD

58

59

60

57

56

55

CHART TABLE

62

61

BRIDGE COMPUTER

& PRINTERS

DOOR

FILES &

MANUAL

PORT

1 Auto telephone no. list

2 External light switch panel

3 Speed log remote display

4 Sound signal main display unit

5 Wind indicator (Anemometer)

6 Indicator panels - Thrusters

7 Analog gyro repeater

8 Ship's information :- SCI NALANDA
CALL SIGN - AVFV
MMSI NO : 419000126

9 GPS - 2

10 Air whistle signal controller.

11 Emergency engine telegraph

(a) Engine telegraph port propulsion

(b) Engine telegraph starboard propulsion.

12 S-Band Radar

(a) S-Band Radar Display

(b) S-Band Radar Keyboard

13 Conning Display

14 X-Band Radar

(a) X-Band Radar Display

(b) X-Band Radar Keyboard

15 ECDIS

(a) ECDIS Display

(b) ECDIS Keyboard

(c) ECDIS Trackball

16 Portable Joystick

17 Gyro - 3

18 Gyro-1 & 2
19 Gyro Change Over Switch
20 Helicon X3 Touch Screen Unit
21 PMS Panel
22 Compass light (emergency)
23 Compass light 230V
24 GMDSS Alarm Panel
25 Aero VHF
26 AIS Pilot Plug
27 Plug box for Command System
28 Echosounder main display
29 Echosounder Alarm Reset
30 Speedlog main Display
31 Windlass pump
32 General Alarm
33 Manual call point
34 Cold store alarm panel
35 Navigation light controller
36 DP system mode selector switch
37 Auto pilot main unit
38 Thrusters emergency stop P.B.
39 Typhone P.B
40 Man overboard P.B
41 Banwas reset P.B
42 Search light main control panel
43 MIC for PA (public address system)
44 BT (Bow Thruster Double Levers)
45 BANWAS Terminal Unit

46 Rolls-Royce Marine System
47 Main propulsion lever
a Port
b Starboard
48 Auto Telephone
49 UHF Station
50 VHF No.1
51 Sound powered telephone
52 Spot light
53 Window wiper panel
54 Rudder control panel
55 AIS
56 GPS-1
57 Navtex
58 GMDSS No.1
59 GMDSS No.2
60 Inmarsat-C
61 Fire Control Panel
62 W/T Door Alarm Panel.

Project Work

NAME:- Anupam Kumar Singh

BATCH NO:- IMU-36

ROLL NO:- 3607

E.C. NO:- 597520

CDC NO:- MUM280594

PHASE:- First Phase

PROJECT TOPIC:- 10.1 : Navigation

PROJECT NO:- 10.1(2)

STO SIGN

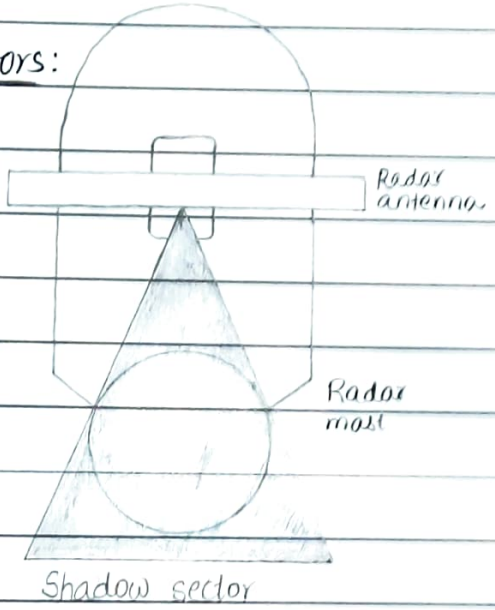
CHIEF OFFICER
SCI NALANDA

PROJECT NAME:-

(2) Draw the radar shadow/blind sectors and describe the procedure for testing the performance of the radar/ARPA Observe and record the performance monitor reading and compare them with the original readings.

2) Draw the radar shadow/blind sectors and describe the procedure for testing the performance of the RADAR/ARPA Observe and record the performance monitor reading and compare them with the original readings

Shadow sectors:



Funnels, stacks, masts, or derricks in the path of antenna block the radar beam. If the angle subtended at the antenna is more than a few degrees, a non-detecting sector may be produced. Within this sector, targets can not be detected.

Performance monitor of RADAR:-

A performance monitor is required for a radar installed on vessels of 300 GT and upward engaged in international voyages. Two units are available:

X- Band radar : PM-31 (9410 ± 45 MHz)

S- Band radar : PM-51 (3050 ± 30 MHz)

The performance monitor is incorporated in the antenna unit

(A) Activating the performance monitor

(1) Roll the track ball to [MENU] box & left click to open the menu.

(2) Roll the track ball to 1[ECHO] & left click to open the Echo menu.

[ECHO]
1 BACK
2 2ND ECHO REJ OFF/ON
3 TUNE INITIALIZE
4 PM OFF/ON
5 SART OFF/ON
6 WIPER OFF/1/2
7 ECHO AREA CIRCLE/WIDE/ALL
8 [PICTURE SELECT]
9 STC RANGE +00

(3) Select 4 PM

(4) Roll the track ball to OFF/ON & left click on ON to activate the performance monitor.

(5) Push the right button twice to close the menu.

"PM" appears on the display when the performance monitor is active.

(B) Checking the radar performance

(1) The radar is automatically set up as follows:

Range: 24 NM

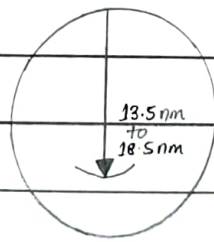
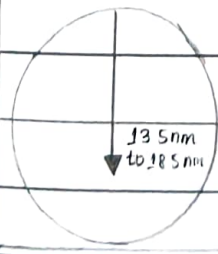
Pulselength: Long

Shadow sector: Off

A/C SEA: Off
A/C RAIN: Off
Echo Stretch: Off
Echo Average: Off
Video Contrast: 2-B
Tune: Auto
Gain: Initial setting

(2) The range scale is automatically set to 24 NM. The radar screen will show one or two arcs. If the radar transmitter and recievers are in good working condition in as much as the original state when the monitor was turned up, the innermost arc should appear beetween 13.5 to 18.5 NM. In my radar, the dia of innermost arc is 14.35 NM & dia of outermost arc is 15.40 NM.

The performance monitor can observe a total of 10 dB loss in transmitter and reciever.

Display	Radar State
	Transmitter : normal Reciever : normal
	Transmitter and reciever: No arc is indication of 10 db loss. Replacement of the magnetron is necessary

(C) Deactivating the performance monitor

(1) After observing the result, turn off the performance monitor.
For that, repeat A-1, 2, 3

(2) Roll the track ball to OFF/ON & left click on OFF to deactivate the performance monitor.

(3) Push the right button twice to close the menu.

10.1 PROJECTS :
NAVIGATION
Second Phase

Appendix 3

IMU

DECK CADET

STRUCTURED SHIP BOARD TRAINING PROGRAMME

PROJECT FILE

NAME: ANUPAM KUMAR SINGH

IMU ENROLMENT No. 1642813007

INDoS No. 16NL2240

Deck Cadet Record Book No. 29101815

DATE: From - 12.09.2019

To - 19.08.2020

SWARNA MALA
CHIEF OFFICER

Pl

PROJECT WORK

INDEX

Sr. No	PROJECT NAME	Page Nos.	Date
3.	Describe the procedures for correction of navigational charts and publications - ALRS, ALL, Sailing directions.		02.02.2020
4.	Describe activities on the bridge for arrival and departure		25.03.2020

STO Signature,date and stamp to be taken prior sign off from each vessel :

Date: 31.03.2020

Project Work

Name :- Anupam Kumar Singh

Batch No :- IMU-36

Enrol. No :- 1642813607

INDOS No :- 16NL2240

PHASE :- II

Project No :- 10.1(3)

Project Topic:- NAVIGATION

STO SIGN

PROJECT NAME:-

(3) Describe the procedure for correction of navigational charts and publications - ALRS, ALL, Sailing Directions. Correct these publications on atleast one occasion under the supervision of the officer concerned.

M.T. SWARNA MALA

The procedure for correction of navigational charts:

For correction of charts, it is essential to know the publication required as follows:-

* NP133A - chart correction log:

It contains the list of the charts numerically & used to record the updates. Once the NM's are recieved, one should identify charts affected & record respective notice number in front of chart affected in NP133A. Also date of New edition/chart is to be entered as permanent record. (Sample page of NP133A is attached at the end of this project)

* 5011 (Symbols & abbreviations used on Admiralty charts:- It is used as a guide while updating charts. It consists of symb-ols & abbreviation used on admiralty charts.

* Weekly notices to mariners:-

Section II of weekly notices to mariner consist of chart correction which are to be applied on new edition/new chart being published & available. Also charts which are drawn permanently are also included in notices to mariners.

* NP234 (Cumulative list of Admiralty Notices to Mariner):

It is published twice a year. 1st in January which contains all NM number published in previous two year & 2nd in July which contains all NM number published in

previous 2½ years. If no notice has been issued during the past 2 years, the most recent notice affecting the chart concerned is quoted. It contains dates of latest edition of chart in admiralty series.

* NP247 (Annual Summary of Admiralty Notices to Mariners):-

It is published in January every year which contains text of all Notices to Mariners used in that year. It also includes reprint of T&P notices inforced in beginning of year & reprint of ammendments to ASD that have been issued since publi-cations of latest edition or supplements.

● Procedure for correction of charts

- One must quickly refer to those pages dealing with updates to charts.
- Index of chart affected should be referred to identify those charts in our stock which are to be updated.
- Corresponding notice no. should be entered in chart correction log.
- Once the notices no. are logged in NP133A, those notice no. which are affecting charts of voyage must be updated first.
- 1st notice should be read and understood, then the position referred in notice must be plotted in respective chart & then appropriate symbol must be inserted besides position.
- If some notes are to be inserted onto the charts or some content of chart has to be deleted should be only done by chart correction pen
- Recheck what you have done to make sure you have applied

the corrections correct.

- When correction is applied onto the chart, then write the respective NM number in bottom left corner of charts as a record of completed updates.
- Also the NM no. written in NP133A infront of respective chart must be cancelled.
- When inserting the NM number onto the chart, check wheather chart is upto-date or not with the help of NP234. If not then update the chart.

* Temporary & Preliminary Notices to Mariners:-

- These notices are placed at end of section II of NM & printed only on one side of page, so that they can be teared off & filled.
- Temporary notices warn about temporary changes in aids to navigation or hazards to nature or naval exercise or dredging.
- Preliminary notices consist information of new permanent develo-pment e.g. harbour works, bridge etc.
- T&P notices affecting your stock on-board must be inserted onto charts in penal & NM corresponding to T&P.

Procedure for correction of ALRS:

- Each week there are changes affecting the volume of ALRS mention in section VI of notices to mariner.
- These information is printed on one side of page so that it can be cut & pasted onto respective place in ALRS volume.
- Page number & affected volume is mentioned at top.

- So one must cut correction & paste it on respective page of corresponding volumes.
- After applying correction to particular volume, the date ammended should be written infront of notice number on back cover page.

Procedure for correction of ALL:

- Updates to all the list of lights are given in section V of notices to mariners.
- The entire entry for each light updated are intended to be cut out and pasted into the appropriate volume.
- An asterisk(*) will denote which column contains a change.
- In the case of a new light, or where a new sequence is added below the main light, an asterisk(*) will appear under all columns.

Procedure for correction of ASD:

- Updates to all Sailing Direction are given in Section IV of ADMIRALTY NOtices to Mariners.
- Correction of ASD consist of NP(no.) followed by area & edition.
- This is followed by page no. paragraph no. & no. of lines to be replaced. (E.g - 154 Paragraph 5.84.i Lines 1-2 Replace by:)
- These corrections are present on one side of a page & can be cut & fitted seperately for easy reference when referring to chapter of ASD.
- These corrections are not pasted onto ASD.
- When any ASD publication is ammended notice number affecting ASD are written below year column on back of cover page.

END

* This page from NP133A is used for example for project 10.1(3)

Chart No.	Folio Nos.	Notices to Mariners affecting chart	Navigational Warnings	Temporary and Preliminary Notices
5336 A				
5336	25.03.2011 (Ed. 2)	2009-6940-2011-509		
5374				
5375	April 2018	2019-2761		2440(T)/18, 4475(T)/18
5376				
5377				
5383				
5384				
5385				
5399				
5500	31.04.2016 (Ed. 4)	2016-2350-3709-3714-4827-4284-4987-5710-6024-6083-6710 2017-373-641-883-3280-3428-4811-4689-4891-5428-5761 2018-136-750-1273-2424-2624-3087-3715-4231		
5501				
5502				
5503				

Chart No.	Folio Nos.	Notices to Mariners affecting chart	Warnings	Preliminary Notices
5098 B				
5098 C				
5098				
5099				
5331 A				
5331	89	1987 OCT 2 (NE) – 2002 – ~~117~~ – ~~2127~~ – ~~5272~~ – ~~5435~~ – 2003 – ~~2343~~ – ~~2973~~		
5332 A				
5332	11	1990 DEC 21 (NE) – 2002 – ~~429~~ – ~~559~~ – ~~783~~ – ~~5475~~ – 2003 – ~~756~~		
5333 A				
5333				
5334 A				
5334				
5335 A				
5335				

Project Work

Name :- Anupam Kumar Singh

Batch No :- IMU-36

Enrol. No :- 1642813007

INDOS No :- 16NL2240

PHASE :- II

Project No :- 10.1(4)

Project Topic:- NAVIGATION

STO SIGN

PROJECT NAME:-

(4) Describe activities on the bridge for arrival and departure

---

M.T. SWARNA MALA

Activities on bridge for arrival are:-

1. The following information should be extracted from the passage plan and should be put into use for arrival:
   a. All the necessary port information.
   b. Tide and current information for the port/adjacent areas.
   c. Weather report.
   d. The maximum & minimum depth of water at approaches, fairway and berth's of the port.
   e. All the vital information from Sailing Direction.

2. All the necessary charts should be rechecked for any corrections and T&P Notices & courses are laid off.
3. Has the latest ETA been sent to local port authorities.
4. Has the deck light been tested along with winches, cranes, gangway etc.
5. Confirm weather mooring lines are ready with good heaving lines, gantlines and hawsers.
6. VHF channel been set at required channels for port control, pilot or tugs.
7. Has pilot boarding arrangement ready for embarkation/dise-mbarkation of pilot?
8. Have the following equipment been checked (tested and ready for use)?
   a. Bridge equipment - course and engine movement recorder, RPM and ROT indicator, controllable pitch propellers controls and indicators, gyro/magnetic compass and repeaters.
   b. Synchronisation of clocks.
   c. Emergency engine stops.

d. Navigational equipment - ECDIS and/or other electronic navigation aids, echo sounder, electronic position fixing system etc.
e. Navigation lights, shapes and sound signals.
f. Communication equipment - internal, external and portable
g. Anchor cleared and ready for use.

9. Is cargo/ballast rearrangement required?
10. Has primary and secondary steering system been checked?
11. Have engines been tested for satisfactory operation, both ahead and astern (clear off area traffic and navigation hazards) and prepared for manoeuvring?
12. Has additional steering motor been switched on?
13. Is the bridge team ready?
14. Has the engine room been advised of the time of "stand-by" for entering port?
15. Is the fouowing berthing information available?
a. Whether anchoring/berthing alongside (including, which side to jetty).
b. Whether ship accomodation ladder/gangway or shore gangway will be used
c. size/number of shore connection.
d. Crane/derricks required
e. mooring boats/lines
16. Pilot card to be kept ready (in case of pilotage)
17. All the crew to be called for respective stations.
18. All required flags to be kept standby and hoisted.

Activities on the bridge for departure are:-

1. Pilot boarding time and boarding arrangement to be asked from port control.
2. Pilot card to be kept ready in ample time
3. Has the following equipment been checked and found ready for use?

a. Deck powers, anchors- including clearing away
b. Bridge movement book.
c. Echo sounder.
d. Electronic navigational position fixing aids.
e. Gyro/magnetic compass and repeaters.
f. Radar and associated plotting aids.
g. GMDSS equipment.
h. Speed/ distance recorder
i. Clocks
j. ECDIS
k. AIS
l. BNWAS.

4. Has the following equipment been tested and found ready for use?

a. bridge and engine room telegraphs, revolution indicators etc.
b. communication including bridge to engine room/ mooring station communication.
c. navigation lights/shapes and signal lights, including search-light, signalling lamp, morse light
d. sound signalling apparatus including whistles, fog horn
e. steering gear, including manual, auto-pilot and emergency

changeover arrangements and rudder indicators
f. window wipers/clear view screen.

5. Is ship secure for sea?
- cargo and cargo handling equipment secure
- all hull openings secure and watertight.

6. Are all crew onboard and all shore personnel ashore?
7. Are the pilot embarkation/disembarkation arrangements in place?
8. Has compass error been checked?
9. Have the ship's clocks been synchronised?
10. Is main engine ready for manoeuvring and sea steaming?
11. Is rudder and propeller clear?
12. Has additional steering motor been switched on?
13. Has ship's whistle/siren been tried out?
14. Has departure draft been taken?
15. Is the crew ready for stations for leaving harbour?

10.1 PROJECTS:
NAVIGATION
Third Phase

Appendix 3

IMU

DECK CADET

STRUCTURED SHIP BOARD TRAINING PROGRAMME

PROJECT FILE

NAME: ANUPAM KUMAR SINGH

IMU ENROLMENT No. 1642813007

INDoS No. IGNL2240

Deck Cadet Record Book No. 29101815

DATE: From - 31.07.2021

To - 21.11.2021

M.V. VISHVA VIJAY SCI LTD. CHIEF OFFICER

P: A.V.D.

PROJECT WORK

INDEX

Sr. No	PROJECT NAME	Page Nos.	Date
5.	Plan a passage beetween any two ports under the supervision of the officer concerned, including selection of charts, plotting of courses on the chart, and	—	—
	use of publications. Explain in details the four stages of a voyage plan : appraisal, planning, execution and monitoring.	01 to 05	11.11.2021
6.	Describe the operation and set up (manual and automatic) of bridge navigational watch alarm system	06 to 08	10.10.2021
7.	Prepare AMVER messages "Arival Port", "Departure port", "At Sea Noon"	09 to 11	01.11.2021

STO Signature,date and stamp to be taken prior sign off from each vessel :

M.V. VISHVA VIJAY SCI LTD. CHIEF OFFICER

21.11.2021

PROJECT WORK

NAME :- Anupam Kumar Singh

BATCH NO :- IMU-36

ENROL. NO :- 1642813607

INDOS NO :- 16NL2240

CDC NO :- MUM280594

PHASE :- III

PROJECT NO :- 10.1(5)

PROJECT TOPIC :- 10.1 : NAVIGATION

STO SIGN :-

M.V. VISHVA VIJAY
CHIEF OFFICER
SCI LTD.

PROJECT NAME :-

(5) Plan a passage beetween any two ports under the supervision of the officer concerned, including selection of charts, plotting of courses on the charts, and use of publications. Explain in detail the four stages of a voyage plan : appraisal, planning, execution and monitoring.

M.V. VISHVA VIJAY

Passage plan from Mina Saqr, U.A.E (load port) to GOPALPUR, INDIA (disch. port)

Total Distance from berth to berth = 2915.4 NM

ETD (Estimated time of departure) - 06th NOV 2021

ETA (Estimated time of arrival) - 15th NOV 2021

Mina Saqr zone time - GMT +4 HRS

Gopalpur zone time - GMT +0530 HRS

CLOCK to advance - 01hr 30 min

CLOCK to retard - NA

Nav Area - VIII

IALA buoyage system - A

CARGO INFORMATION

CARGO TYPE - LIMESTONE

CARGO QUANTITY - 74650 MT

Draft (SW)

Departure :- DF - 14.42M DA - 14.65M

Arrival :- DF - 14.42M DA - 14.57M

Publications Referred

Guide to Port entry VOL NO - 01, 02, 03, 04
NP 5011 - Symbols and abbreviation used on admiralty charts
NP 5012 - Symbols and abbreviation used on ECDIS
Admiralty sailing direction - Digital publication e-NP 38, 21 & 63
Admiralty chart catalogue NP-131
Admiralty list of lights & fog signals area 5
Admiralty list of radio signals - Digital ADRS 2 (AREA 5)
Admiralty list of radio signals - ADRS 1, 3, 4, 5 (AREA 5)
Admiralty tide tables - DIGITAL TIDE TABLES
Ocean passages of the world NP 36 (2)
Mariner's handbook e-NP 100
Nautical Almanac 2021
Loadline chart: D-6083
REFER BA Q6099 & Q6111

All Charts & NPs corrected upto ANM : 44/2021

The four stages of passage plan briefed below:-

a) Appraisal :- In this stage, the master of the ship discusses with the second mate, as to how he intends to sail to the destination port. This is the process of gathering all information relevant to the proposed passage, including ascertaining risks and assessing its critical areas. This involves information extracted from publication as well as those within the chart. The appraisal will include detail from:

- Chart catalogue
- Charts
- Ocean passages of the world
- Routeing charts
- Admiralty Sailing Directions
- Admiralty list of lights and fog signals
- Admiralty list of radio signals
- Tide tables
- Tide stream atlas
- Notices to mariner
- Admiralty Distance Table
- Ships Routeing
- Navigational warning
- Mariner's Handbook
- Loadline chart
- Draft of ship
- Owners and other sources
- Personal experience

Taking into consideration master's guidelines, company's guidelines, ship's cargo, marine environment, and all other factors that may

affect the ship, the navigating officer draws upon a general track, which the ship shall follow.
For the ease of planning, this plan is first laid out on a small scale chart, which is later transferred to larger scale charts, and then minor modification are made as and when deemed necessary.

(b) Planning :- Having made a full appraisal using all information at hand pertaining to the passage, the OOW, under authority of the Master is to prepare a detailed plan for the passage. In this stage, the intended course of the ship are actually laid out on the chart of suitable scale and all additional information is marked. The plan is layed out from berth to berth, including the pilotage water. It is good practice to mark dangerous area such as nearby wrecks, shallow water, reefs, small island etc.
It is advisable to layout the rate of turn for waypoints and laying out of PI range for suitable objects, if any. Reporting area should also be clearly marked on the chart.
Elements of the planning phase include :

- NO-GO Areas
- Margins of safety
- Charted tracks
- Course alteration and wheel over point
- Parallel indexing
- Aborts and contingencies
- Clearing line and bearing.
- Leading lines
- Tides and currents
- Change in engine status

- Minimum UKC
- Use of Echo Sounder
- Head marks
- Natural Transit.

*Aborts: When approaching constrained waters, the vessel might be in position beyond which there is no possible action but to proceed. That is why, a position is drawn on the chart showing the last point wherein the passage can be aborted.

*Contingencies: The bridge team must be aware that the events might not go as planned and that emergency action might be required. Contigency plan for such situation should cleary shown on the chart. Contingeny planning include alternative routes, safe anchorages, waiting areas, emergency berths.

(c) Execution :- In this stage, the navigating officers execute the plan that has been prepared. After departure, the speed is adjusted based on the ETA and the expected weather and oceanographic condition. The speed should be adjusted such that the ship is not either too early or late at its port of destination. The expected weather change also to be taken into account. ECDIS is being used and appropriate limits must be set with regard to safety settings.

(d) Monitoring:- The position of the vessel should be monitored regularly, such that it remains within the safe distance from any danger areas. Parallel Indexing can be used to maintain safe distance alongside any hazards to navigation. A safe and successful voyage can only be achieved by closed and continues monitoring of ship's progress along the pre-planned tracks. In case, navigating officer feel to deviate from the plan, he shall inform the master and take any action necessary for safety of ship & its crew. This stage is very important where all the deck officer contribute their part to execute

PROJECT WORK

NAME :- Anupam Kumar Singh

BATCH NO :- IMU-36

ENROL. NO :- 1642813607

INDOS NO :- 16NL2240

CDC NO :- MUM280594

PHASE :- III

PROJECT NO :- 10.1(6)

PROJECT TOPIC :- 10.1 : NAVIGATION

STO SIGN :-

M.V. VISHVA VIJAY SCI LTD. CHIEF OFFICER

PROJECT NAME :-

Describe the operation and set up (manual and automatic) of bridge navigation watch alarm system

M.V. VISHVA VIJAY

* BNWAS Overview

⇒ The purpose of BNWAS is to monitor bridge activity and detect operator disabbity which could lead to marine accidents.

⇒ BNWAS monitors the duty officer presence through watch safety system function or motion sensors fitted inside the bridge.

⇒ A duty officer is required to press the button on a Timer Reset Panel or to operate navigation equipment (e.g. ECDIS, RADAR etc.) at certain interval of time.

⇒ When the officer fails to press the button within preset intervals, visual and audible alarms will be generated in the wheelhouse.

⇒ If the officer doesn't respond to the alarm, the system transfers the alarm to the cabin panels installed in other section of the vessel in order to inform backup officer of watch officer's incapacity.

* Timer reset function

The timer reset may be facilitated by one of the following means:-

1. Pressing the reset button on the Main Panel/ Timer Reset Panel.
2. Provoking the motion sensor
3. Initiate operation of various navigation equipment.

* Operational Modes

- AUTOMATIC : The BNWAS is automatically activated when the vessel is navigating by means of AUTOPILOT, and get deactivated when vessel is in HAND STEERING
- MANUAL ON : The BNWAS is always in operation.
- MANUAL OFF : The BNWAS is turned off completly.

* Stages of BNWAS

Dormant Period

The duty officer in the bridge has to press the button on Timer reset panel or operate interfaced equipment at certain intervals (Dormant period, 3-12 min)

Pre-Warning

If the watch officer does not press the button on Timer reset panel or operate interfaced equipment, the main Alarm & Timer Reset panel generate the visual alarm for 15sec.

1st Stage

If the visual alarm is not acknowledged is not acknowle-dged in the prewarning period, the Main alarm & Timer Reset Panel generate the audible as well as visual alarm for 15sec.

2nd Stage

If the duty officer doesn't respond to the alarm in 1st stage, BR-500 transmits the alarms to the selected cabin panels in the selected backup officer's and/or the captain's room as well as panels in the public room (e.g Off. lounge, off. messroom, ship's office)

3rd Stage

If the alarm is not acknowledged with-in the pre-set time, (i.e. 90sec) the system transmits the alarm to all cabin panels

Dormant Period

The buzzer stops when the officer presses the [RESET] button. The main alarm panel will reset the timer and return to the dormant period, when alarm is ackno-wledged by the duty officer

PROJECT WORK

NAME :- Anupam Kumar Singh

BATCH NO :- IMU-36

ENROL. NO :- 1642813607

INDOS NO :- 16NL2240

CDC NO :- MUM280594

PHASE :- III

PROJECT No :- 10.1(7)

PROJECT TOPIC :- 10.1 NAVIGATION

STO SIGN :-

M.V. VISHVA VIJAY
CHIEF OFFICER
SCI LTD

PROJECT NAME :-

(7) Prepare AMVER messages "Arrival Port", "Departure Port", "At Sea Noon"

M.V. VISHVA VIJAY

) AMVER messages for "arrival port" (FR)

AMVER/FR//

A/VISHVA VIJAY/AVLY//

K/MINASAQR ANCH/2526N/05649E/192315Z OCT//

Z/EOR//

) AMVER messages for "departure port" (SP)

AMVER/SP//

A/VISHVA VIJAY/AVLY//

B/241200Z OCT//

E/230//

F/126//

G/MINA SAQR/2526N/05649E//

L/RL/130/2558N/05602E//

L/RL/130/2601N/05600E//

L/RL/130/2630N/05620E//

L/RL/130/2330N/05959E//

L/RL/130/0930N/07212E//

L/RL/130/0543N/08015E//

L/RL/0620N/08157E//

L/RL/1708N/01909E//

L/RL/1909N/08541E//

L/RL/1917N/08457E//

M/INMARSAT 441924053//

V/NONE//

Z/EOR//

(C) AMVER messages for "At Sea Noon" (PR)

AMVER/PR//

A/VISHVA VIJAY/AVLY//

B/260900Z OCT//

C/2126N/06349E//

E/230//

F/126//

I/GOPALPUR/1926N/08456E/021100Z NOV//

M/INMARSAT

Z/EOR//