TELSCOPE®
BY FURUNO

TELSCOPE USER MANUAL

Software version 1.27

TELKO AS

TELSCOPE
BY FURUNO

TABLE OF CONTENTS

Introduction 4
General Information 4
Standard Compliance 4
Type Approval and Flag State Acceptance 4
Telscope ship system 5
TELSCOPE Server 5
User and Role Base Access System (RBAC) 5
TELSCOPE Database 6
Sensor Connections 6
Data Storage & Back-Up 6
Data Storage on SSD 6
Data Backup on SD-Car 6
Data to VDR 6
TELSCOPE Modules 7
TELSCOPE Dashboard 7
SOLAS Logbooks 7
MARPOL Record Books 7
Ballast Water Record Book 7
Bridge 7
Engine 7
MARPOL 8
Checklist 8
Reports 8
Get started 9
Work with TELSCOPE 9
Login to TELSCOPE on the Server 9
Login to TELSCOPE from a Ship Workstation or a Mobile Device 9
User Profile – Change User – Sign Out 10
Create and Add Record as other user. 10
Change Record Time 10
TELSCOPE Approval route 11
TELSCOPE DASHBOARD – GENERAL INFORMATION 12
Menus and Side Panel 12
Top row 12
TELSCOPE DASHBOARD - BRIDGE 14
TELSCOPE DASHBOARD – ENGINE 17
ENGINE MODULE 19
WORK WITH SOLAS LOGBOOKS 20
Logbook Tools 20
The Logbook Entry 22
Logbook Entry Panel 23
The Logbook table. 24
Nautical Observations (Part of Deck logbook) 25
GMDSS Annex I and II 25
Engine TANKS overview 26

Tank Readings 26
New Reading 27
Engine MACHINE 29
Engine Operations Panel 29
Engine Readings Panel 31
Ballast water record book 32
Introduction 32
Ballast Water Operations 32
Register Ballast Operation 34
Start New Ballasta Operation 34
Complete ballast operation 34
MARPOL GARBAGE record book i & II 35
MARPOL Oil Record Book I 37
Tank Setup 37
General Guidance 37
Oil RB I Page 38
Register Machinery Space Operation 39
Start New Oil RBI Operation 39
Complete Oil Cargo operation 40
MARPOL OIL RECORD BOOK II 41
Oil RB II Page 41
Register New Oil Operation 42
Start New Oil Cargo Operation 42
Complete Oil Cargo operation 43
MARPOL Cargo record book 44
Checklist module 46
Checklist page 46
Work with Checklist 47
Record in Logbook 48
Checklist Editor 49
Checklist Editor Panel 49
Report module 51
Create Report 51
Noon report 52
TELSCOPE SET UP and COMMISSIONING 53
User Management 53
Reset Password and Pin code. 53
Role Management 54
Tank set up 55
Machinery set up 56
Configure Machinery layout 56
Troubleshooting 57
System notifications 57
Server and Network problems 58

DOCUMENT REVISION HISTORY

Ver No	Rev Date	Document Information
1.0	2024-03-26	Updated to TELSCOPE software version 1.24
2.0	2024-06-10	Updated to TELSCOPE software version 1.25
3.0	2024-09-17	Updated to TELSCOPE software version 1.26
4.0	2024-11-04	Update to TELSCOPE software version 1.27 New chapter TELSCOPE SET UP AND COMMISSIONING
4.1	2024-11-21	New chapter Troubleshooting, Report section updated

INTRODUCTION

General Information

TELSCOPE is an open, extensible platform for data collection, Electronic Record Books, and e-Navigation services. It is designed to assist the crew in performing operational and administrative tasks, such as keeping electronic record books, filling out checklists and automating reports to fleet management, authorities, and other parties. TELSCOPE is a responsive application accessed in a standard web browser.

On your TELSCOPE server, the web browser starts automatically when you boot up the computer. It starts TELSCOPE in full screen mode, and all general use of TELSCOPE happens within the web browser.

TELSCOPE is a responsive web application, it resizes automatically for your screen, showing you as much information and as clearly as possible. TELSCOPE is designed for a standard Full HD computer monitor, but the responsiveness ensures you can use it on any screen, smaller and bigger.

Standard Compliance

TELSCOPE software conforms to the following standard(s) and Guidelines.

• IMO Resolutions	A.916 (22). 4.4
• MSC Circulars	MSC/Circ .982.
• SOLAS 74 as amended	Regulation V/28
• ISO 21745:2019	Electronic record books for ships technical specifications and operational requirements
• IEC 60945 Ed. 4	Maritime navigation and radiocommunication equipment and systems – Presentation of navigation-related information on shipborne navigational displays – General requirements, methods of testing and required test results
• IEC 62288 Ed. 3.0	Maritime navigation and radiocommunication equipment and systems – Presentation of navigation-related information on shipborne navigational displays – General requirements, methods of testing and required test results
• IEC 61162-1 Ed. 5.0	Maritime navigation and radio communication equipment and systems – Digital interfaces – Part 1: Single talker and multiple listeners
• IEC 61162-2 Ed. 1.0	Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 2: Single talker and multiple listeners, high-speed transmission
• Resolution MEPC.312(74)	GUIDELINES FOR THE USE OF ELECTRONIC RECORD BOOKS UNDER MARPOL
• MEPC.372(80)	GUIDELINES FOR THE USE OF ELECTRONIC RECORD BOOKS UNDER THE BWM CONVENTION

Type Approval and Flag State Acceptance

TELSCOPE is Type Approved by DNV.
DNV Certificate TAA000032F Rev 2 2024-04-03.
DNV TYPE EXAMINATION CERTIFICATE (MODULE B) MERB000099Z rev 0 240920.

TELSCOPE is accepted by most Flags to be used for record keeping equal to traditional paper logbooks.
Please note that exemptions can occur for one or several Record Books for the Flag in question.
It is the Ship owner's responsibility to check Flag requirement and ensure that Declaration of Conformity will be issued accordingly.

List of Flags For details se Annex 1

TELSCOPE SHIP SYSTEM

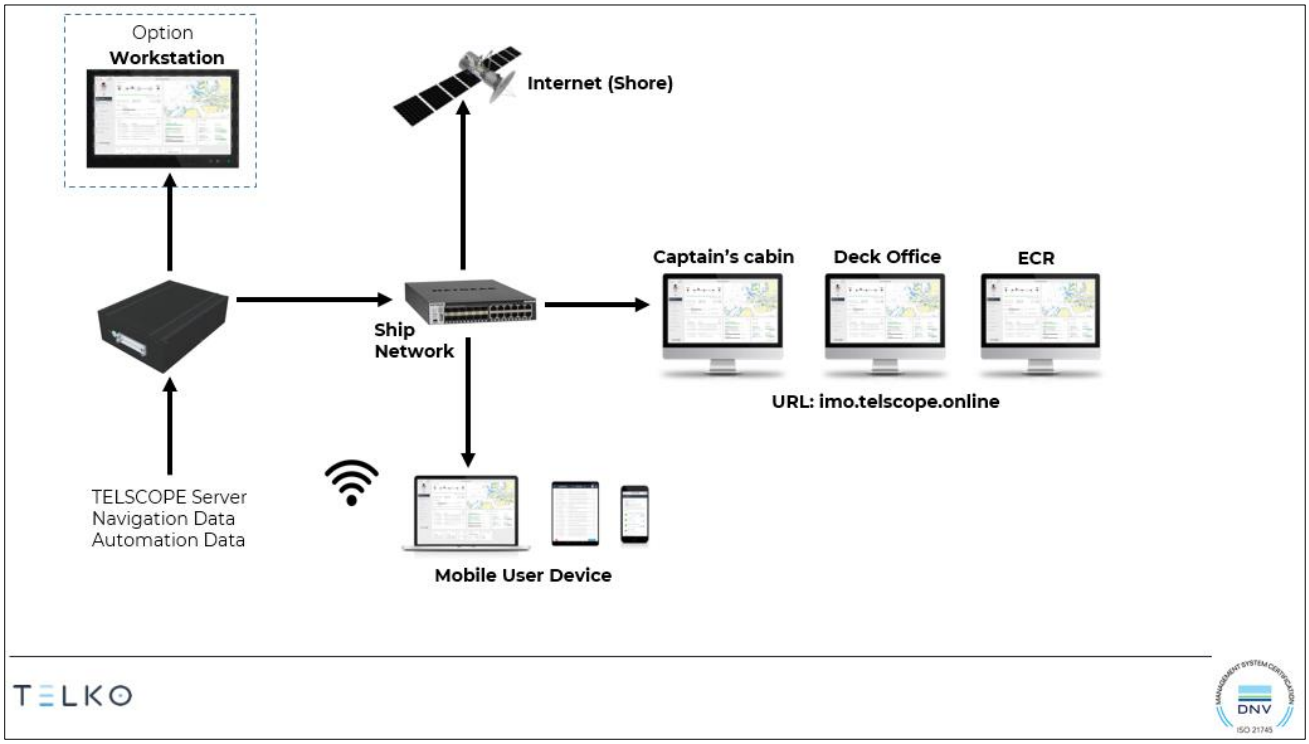
TELSCOPE Workstation

TELSCOPE Web Client can be accessed from any computer or mobile device via secure network connection (https) on the ship. TELSCOPE Web Client is responsive and will work on any screen starting from the small mobile phone even though some functions will not be available or that user friendly on small displays.

TELSCOPE Server

The TELSCOPE Server have the following main characteristics:

- 2 SSD in RAID 1 configuration allowing HOT SWAP in case of Disk failure.
  For more information contact TELKO Support
- 1pcs SD Card (32 GB) for backup of all Record Book Data
- 4 LAN Ports
- 4 Serial Ports
- USB Ports – protected.
- 24 VDC / 230 VAC Power supply



User and Role Base Access System (RBAC)

Access to the TELSCOPE application is provided via a unique personal login identifier and password for each user. This level of security ensures that the user making entries into the application is accountable for any false entries or omissions.

For Verification and Signing of a single or series of entries, TELSCOPE has an additional authentication factor a 6-digit Pin Code unique for each user.

TELSCOPE Database

TELSCOPE DATA is stored in two separate databases.

- Sensor data and Stream Data.
  Stream Data is information generated automatically or manual in TELSCOPE that can be reused in records, readings, and reports. As example Persons onboard.

- Record Book Data
  Logbook Events, Checklist Data, Engine and Tank Readings are stored in this DB.

Sensor Connections

TELSCOPE shall at a minimum be connected to Ships Primary Position Sensor GNSS normally GPS that will provide position, date, and time.

All Records in TELSCOPE are stored with UTC as Time reference and position in Lat/Long values. Navigation data can either be received directly from a sensor or via INS (Integrated Navigation System) or ECDIS in a special NMEA Output sentence that combines data from multiple sensors. In the same way data can be obtained from Automation-, Tank-, Cargo-, and other systems either via a data stream or from a dedicated API. If sensor data is not available or incorrect manual input of data is supported.

Data Storage & Back-Up

DATA STORAGE ON SSD

TELSCOPE data and records are stored on two SSD on the TELSCOPE Server in RAID 1 Configuration (Duplication of data). If one SSD fails TELSCOPE continues recording to the other SSD with no interruption. The broken SSD can be replaced, and the system will automatically synch the two disks.

DATA BACKUP ON SD-CAR

TELSCOPE make a second Back-Up on an Internal SD-Card.
All Records, Checklist and Configuration Data are stored.
Sensor data (Stream Data) are not included in the Back-Up.

For restore of DATA contact TELKO Support

DATA TO VDR

All Verified and Signed Records from Electronic Logbooks and Electronic Record Books (MARPOL) are sent to Ship's VDR.

Note: Storage on VDR is not to be considered as a Back-Up of TELSCOPE Data. Connection is made to comply to the VDR Interface requirement

TELSCOPE MODULES

TELSCOPE Includes the following modules,

TELSCOPE Dashboard

Two Dashboard are available Bridge and Engine that provide situation display with direct access to Checklist, Operation and Logbooks

SOLAS Logbooks

TELSCOPE complies to SOLAS Regulation V/28, IMO Resolution A.916(22) “Guidelines for the recording of events related to navigation and Flag State requirements. Record keeping is provided for Bridge/Deck, Engine and Radio/GMDSS. Paper logbooks can be replaced with electronic record books if accepted by the Flag State.

MARPOL Record Books

TELSCOPE complies to MEPC.312(74) guidelines for MARPOL Electronic Record Books. The following Electronic Record Books are provided in TELSCOPE.

- OIL Record Book I MARPOL Annex I
- OIL Record Book II MARPOL Annex 1
- CARGO Record Book MARPOL Annex II
- GARBAGE Record Book MARPOL Annex V

Paper logbooks can be replaced with electronic record books if accepted by the Flag State.
Declaration of Conformity to be issued by Flag State or by a Recognized Organisation (RO) accepted by the Flag.

Ballast Water Record Book

TELSCOPE Complies to Regulation B-2 of the BWM Convention and is adopted to

- BWM.2-Circ.80 GUIDANCE ON BALLAST WATER RECORD-KEEPING AND REPORTING,
- RESOLUTION MEPC.369(80) AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE CONTROL AND MANAGEMENT OF SHIPS' BALLAST WATER AND SEDIMENTS, 2004
- MEPC RESOLUTION MEPC.372(80) GUIDELINES FOR THE USE OF ELECTRONIC RECORD BOOKS UNDER THE BWM CONVENTION

Paper logbooks can be replaced with electronic record books if accepted by the Flag State.
Declaration of Conformity to be issued by Flag State or by a Recognized Organisation (RO) accepted by the Flag.

Bridge

The Bridge module contains the following functions.

- Deck Logbook and Nautical Observations
- Ballast Water Record Book
- GMDSS Logbook

Engine

The Engine module contains the following functions.

- Engine Logbook
- Tank Readings
- Machinery Operations & Readings
- Oil RB I

MARPOL

The MARPOL Module contains the following functions.

- GARBAGE Record Book I & II
- Oil Record Book II
- Cargo Record Book

Checklist

TELSCOPE checklist module is an easy way to follow up ship operations with intuitive Checklist that can be connected for Record keeping purpose to Deck, GMDSS or Engine Logbook. Checklist can be categorized as follows.

- Cargo
- Deck
- Engine
- Environment
- Safety

The inbuild Checklist Editor provide tools for

- Create and maintain Checklist.
- Publish
- Share checklist with Import and export files.

Reports

TELSCOPE report module consolidates tools for generation of various reports and track report history for some of them. The following reports can be generated:

- Noon Report – xlsx
- Ballast Water Record book – PDF
- Cargo Record Book – PDF
- Deck Logbook – PDF
- Engine Logbook – PDF
- Garbage Record Book – PDF
- GMDSS Logbook – PDF
- Oil Record Book I – PDF
- Oil Record Book II – PDF
- Checklist - xlsx
- Tank Reading - xlsx
- Certificates Report -xlsx
- Users Report - xlsx
- Roles report - Xlsx
- Running hours reading – xlsx
- TMON - Xlsx

GET STARTED

Before you can start working with TELSCOPE the system must be set up, see TELSCOPE Set up and Commissioning in the end of this manual.

Work with TELSCOPE

TELSCOPE Web-client (front-end) communicate in real-time with TELSCOPE Server (backend) allowing prompt update of records and other information on all workstations were,

- Several users can work with TELSCOPE simultaneously.
- Pressing Ctrl+Shift+r will reload and update the Web Browser
- Pressing "TAB"-button is the easiest way to move between input fields in TELSCOPE.
- TELSCOPE "remember" selections made in one module when user switch to another module and later switch back.
- TELSCOPE can export reports to Excel, this can only be done on a workstation as Excel is not available on the server.
- Software updates are pushed from shore to the ship server. This is done in the background and will not interfere with the use of TELSCOPE. When the software is updated, the user is notified. A notification appears in the top of the screen stating,
  "New version available. Click here to get the latest version".
  Click - will reload TELSCOPE with new SW.
- TELSCOPE does not require a connection to the Internet for normal operations on the ship.
- Internet connection is used for,
  - Software Updates
  - Remote Support and configuration from shore
  - Push Record Book Data and other information to TELSCOPE Shore

Login to TELSCOPE on the Server

TELSCOPE web application will start automatically when the server is started or re-booted.
Login by entering username and password.

Note! One common user for the bridge and/or the engine team is not allowed.
All users shall have their own personal credentials.

Login to TELSCOPE from a Ship Workstation or a Mobile Device

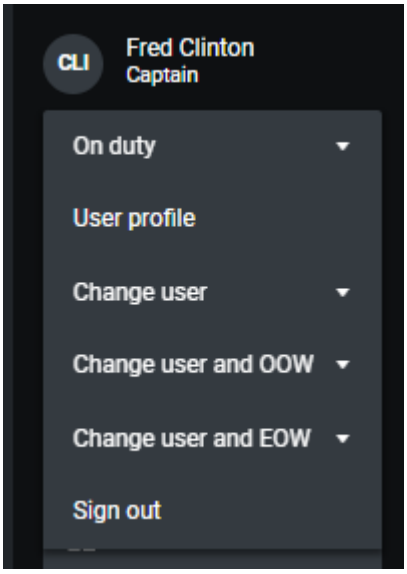
TELSCOPE can be available on the ship network through a secure connection (https). This means user can work with TELSCOPE on any workstation or mobile device on the ship as follows.

1. Login to the ship network (access to be granted Ships IT administrator).
2. Open a web browser and type in the following address https://nnnnnnn.telscope.online
   "nnnnnnn" in the address is Ship's IMO number and Call Sign for ships that do not have an IMO number.
3. Login using TELSCOPE Credentials.

Note! A local DNS server is required on the ship to access TELSCOPE from a local workstation or mobile device.

User Profile – Change User – Sign Out

The first page shown is TELSCOPE Dashboard.
On the left side the Username and Position is shown.
A Click on the username will open a menu with the following options.



On Duty/On Leave, allow the user to set his status (on leave = not onboard).

User Profile, Link to Settings/User Profile where user can,

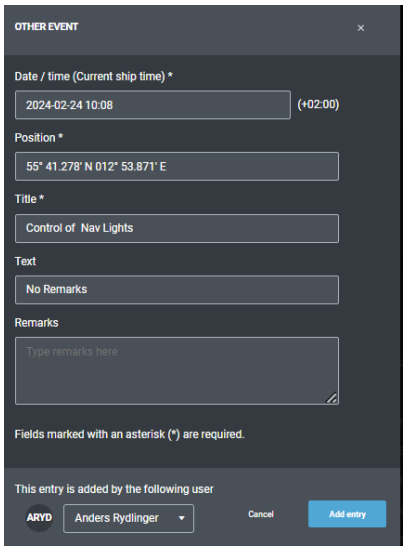
- Change Pin Code and Password, Forgotten Pin Code and/or Password can be reset by Admin.
- Add Certificate
- See the list of TELSCOPE Roles that are assigned to the user.

Change User, Sign out and Log in as a new user on the workstation.

Change User and OOW or EOW, Sign out and Log in as a new user on the workstation and at the same time update information about OOW or EOW in the Persons onboard panel.
This dropdown is filtered by On Duty & Role OOW/EOW

Create and Add Record as other user.

TELSCOPE provide a function that allow a user to create a record on a workstation without change the user.



When record information has been added change user in the drop-down menu, shown down left in the panel.

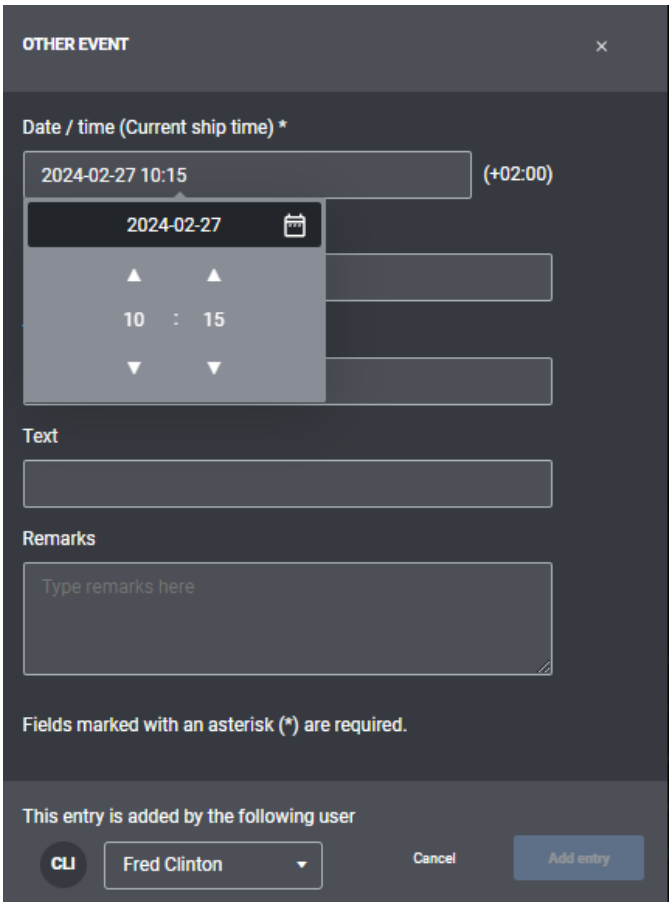
Click on Add Entry and Sign with Pin-Code.

This function can also be used completing checklist or Co-sign of checklist.

Change Record Time

TELSCOPE allow the user to change Record Time when a Logbook Entry is created.
This function is very useful if the user is prevented from creating a logbooks entry at the time.

Date and Time can be changed as follows,



1. Click on the Date and Time field.

2. Change date, click on the calendar or type in new date (note format must me the same)

3. Change time, use the arrow keys or type in new time.

TELSCOPE will now change date and time, all stream data (Sensors, Tanks, Quick settings, Dashboard data) will be updated for the new entry time.

TELSCOPE provide the same possibility to change date and time for,

- Checklists start, complete, and confirm check, click on Clock Icon.
- Quick settings, click on the Clock Icon

TELSCOPE Approval route

Only authorized users onboard are allowed to make entries in The Electronic Record Books.

- New entries are verified by the user where TELSCOPE records date, Time position and user ID.
- Remove Entry, complete operations, complete/cosign Checklist shall be verified by input of the unique 6-digit pin code.
- Master shall Sign all Record Books daily, (records up to 24.00 the day before) this replace signing of pages in the paper logbook.
  Master signs the record book with the unique 6-digit pin code.
- Signed records can only be changed, amended, or strike through by the MASTER.

TELSCOPE DASHBOARD – GENERAL INFORMATION

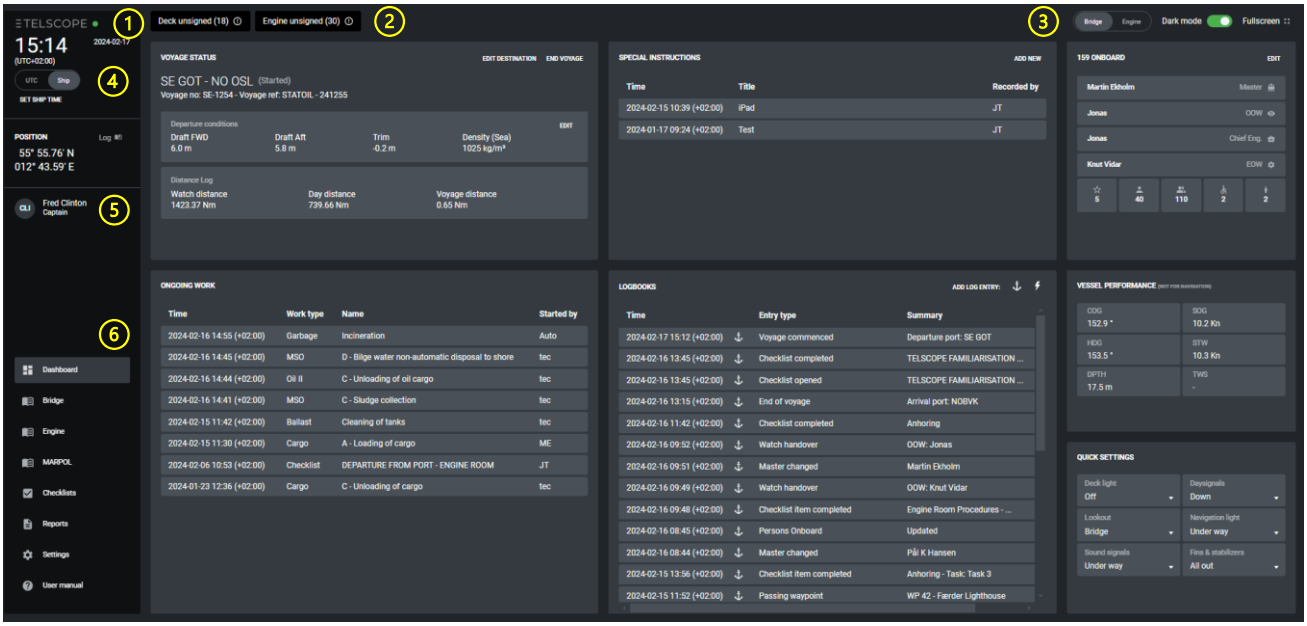
TELSCOPE Dashboard is the Opening Page that provide Information overview and quick access to several modules and functions. There are two Dashboards one for Deck and one for Engine. Logbooks and Record books are arranged by department Deck (Bridge) and Engine. During the development of TELSCOPE the objective has been to reduce the workload for the ship crew where we have set the following two targets for the design and functionality,

- Input Once - Use Twice
  The target is to input once and then reuse what is in the system in new entries.
- One-Touch-On-Desktop
  Modules. tools and information shall only be one click away.
  TELSCOPE shall be intuitive and self-explaining, minimizing the need for training and comprehensive manuals.

TELSCOPE remember last used sub-panel or tank-table when user switch between Dashboard, Checklist and Logbook. Below you find guide to the modules on the dashboard.

Menus and Side Panel

The following functions and tools are common in the tow Dashboards for Bridge and Engine, see description below.



Top row

The Top Row provides the following information and functions:

1. TELSCOPE LOGO
   Click on the Indicator Green/Yellow and a panel opens that provide the following information System Status, TELSCOPE version and view of DNV Type Approval Certificate

2. Alerts and Notifications
   A Snack bar appears in the top middle of the screen with the following Notifications,
   - Confirmation that an action was successfully recorded or stored on the server (Black) is used for Records, Operations and Checklist
   - Unsigned Records (Black)
     Master is notified if there are old records that have not been signed e.g. older than hour 00.00 current day. Click on the notification will open the actual Record Book for Signing.
     Note Records must be Verified prior to signing. OOW/EOW shall sign Records with status “Not Signed” before watch is handed over.

- New version available (Orange).
  A click on the textbox force a reload of TELSCOPE Web application when TELSCOPE Server has been updated.
- Notifications that system does not behave correctly (Orange).
  Wait (1 min) and try again if problem remains, for more information see Troubleshooting

3. Date and time & Position

UTC is used as time reference in TELSCOPE where the user can:
- Shift between UTC and Ship Time (local Time Zone), click on the toggle
- Set the Ship Time Off-Set by pressing SET SHIP TIME, HH:MM can be adjusted using the arrow keys.
Change of Time Zone will generate a record in the Deck Logbook.
Ships position sensor normally a GPS is used as time reference

The server clock will be adjusted to GPS time automatically if there is a time difference. Adjustment will be done smoothly; this means if there is a 10 min offset it will not adjust promptly. It will be done over time i.e. server clock will speed up or slow down till booth clocks are in synch. This can take up to 30 min, the reason for this algorithm is to prevent disorder in time stamps of record data.

Ships position received from Primary position sensor (GPS).
Log-Icon. click on it to start the automatic recording of ships position with a desired time interval.

Note: it is only recommended to use this function when there are no objects in visual or radar range allowing the user to record a position fix.

4. User

Name and position of the user logged into the workstation.
For more information see “User Profile – Change User – Sign Out” above.

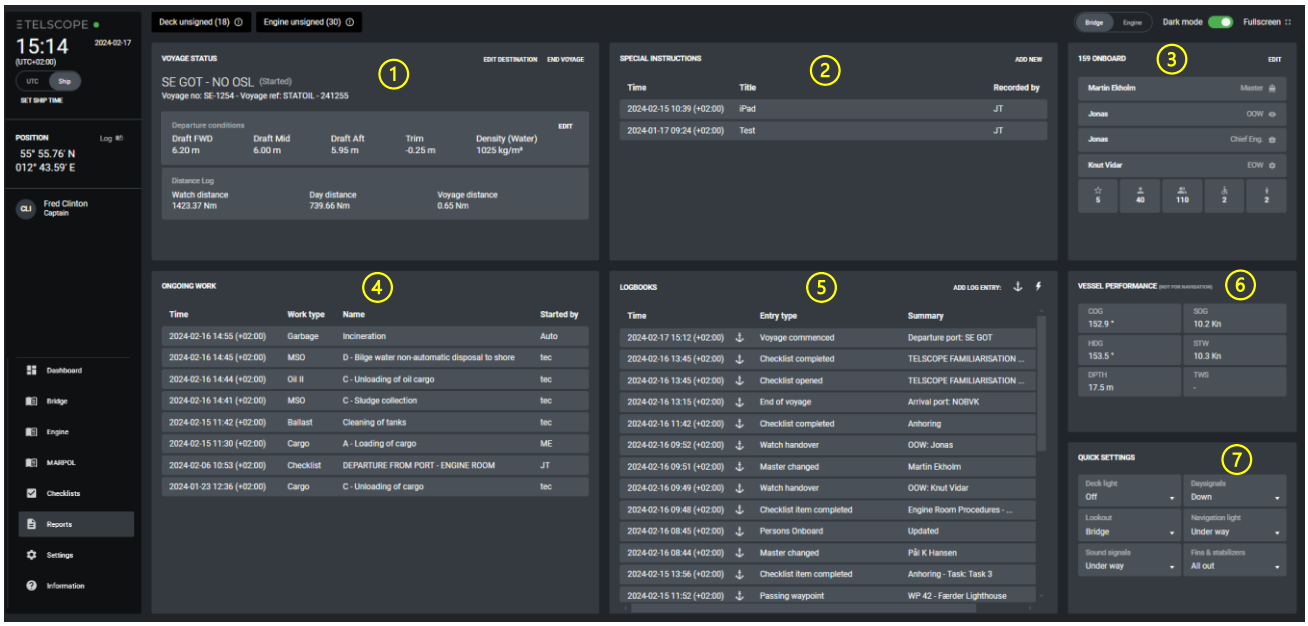
5. TELSCOPE Modules

TELSCOPE functions are grouped into several Modules.
The left side panel provides a list of the modules for quick access.

- Dashboard - link to Deck & Engine Dashboard Bridge
- Bridge -link to
  - Deck Logbook / Nautical Observations Table,
  - GMDSS Logbook and
  - Ballast Water Record Book
- Engine - link to
  - Engine Logbook,
  - Tank overview,
  - Engine Operations and
  - Machinery Operations (OIL RBI)
- MARPOL - Link to MARPOL Record Books (Except for OIL RBI),
  - Garbage Record Book In& II,
  - Oil RB II
  - Cargo Record Book,
- Checklist and Checklist Editor,
- Reports
- Settings - link to system settings Users & Audit Log Roles Ship Tank Machinery Sensors
- User Manual (quick reference) and link to PDF manual

TELSCOPE DASHBOARD - BRIDGE

The Bridge Dashboard have seven Information panels, content and functions are described below.



1. Voyage Panel

   The Voyage Status Panel Shows Voyage Credentials that are stored in the system as TELSCOPE Streams. For example, the name of the Arrival Port. The stream values will be reused (i.e., filled in automatically) in all records and reports where the crew must enter the same information as the name of Arrival Port.

   The upper right corner shows the following buttons:

   - **Create Voyage**, opens a panel for setting the Voyage Credentials - Departure Port, Arrival Port, Voyage No and Voyage Reference.
   - **Start Voyage**, an automated Logbook Entry is made in the Deck Logbook "Voyage Commenced" and starts the Voyage Trip Log.
   - **End Voyage**, an automated Logbook Entry is made in the Deck Logbook "End of Voyage ", Stop the and reset the Voyage Trip log.
   - **Edit Voyage**, allow the user to change data before the voyage has been started.

Draft and Trim

TELSCOPE calculates the Static Trim as Trim = Draft Aft - Draft Fwd.

Draft values and Water Density can be adjusted by means of clicking on Edit.
Values are normally adjusted before departure and if required before arrival.
Dynamic trim is not calculated, displayed, or recorded.
Draft and Trim Values will automatically be added to all records where applicable.

Distance Log

The distance log shows sailed distance over ground where TELSCOPE calculate the following,

- **Watch Distance, will be reset when OOW is changed,**
- **Day Distance, reset at 00.00 UTC,**
- **Voyage Distance, calculate distance from Voyage start to Voyage End**.

The Distance Log values are used in Logbook Records and Reports.

2. Special Instructions

Special Instructions panel provides a tool for making short notifications that can be shared with the TELSCOPE Users.

The list in the panel shows:

- Title,
- Date and Time
- Recorded By

Click on a Special Instruction Line opens the Instruction allowing the user to read, update or delete the message.

ADD NEW

Opens the Edit Special Instructions Panel where the user can,

- Add a Title
- Set Expiry date for the Instructions,
- Select if it shall be recorded in the Logbook,
- Add information text.

3. Persons Onboard

The Persons Onboard Panel displays the following information (all values are stored as TELSCOPE Streams).

- Name of Master, Officer on Watch, Chief Engineer, Engineer on Watch
- Number of Crew, Visitors (any person that is not crew or passenger), Passengers, Persons with reduced mobility and Children.
  The total number of passengers is the sum of Passengers, Persons with reduced mobility and Children.

EDIT

Opens a window where Name and Numbers can be updated.
All changes will be logged in Deck Logbook except for change of Chief Engineer and EOW that will be logged in Engine Logbook.

The Stream Values will be used in Logbook entries and reports where any type of persons onboard data is required.

4. Ongoing work

The panel shows a list of,

- Ongoing operations
  - Ballast Water Management
  - Garbage
  - Machinery Space Operations OIL RB I
  - OIL RB II
  - Cargo
- Open Checklist

Clicking on the row provide a quick link to the actual work or checklist.

5. Logbook panel

The list in the Logbook panel shows the last entries made in the:

- Deck Logbook (Anchor Icon),
- GMDSS Logbook (Lightning Icon)

Clicking on the Entry Row or the Right Arrow opens the Logbook Entry.

The Icons in the upper right corner provide a quick link to ADD LOG ENTRY in Deck and GMDSS Logbook.

6. Vessel Performance

The Vessel Performance Panel shows status of the connected navigation sensors.

Note: Depth sensor values displayed in TELSCOPE are depth below transducer (DBT) in meters.

7. Quick Settings

The Quick Settings Panel provide quick settings via Drop-down menus for the following,

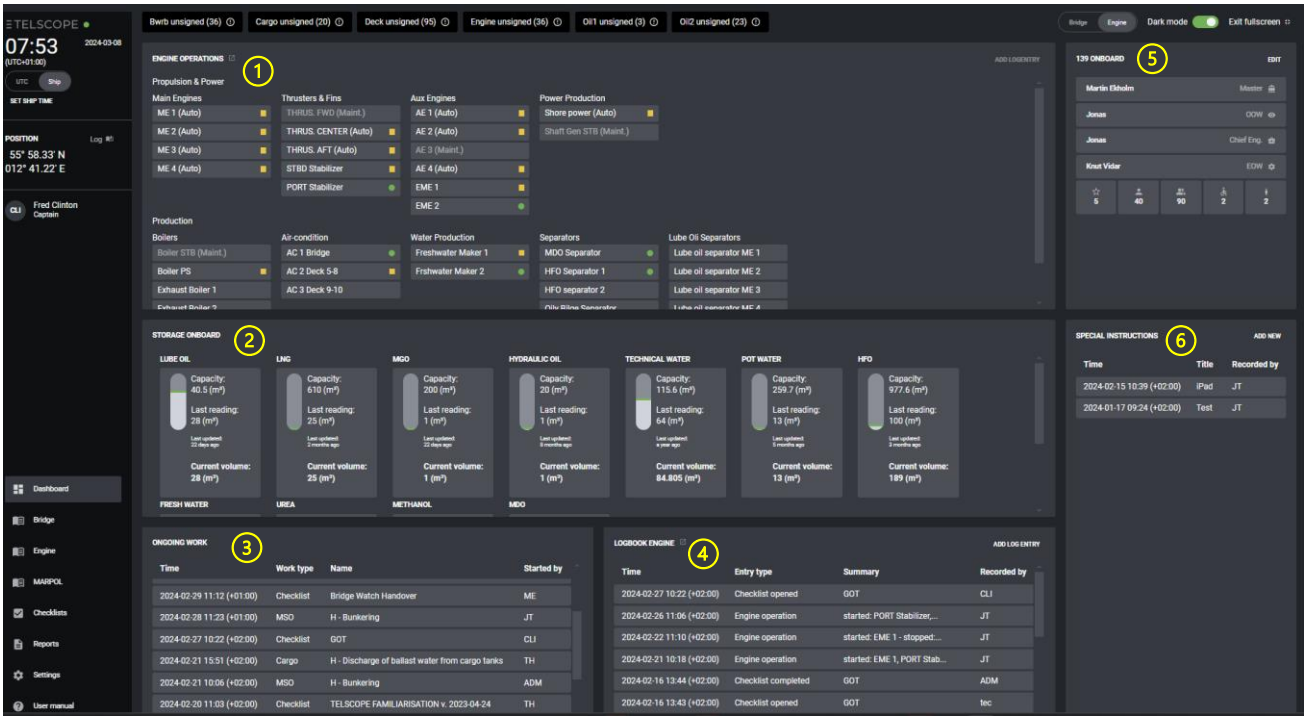
- Deck Light
- Day Signals
- Lookout
- Navigation Light
- Sound Signals
- Fins & Stabilizers

Click on the Clock Icon to change the time of the Quick Setting.

All Changes will be recorded in Deck logbook.

TELSCOPE DASHBOARD – ENGINE

The Engine Dashboard have six Information panels, content and functions are described below.



1. 1 Engine operations

The Panel Show the status of Ship Machines,

- Started, Green
- Stopped, Yellow
- Maintenance, grey and (MainT)

For more information see the Engine Section.

2. Storage onboard

The panel shows the remaining onboard of the different storage groups like Fuel, Freshwater, UREA etc.

The following information is presented in the Tank layout,

- Capacity (sum of all tanks in that category)
- Last Reading, the summary gathered as a daily reading and or an operation in OIL RBI
- Time of the last reading
- Current Volume e.g. data from tank sensor.

Clicking on a category opens the corresponding group in Engine/Tank readings.

3. Ongoing work

The panel shows a list of Ongoing operations,

- Ballast Water Management
- Garbage
- Machinery Space Operations OIL RB I
- OIL RB II
- Cargo

- Open Checklist

Clicking on the row provides a quick link to the actual work or checklist.

4. Logbook panel

The list in the Logbook panel shows the last entries made in the Engine Logbook.

Clicking on the Entry Row or the Right Arrow opens the Logbook Entry.

Add Entry in the upper right corner provides a quick link to add a new entry.

5. Persons Onboard

The Persons Onboard Panel displays the following information (all values are stored as TELSCOPE Streams).

- Name of Master, Officer on Watch, Chief Engineer, Engineer on Watch
- Number of Crew, Visitors (any person that is not crew or passenger), Passengers, Persons with reduced mobility and Children.
  The total number of passengers is the sum of Passengers, Persons with reduced mobility and Children.

EDIT

Opens a window where Name and Numbers can be updated.
All changes will be logged in Deck Logbook except for change of Chief Engineer and EOW that will be logged in Engine Logbook.

The Stream Values will be used in Logbook entries and reports where any type of persons onboard data is required.

6. Special Instructions

Special Instructions panel provides a tool for making short notifications that can be shared with the TELSCOPE Users.

The list in the panel shows:

- Title,
- Date Time and
- Recorded by.

Clicking on a line opens the Instruction allow TELSCOPE user to read, update or delete the message.

ADD NEW

Opens the Edit Special Instructions Panel where the user can,

- Add a Title
- Set Expiry date for the Instructions,
- Select if it shall be recorded in the Logbook,
- Add information text.

In the Bridge module, we have collected the following logbooks managed by the Ships Bridge team for easy access and switch between them,

- Deck Logbook and Nautical Observations
- Ballas Water Record Book
- GMDSS Logbook with Annex I and II

Functionality and tools are described in the following chapters.

ENGINE MODULE

In the Engine module, we have collected the following logbooks and additional applications managed by the Ships Engine team for easy access and switch between them,

- Engine Logbook
- Tank Overview shows information on tank status for the ship's various tank types as well as a table where daily readings, bunkering, discharge, etc. can be registered mainly for tanks that are not handled in OIL RB I.
- Machines, with two subcategories Operations and Readings.
- Machinery Space Operations, Oil Record Book I

Functionality and tools are described in the following chapters.

WORK WITH SOLAS LOGBOOKS

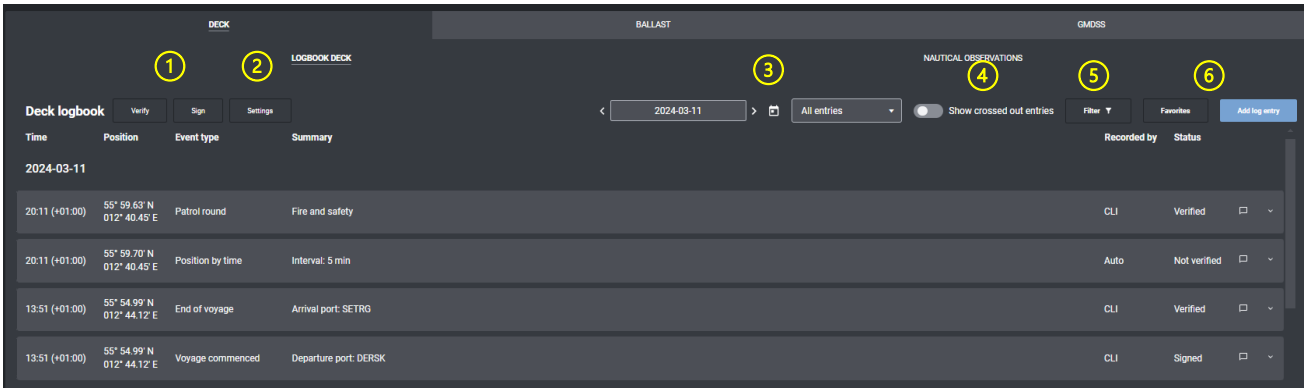
TELSCOPE have three logbooks to comply with the requirement in SOLAS Regulation V/28, IMO Resolution A.916(22).

- Deck Logbook
- GMDSS Logbook
- Engine Logbook

Note, some Flag state might not accept these books in electronic format or might have special requirement in addition. For more information about Flag State see Annex 1 in TELSCOPE User Manual.

Logbook Tools

Tools and functions are described below.



1. Verify and Sign

Logbook records have one of the following statuses,

- Not Verified, this status is given records that have been generated automatically be the system as example Deck Logbook / Position by time. Such record shall be Verified by OOW/EOW before the watch is handed over.
- Verified, record generated by user.
- Signed, record that have been signed by the Master

When a user shall Verify or Sign a record Click on the appropriate button that will result in.

Verify

Verify Sets the Logbook filter to Not Verified.
All entries are pre-selected and ready to be Verified by Click on the Verify Button.
Entries can be deselected and not included in the Verification
Note, only entries for the last seven day will be verified. To Verify older records, activate the filter and scroll down.

Sign

Sets the Logbook Filter to Verified (Not Signed)
All entries are pre-selected and ready to be Signed by the MASTER by Click on the Sign Button.
Entries can be deselected and not included in the Signing.
Note, only entries for the last seven day will be Signed. This means that the notification can still show UNSIGNED RECORDS IN DECK. To Sign older records, activate the filter, and scroll down, be aware that there might be Records that must be verified before signing.

Master inspection of Engine Logbook (not mandatory option based on SMS)

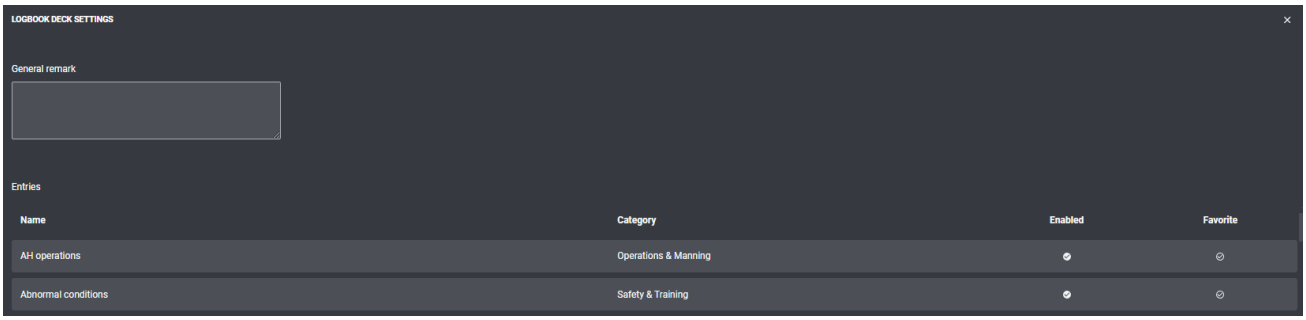
Inspection can be documented as follow:

1. All Entries shall be signed by Chief Engineer prior to the Inspection
2. After inspection create new record MASTER APPROVAL
3. Set period "From - To" and a remark if required - Add Entry
4. Master shall Sign this record.

2. Logbook Settings

Opens a panel where the user can.

- Add General Remark and manage which entry types that shall be used
  General remark can be used to add information that will be presented on the first page of a PDF report.
  As example if Drills are recorded in HR system this can be stated as a General Remark
- Enable/Disable Entry types prefer to be used on the ship.
- Add Entry type to favorite list.



3. Date Picker and Filter

Date Picker

The date picker allows infinity scroll between dates in the logbook table. Use the date field to select a date. Date can be adjusted by arrow keys or by pressing the calendar icon.
The small calendar Icon provides a quick return to current date

Entry Filter

- All Entries,
- Not Verified, shows all entries that must be verified,
- Verified (Not Signed), shows all entries that must be signed by Master,
- Signed,

4. Toggle Show crossed out entries.

Toggle "Show Crossed-Out Entries" Show/Hide Crossed Out Entries.
Note, a record cannot be deleted only be strike trough.

Strike through records is always included in PDF reports.

5. Filter

The filter symbol opens a window allowing filtering the table based on selected record types.

6. Favorites & Add Log Entry

Buttons for adding a new entry or operation.

- Favorites provide a shortlist of often used entry types
  The list can be adjusted see Logbook Settings
- Add Log Entry Full List of Logbook Entry

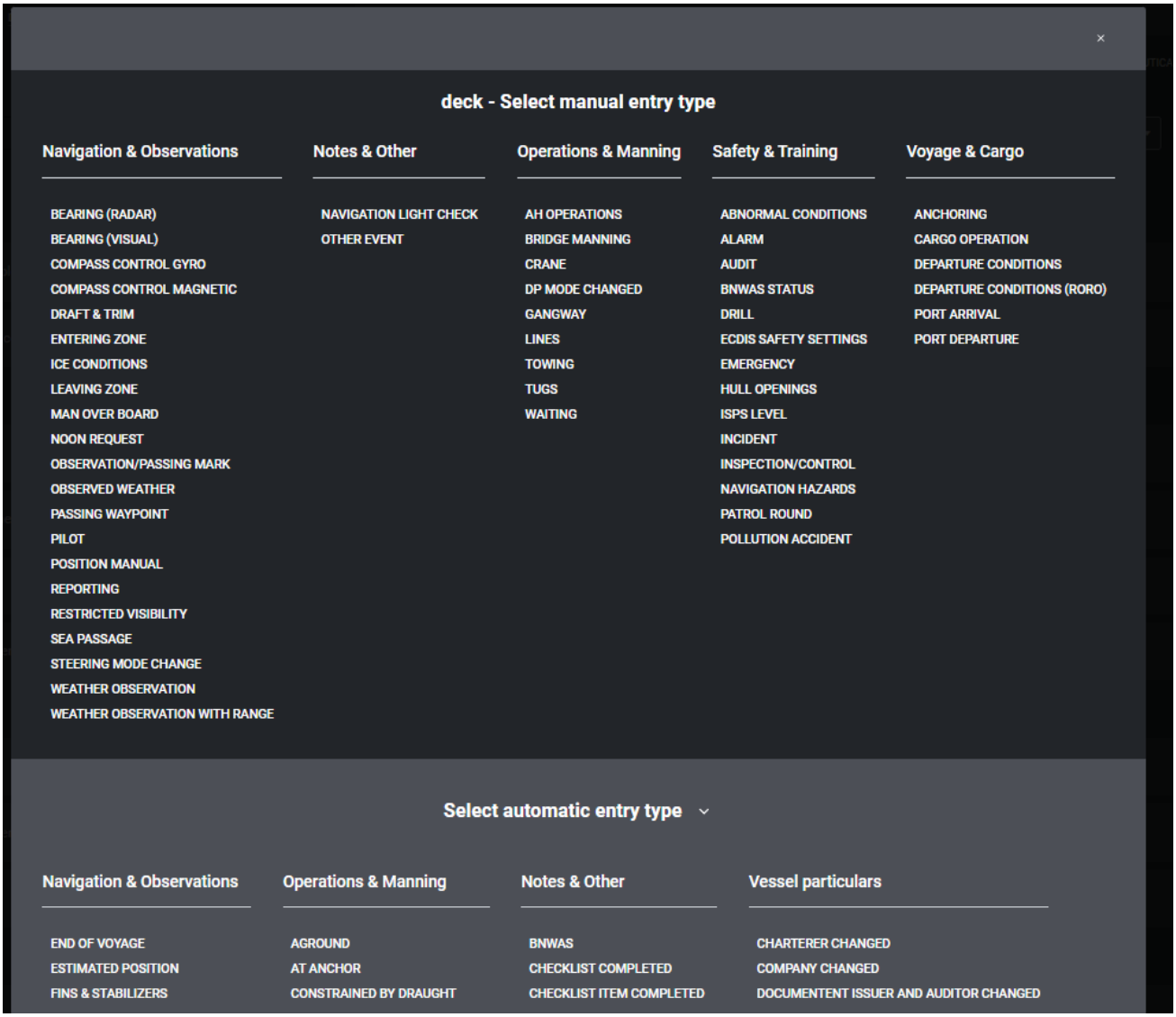
The Logbook Entry

Create a Logbook Entry

- From Dashboard click on Add Log Entry
- From Logbook Panel Click on Favorites or Add Log Entry

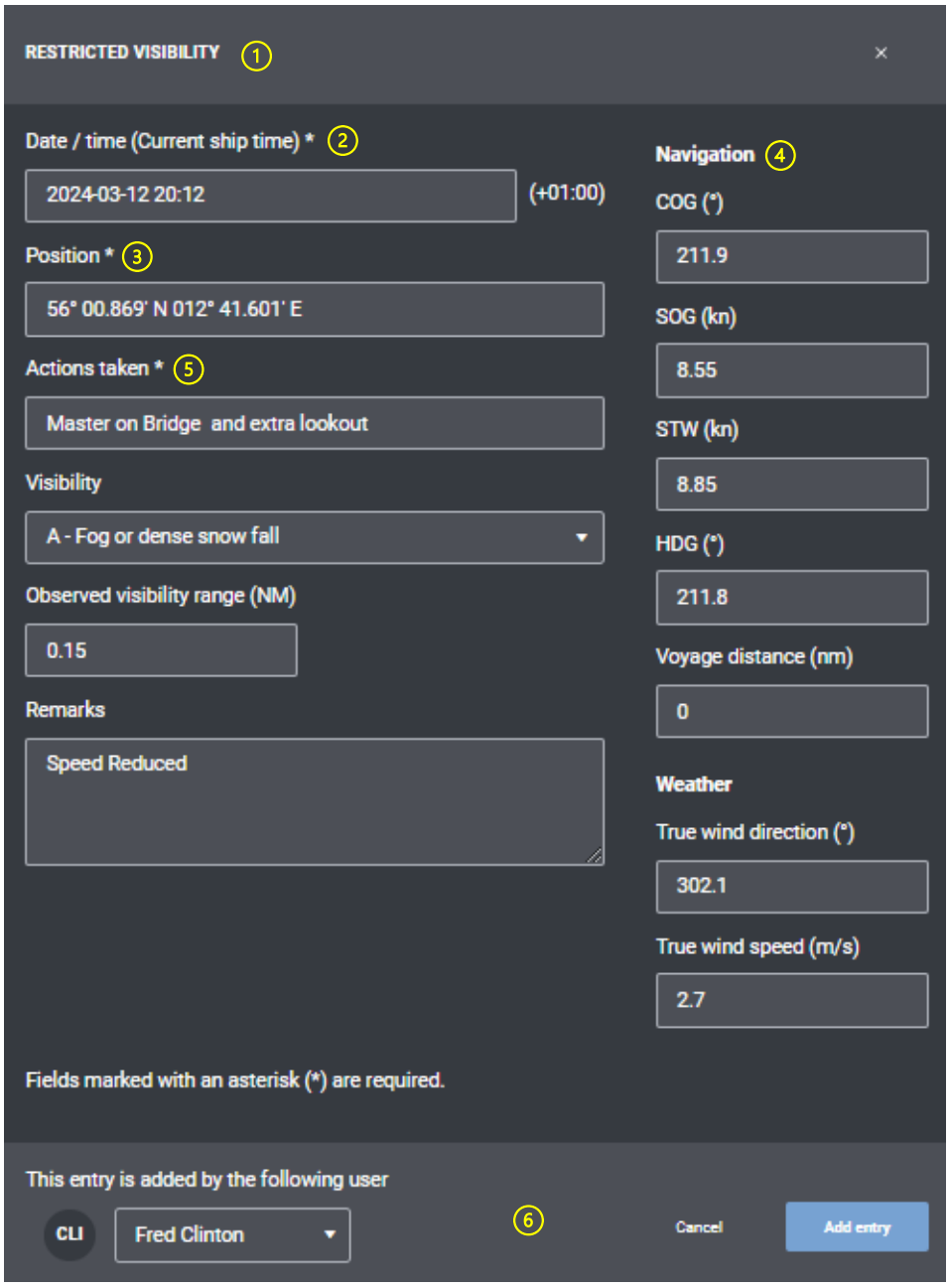
Logbook Entries are divided in,

- Categories,
- Manual and Automatic Entries
  Automatic Entries are generated by TELSCOPE triggered by a user action or system trigger.
  Records generated by system triggers gets status Not Verified and recorded by AUTO.
  Records to be Verified by OOW/OEW before watch is handed over.



LOGBOOK ENTRY PANEL

The Logbook Entry Panel contains a set of information and data.



1. **Entry Type/Name**

2. **Date and Time**
Can be adjusted if event occurred earlier.

3. **Position**
Can be manually changed

4. **Sensor data**

Position and Sensor data will be updated if Date and Time is Changed

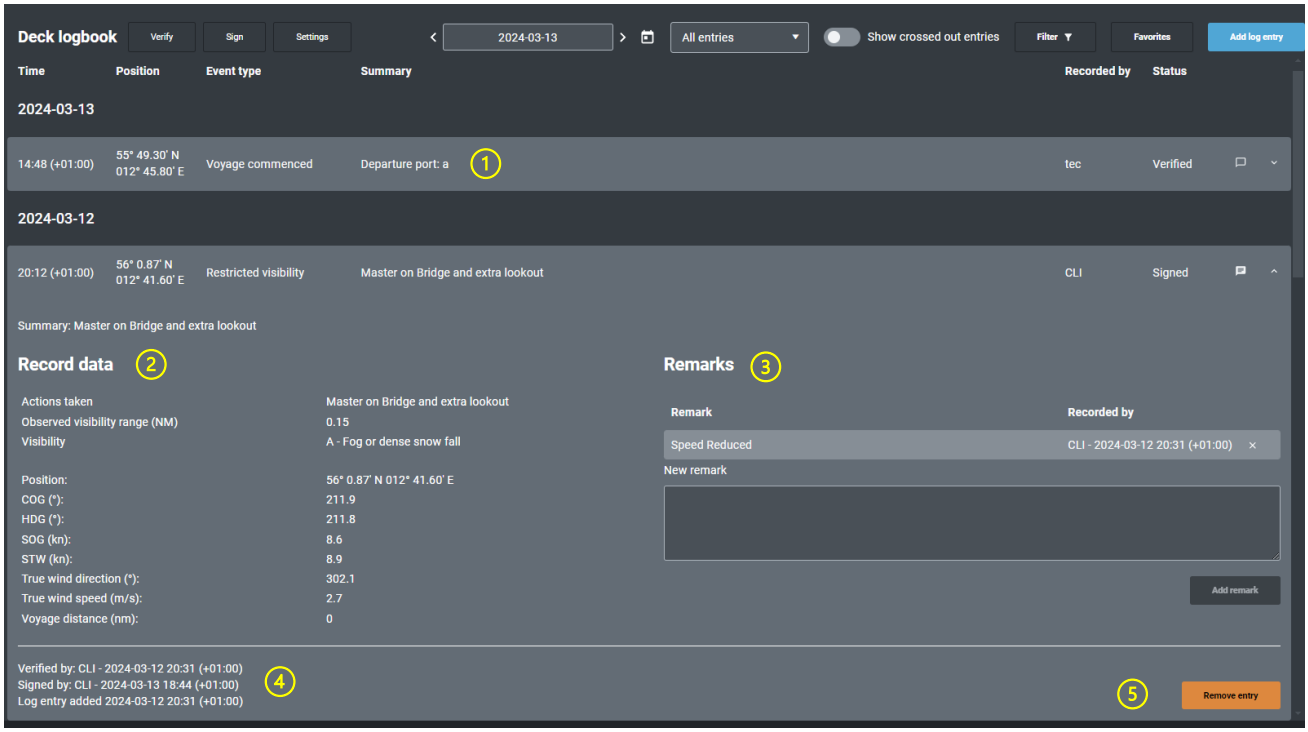
5. **User input**
Can be in form of Dropdown, Free Text or input of Numeric values.
Fields with * are mandatory.
The first free text field will appear in the logbook Summary.

In addition TELSCOPE can add so called Stream data. This is data that already have been entered by the user such as Person Onboard, Tank Data, Quick Settings, Voyage Data and more

6. **Add Entry/Cancel**
A user that is not logged in on the workstation can add an entry and complete with his credentials.
- Click on the user drop down
- Select user
- Complete with Pin-Code

THE LOGBOOK TABLE.

In the logbooks table, all records are listed in date order, click on the logbook entry to open and see all the information. Function and content are described below.



1. Record Information

For each logbook record, the following is displayed on the left,

- Entry time
- Ships Position
- Record Type
- Short Summary

The following is displayed to the right,

- Recorded By
- Status (Not Verified/Verified/Signed)
- Remark icon, if filled, there are one or more remarks.
- Arrow Down/up – Opens/Close the record.

2. Record Data

Each logbook record contains different types of data these can be,

- User input, from Drop Downs, Free Text, or numeric values
- TELSCOPE Stream Data
- Sensor Data

3. Remarks

One or more remarks can be added.
A remark can be crossed out by clicking on the X

When Remark is added or crossed out TELSCOPE register Recorded By, Date and Time.
After the Master has signed the logbook, only the Master can make changes to the signed record.

4. History data

TELESCOPE logs all changes of the Records status,

- Verified by
- Signed by
- Log Entry added, shows the time when the entry was made in the logbook. This time differs from the time in Record Information if the user has altered the Record Time.

5. Remove

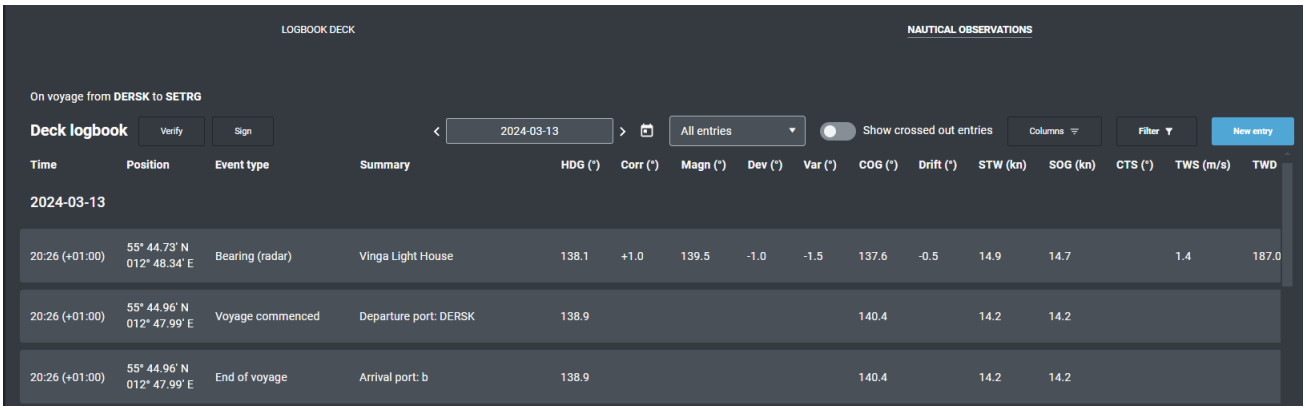
The user can cross-out a record by clicking the Remove Entry button.

The record will then be hidden. User can show hidden records by changing the toggle Show Crossed Out Entires.

Crossed Out Entires are always included in Report (PDF)

Nautical Observations (Part of Deck logbook)

The Nautical Observations Panel provides an overview of the all log-book entries in the category Navigation & Observations. New Entries can be created directly from this page.



FILTER - Columns with Nautical data can be filtered. Click on the Filter button (highlighted yellow in the below picture)

GMDSS Annex I and II

In GMDSS Annex I, all GMDSS batteries can be listed with the following information

- Battery No
- Number of cells
- Manufacturer
- Type of Battery
- Date Supplied
- Voltage A/h capacity

The User can

- Add batteries, Click on Add battery.
- Change Battery data, Click on Edit
- Remove Battery, Click on Delete

In GMDSS Annex II Records can be made when batteries are controlled and or charged.

ENGINE TANKS OVERVIEW

Tank Overview shows information on tank status for the ship's various tank types as well as a table where daily readings, bunkering, discharge, etc. can be registered mainly for tanks that are not handled in OIL RB I.

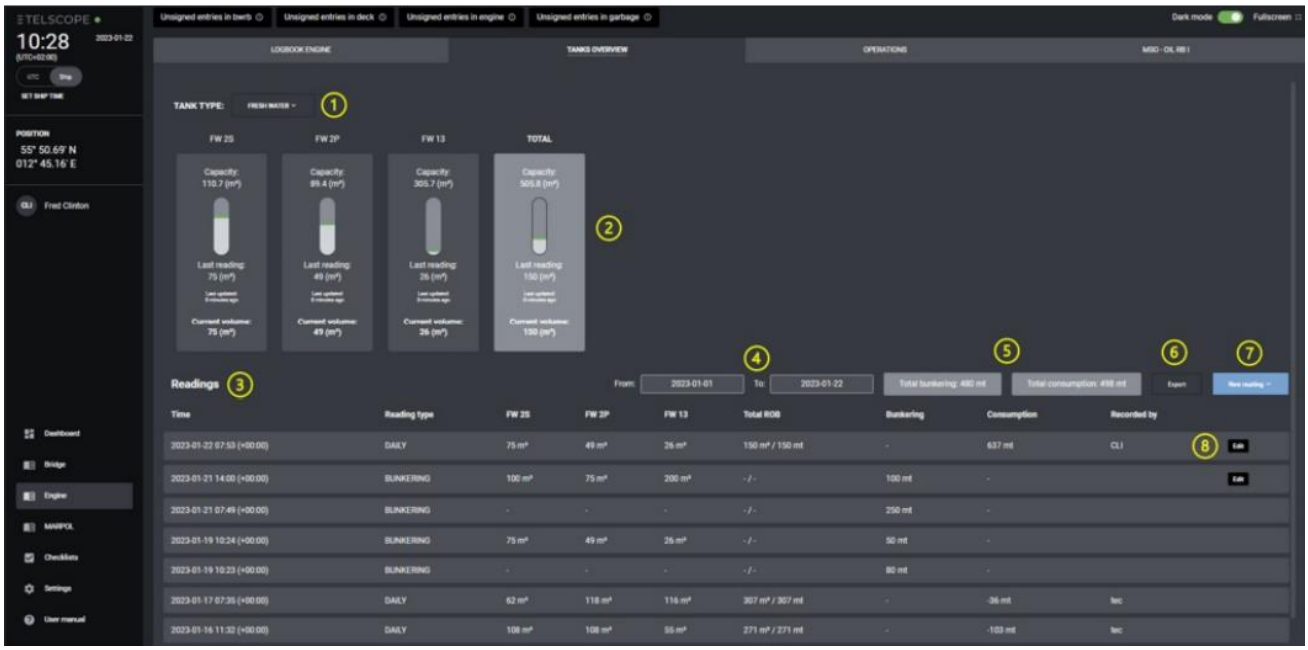
Tank Readings

Tank Readings provide tools for reading of,

- Daily consumption
- Bunkering of storage
- Delivery of Storage (normally used by Offshore ships delivering to offshore installations)
- Discharge of disposal tanks
- Collection to disposal tanks

For tanks that is operated in OIL RBI functionality is limited to Daily reading of Fuel and Lube Oil.

Numbers in the picture are described below.



1. Select Tank Type
   The drop-down menu allows the user to choose tank type
   Readings can be made for Storage and Waste tanks
   TELSCOPE remember the last tank type used when switching between functions in TELSCOPE

2. Tank Graphic
   shows the following information.
   - Tank Name
   - Capacity
   - Graphic that shows level, with sensor connected current level, no sensor it shows level of last reading.
   - Last Reading, input from last operation in OIL RB, BWR or Tank Readings.
   - Last update, time since the last reading/update
   - Current Volume - Level from tanks sensor (Live).
   - Last Updated

3. **Readings Table**
   With the following information,
   - Date and Time
   - Reading Type
   - Tank name and ROB
   - Total ROB
   - Total Bunkering
   - Consumption between readings (today calculation is made between the Daily readings
   - Recorded By

4. **Date Filter - From/To**

   The date filter from is by default set to the first of current month.
   Time period exceeding 3 months are not supported as amount of data might exceed system limitation.
   collecting data on the fly

5. **Total Values**

   The two grey fields represent the summary for the selected time.
   Total Bunkering - available for all storage tanks
   Total Consumption - available for all storage tanks
   Total Disposal - available for all waste tanks
   Total Discharge - available for all waste tanks

6. **Export**
   Allow export of data for the selected time to Excel (.csv)

7. **New Reading**
   The drop-down menu allows the user to conduct one of the following readings.
   - Daily Reading of Tanks
   - Bunkering
   - Bunkering plus reading of ROB for individual tanks
   - Discharge
   - Delivery

8. **EDIT**

Allow the user to correct Date, Time, or ROB values in the selected reading.
As for now correction can be made to the last Bunkering and last Reading.

NEW READING

New Reading Button opens the Add Tank Reading panel where the user can:

- Set Date and Time
  ROB Values are updated if date and time is changed.
- Add Port/Facility
- Set Total Bunker or Discharge
- Change the ROB values for each tank (Use TAB to move to next tank)
- Select Add to Logbook (Tickbox).
- Complete the Reading, click on Add Reading.

Numbers in the picture are described below.

1. Tank no sensor connected
   Level taken from last reading

2. Tank sensor connected
   Level taken from sensor

3. ROB Values
   Must be filled in
   With Sensor, ROB value prefilled = Tank Sensor
   If Tank Sensor not is connected ROB to be filled in manually
   ROB values can be adjusted

NOTE, if date and/or time is changed TELSCOPE fill ROB values from Database for the date and time selected. Current Volume is not updated as this is live from sensor.

ENGINE MACHINE

The Engine Operations panel provide a status overview of Ships Machinery (Main Engines, Generators, Boilers, Water maker etc) where it is possible to record and track status, running ours, out of service/maintenance, oil, or power consumption. For more information see Engine Reading Panel below.

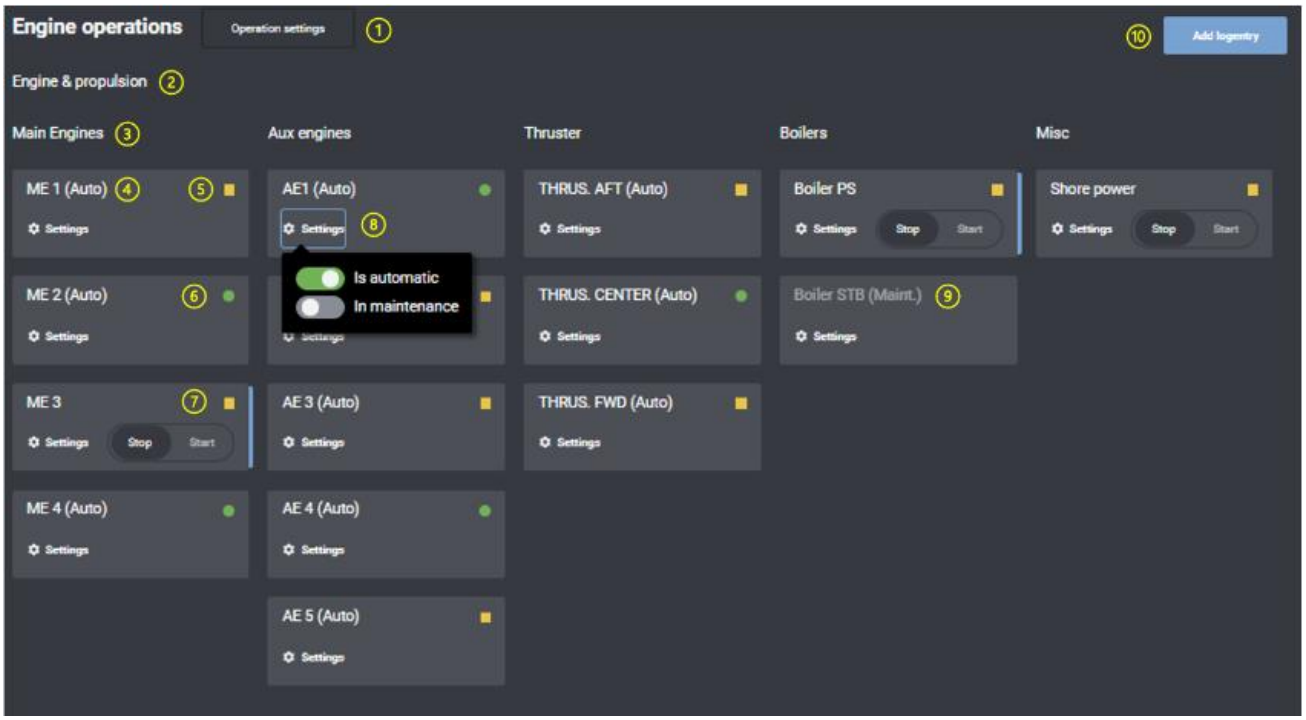
The Machine configuration is set up in the Settings Module (TELSCOPE MAIN PAGE). The layout of the Operations panel is configured in Operations Settings.

Engine Automation System and Tank Sensors can be connected to TELSCOPE allowing automatic change of status of engines and presentation of Tank Sensor information.

Automatic Mode can be used in combination with Manual Mode if Automation data is missing or sensor broken for a machine. User can at any time switch between Manual and Auto.

Engine Operations Panel

Numbers in the picture are described below.



1. Operation Settings

   Operation Settings opens a panel where the user can set up the Engine Operations Panel.
   This is normally done in conjunction with commissioning of TELSCOPE, but adjustments can be done if needed.
   Before the Operation Panel can be adjusted all Machinery and Tanks must be configured (Settings/Machinery Add New Machine)

   Setting up the Operations Panel:

- Add Row and Columns, for grouping of machines and functions
- Add Row Label
- Add Column Label
- Add Machinery - Click on Add Machinery and select from the drop-down menu.

Import Configuration / Export Configuration allow the user to import and/or export an engine configuration. (.Json format)

2. Row Label

3. Column label

4. Engine Status (AUTO)
   indicating that it is connected to automation system
   Change of status will be triggered by engine sensor data.

5. Yellow Box
   indicates that engine is Stopped and/or in Standby Mode

6. Green Circle
   Indicates that the engine is started and in operation

7. Engine Status (Manual)
   - Toggle for change of status Stop & Start when automation system is not connected or working (operation is switched to manual mode see 8)
   - Clock Icon allow the user to set time for Start/Stop of Engine
   - Blue Line - Indication that engine status has been changed and that the engine Record is pending.

8. Settings
   Two toggles that allow the user to:
   - Switch between AUTO and Manual Mode
   - Set the engine in Maintenance Mode
     Maintenance - Indication that engine is not in operation i.e., out of service or maintenance.

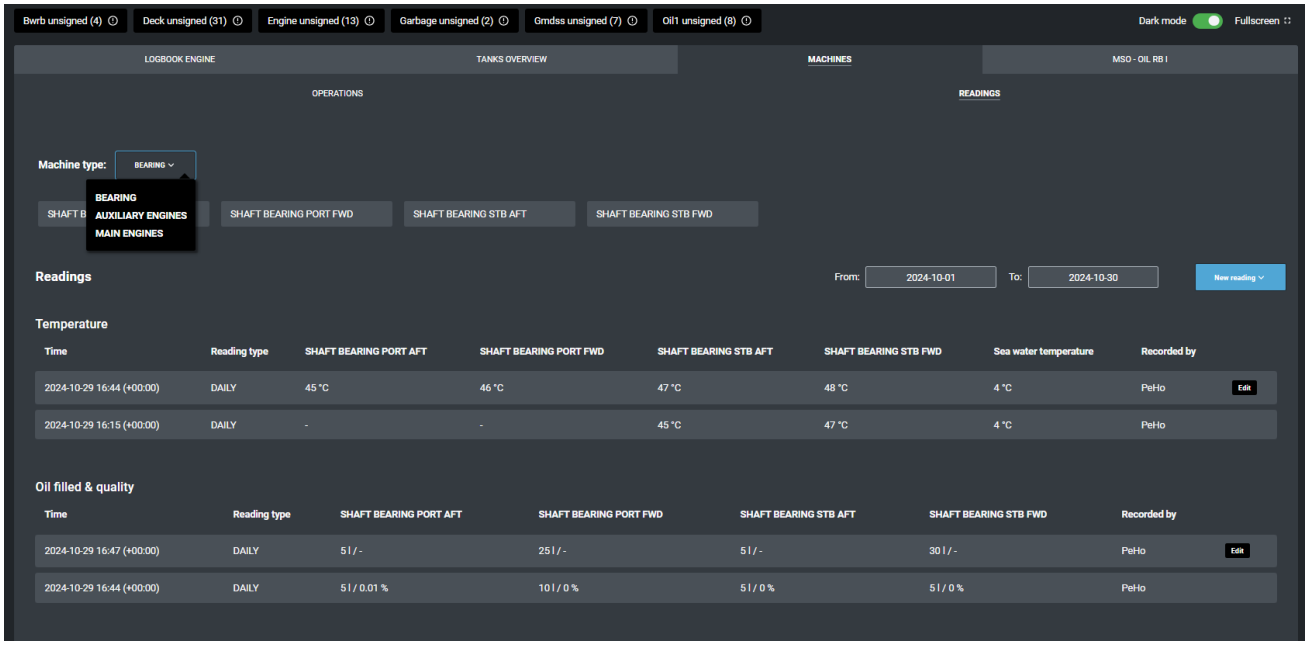
Engine Readings Panel

TELSCOPE provide tools for recording of Engine parameters such as Running Hours, Temperature, Oil Quality.

New Reading

A new Reading is created by

1. Select machine Type (Bearing, Aux Engines, Main Engines)
2. Select Reading Type (only available for Engines)
3. New Reading
    a. For Machines Daily Reading
    b. For Bearing temperature or Oil Fill & Quality



BALLAST WATER RECORD BOOK

Introduction

The International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention), entered into force on 8 September 2017. MEPC 81 adopted amendments to regulations A-1 and B-2 of the BWM Convention concerning the use of electronic record books that will come in force February 2025.

TELSCOPE is compliant to the new format outlined in MEPC 369(80) Form of Ballast Water Record Book and MEPC372(80) GUIDELINES FOR THE USE OF ELECTRONIC RECORD BOOKS UNDER THE BWM CONVENTION.

IMO has in BMW.2-CIRC.80 outlined, GUIDANCE ON BALLAST WATER RECORD-KEEPING AND REPORTING that can be found in Annex 3 to the user manual.

Note, some Flag state might not accept Ballast Water Record Book in electronic format or might have special requirement in addition. For more information about Flag State see Annex 1 in TELSCOPE User Manual.

Format can be changed in SETTINGS/SHIP/BALLSAST – Form of Ballas Water Record Book MEPC.369(80).

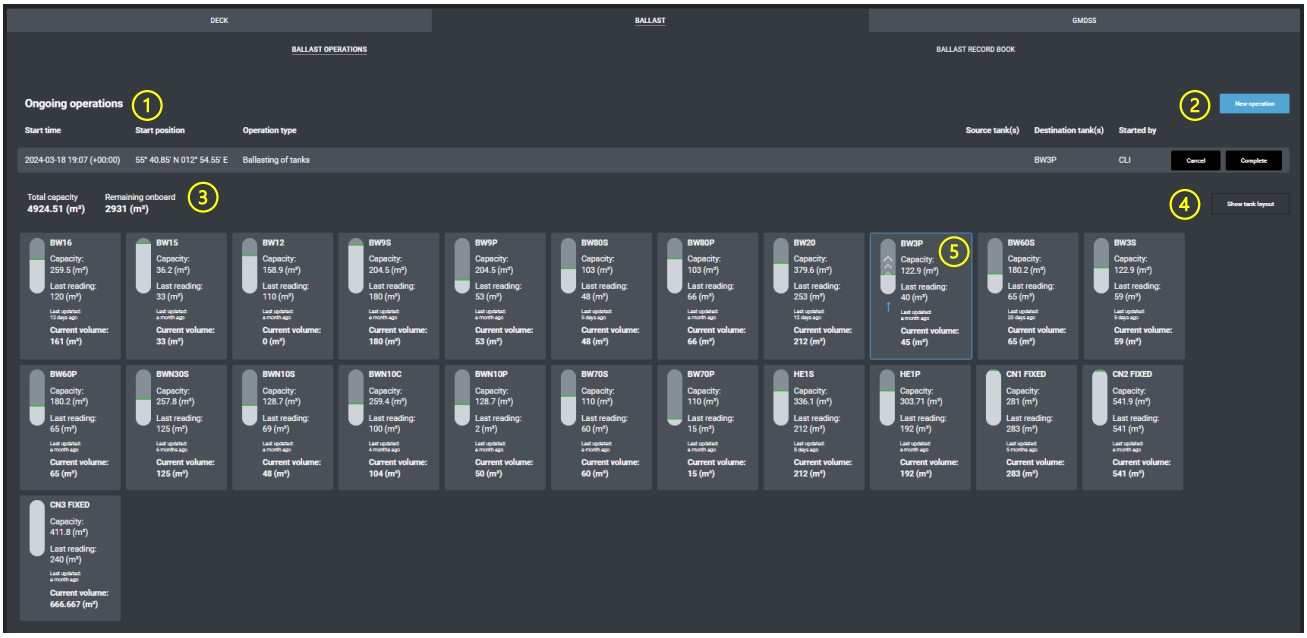
TELSCOPE support Ballast Operation outlined in the documents mentioned above.

TELSCOPE Ballast Water Management Module is divided in two parts.

- Ballast Operation includes tools and panels for correct record keeping during different type of Ballast Water Operations.
- Ballast Record book follow the layout and functionality used in SOLAS Logbooks described above.

Ballast Water Operations

The Ballast Water Operation Page includes tools and information described below.



1. Ongoing operations

Shows a list of Ongoing Ballast Water Operation including,

- Start time & Start Position
- Operation Type
- Tanks in operation (source and destination)
- Started by (user)

- Cancel Button, that will stop the operation. No Data will be stored.
- Complete, opens a dialog panel allowing the user to fill in data required to complete the record.

2. New Operation

Opens the following list of Ballast Operations

- Ballasting of Tanks (from Sea)
- Ballasting from Shore
- Discharge to Sea
- Exchange
- In-tank treatment
- Discharge to shore.
- Accidental
- Cleaning of Tanks
- Other
- Internal Transfer
- Internal circulation treatment
- Failure and inoperability's

3. Total Volume

Sum up the total

- Capacity of the ballast tanks
- Remaining on board in the ballast tanks

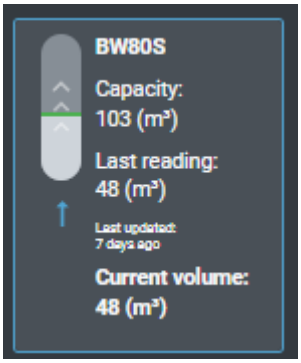
4. Show Tank Layout

Open a 2D-presentaion of Ships Ballast tanks.

Tanks included in ongoing Ballast Operation is outlined blue.

5. Tank Symbol

For each tank a rectangular shape with the following information is presented



- Tank name
- Tank capacity in m^3
- Last reading in m^3, this is the last registered tank volume in BWR.
- Last update, e.g. time since the last operation
- Current volume, information from connected tank sensor.
- Tank symbol indicating type of operation.

Register Ballast Operation

When a Ballast Operation is started the user shall start the corresponding operation in TELSCOPE.

TELSCOPE will guide the user through the operation following the steps below.

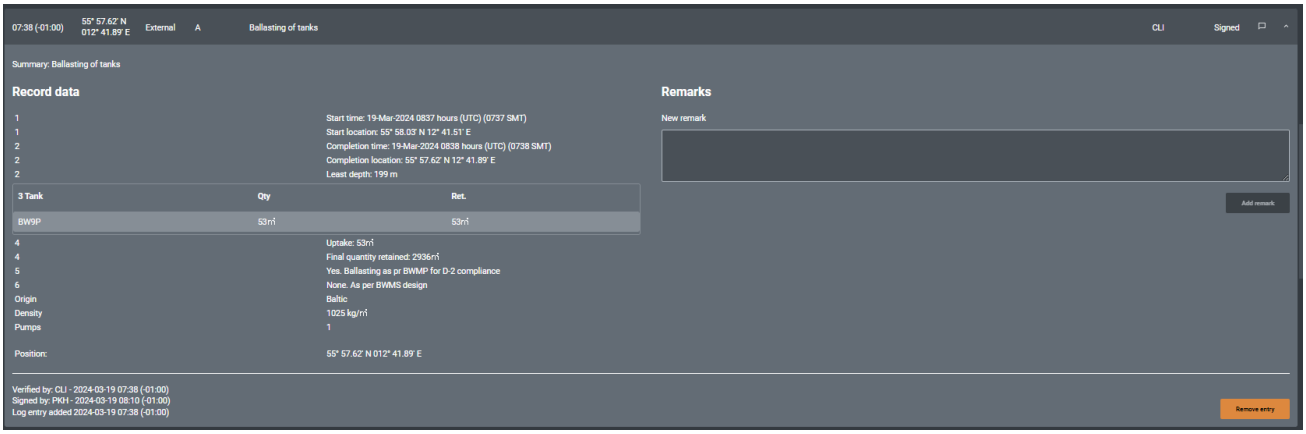
START NEW BALLASTA OPERATION

1. **Click on New Ballast Operation** and select operation type.
   In this example we use Ballasting of Tanks.
   Principals are the same for all operations.
   Fill in the form.
2. **Start Time**, adjust if needed.
   If time is changed position and other data will be updated.
3. **Port/Facility**
4. **Origin of Ballast Water**
5. **Tick box for "In Accordance with management plan"**
6. **Pump Used**
7. **Treatment System applied**
   Tick Box is "On" by default
8. **Select tank (-s)**
9. **Control start volume** (should be equal to Last Reading)
   But this can be adjusted by the user so that record keeping is in line with data from other system like Treatment system,
10. **Start Operation**

The operation will now appear among Ongoing Operations booth in Ballast Operations and on the Dashboard.

COMPLETE BALLAST OPERATION

1. **Click on Complete Operation**
   Fill in the form
2. **Density,** note that density always is in Kg/m^3
3. **Least depth (m) ***
   * indicates that field is mandatory to fill in
4. **Least distance to shore (NM) ***
5. **Start volume (m^3)**
6. **ROB (m^3) *,** Control and adjust if needed.
   The pencil opens the field for manual input
7. **Quantity received (m^3) ***
   This value is calculated by TELSCOPE as *ROB (m^3) -Start volume (m^3)*
   The pencil opens the field for manual correction.
   Note if this value is changed ROB is not updated. To be done manually if needed.
8. Complete **Operation.**
   A record will be generated in the Ballast Record Book.
   Layout and functions as in other record books.
   Printed PDF report can be done se Reports.



MARPOL GARBAGE RECORD BOOK I & II

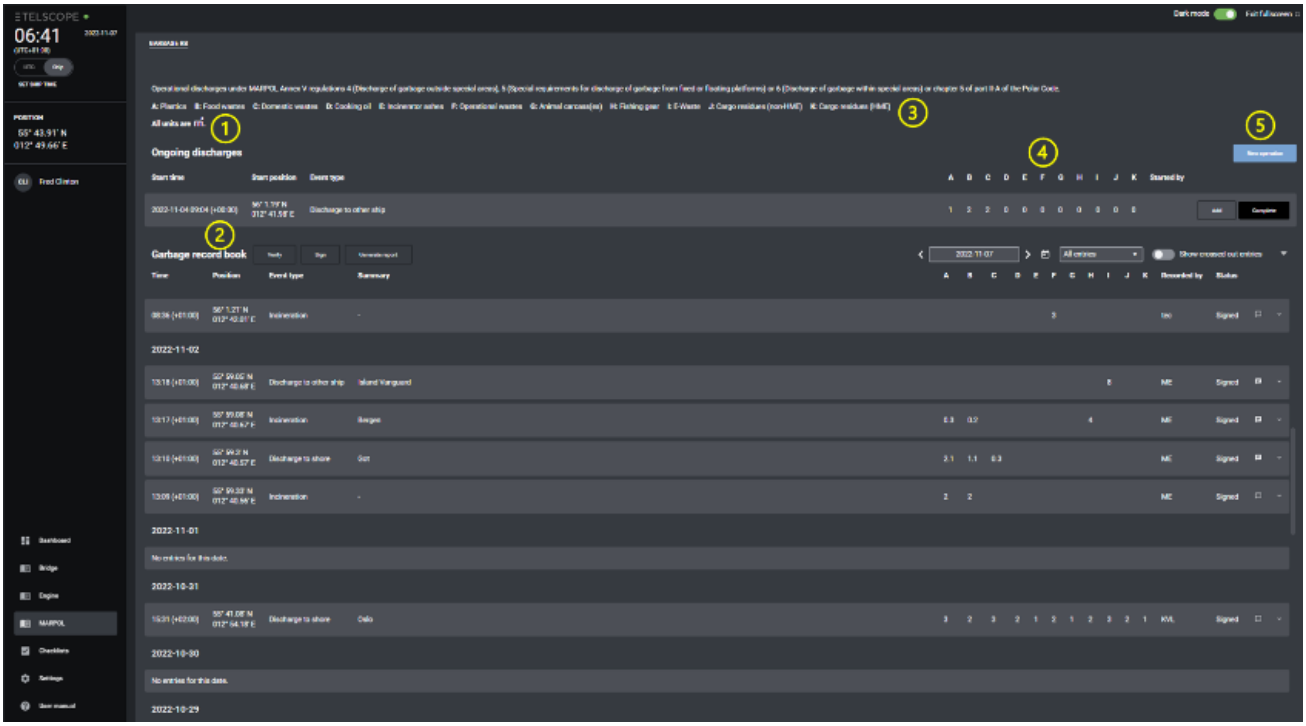
TELSCOPE Garbage Electronic Record Book Complies to the requirement in MARPOL Annex V, regulation 10.3 (Part I & II)

Operational discharges under MARPOL Annex V regulations

- 4 (Discharge of garbage outside special areas),
- 5 (Special requirements for discharge of garbage from fixed or floating platforms)
- 6 (Discharge of garbage within specific areas) or
- Chapter 5 of part II-A of the Polar Code.

Layout and functionality follow the operational principals outlined for DECK, GMDSS and ENGINE Electronic Logbooks.

Numbers in the picture are described below.



1. Ongoing Operations,
   Show a list of ongoing Garbage Operations.

2. Garbage Record Book
   Show the list of completed Garbage Operations.

Layout and functions as in other record books.
Printed PDF report can be done se Reports.

3. List of Garbage Categories

Garbage Categories as described in MARPOL ANNEX V.

4. Table

A table that shows quantity of garbage in m3 for each category.
Filter to hide not used Columns/Categories

5. New Operation

Drop Down List for selection of new Garbage Operation.
Starting time and position is recorded
The following five Categories are available.

- Accidental Discharge
- Incineration
- Discharge to other ship.
- Discharge to Sea
- Discharge to Shore

6. ADD and Complete Button

ADD, allow the user to add garbage into an ongoing operation.
Complete, allow the user to complete the Garbage operation:
Stop time and Position is recorded and can be adjusted.
User can add following information; Facility/Port, Receipt No and Remark.

Note: TELSCOPE Garbage Record Book combines Part I and PART II,
Print report can include either Part I or Part II or a combined report with booth Record Books.

MARPOL OIL RECORD BOOK I

TELSCOPE complies to the requirement outlined by The MARINE ENVIRONMENT PROTECTION COMMITTEE in

- MEPC.117(52) MARPOL Annex I, regulations 17.1 and MEPC.1/Circ.736/Rev.2
- RESOLUTION MEPC.312(74) GUIDELINES FOR THE USE OF ELECTRONIC RECORD BOOKS UNDER MARPOL CONVENTION.

TELSCOPE OIL RB I has been designed to

- Ensuring compliance with MARPOL Annex 1 requirements
- Simplifying and preventing human errors in the onboard work.
- Facilitating simple tools for the responsible officer and Master
- Ensuring uniform and consistent ORB Part I1 Record keeping that is aligned with and compatible with other TELSCOPE Record Books.

INTERTANKO Guide for Correct Entries in the Oil Record Book Part I Machinery Space Operations has been used as an example for good record keeping during the development of TELSCOPE OIL RBI.

Note that some Flag state might not accept OIL Record Book Part II in electronic format or might have special requirement in addition. For more information about Flag State see Annex 1 in TELSCOPE User Manual-

TANK SETUP

Before TELSCOPE OIL RB I can be used Fuel, Lube Oil, Sludge and Bilge tanks must be set up.
To do this,

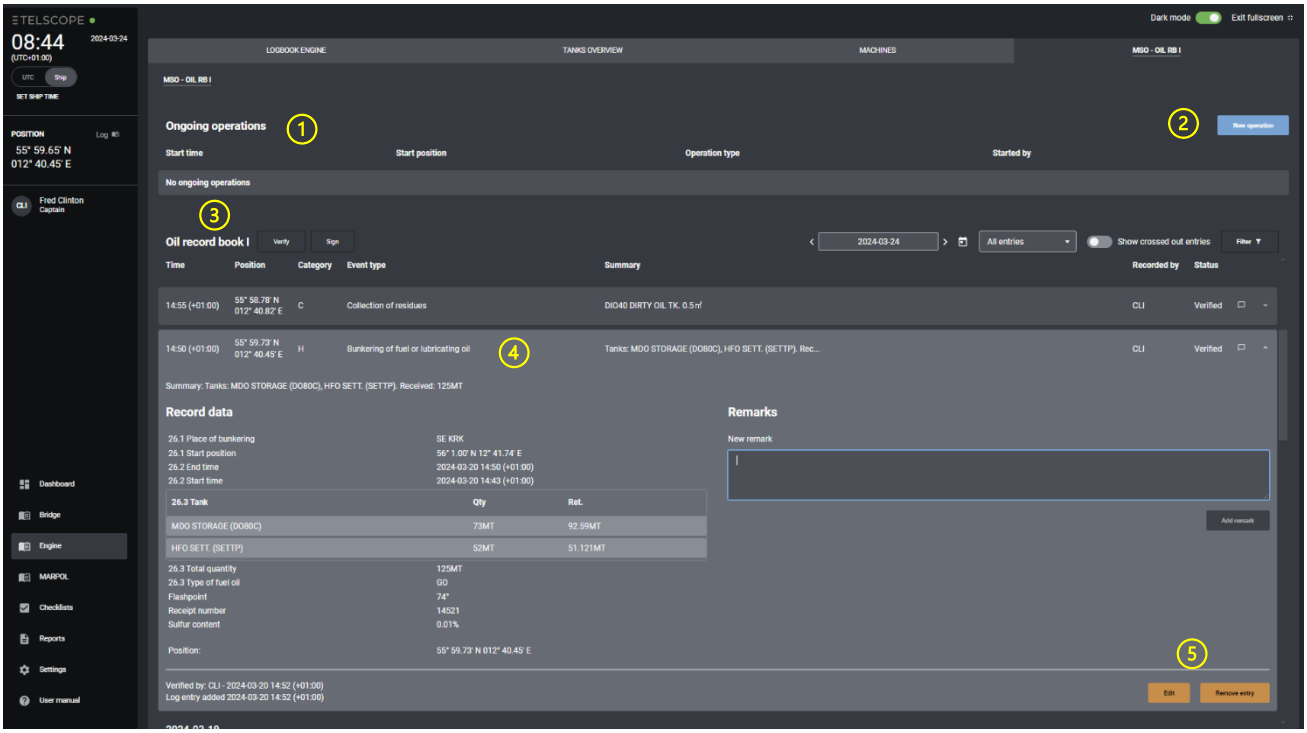
- Open Settings/Tanks
- Select Tank Type
- Add Tank
    - Set name = Tank Certificate
    - Set location x and y
    - Set Capacity

GENERAL GUIDANCE

- Operations should be recorded in chronological order as they have been executed on board.
- Dates should be entered in dd-MONTH-yyyy format, e.g., 16-MAR-2009.
- Incineration or landing ashore of oily garbage and used filters should be recorded in the Garbage Record Book only.
- All Entries are to be made and signed by the officer or officers in charge of the operations concerned and each entry shall be signed by the master of the ship.
- If a wrong entry has been recorded in the Oil Record Book (ORB), it should immediately be Cancelled (if operation have not been completed) or Removed (when operation has been Completed struck through) with a single line in such a way that the wrong entry is still legible.
- The wrong entry should be signed and dated, with the new corrected entry following.
- Tank nomenclature should be recorded as per the format noted within the International Oil Pollution Prevention Certificate (IOPPC).
- Recording of quantities retained in bilge water holding tanks listed under section 3.3 of the IOPPC is voluntary and not required by the Convention.
- The recording of general maintenance of items pertaining to the OWS remains voluntary and is not required to be recorded in the ORB.
- Printed PDF report shall be signed by the Master on each page.

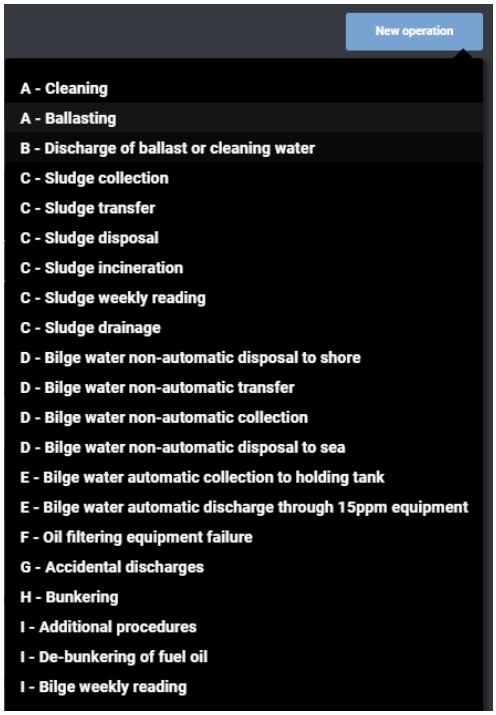
Oil RB I Page

Oil RB II is in the Engine Section.
Layout and functionality follow the operational principles outlined for DECK, GMDSS and ENGINE Electronic Logbooks.
Numbers in the picture are described below.



1. **Ongoing operation**
   Show a list of ongoing Machinery Space Operations

2. **New Operation**
   Drop Down List for selection of New Operation.
   Starting time and position is recorded.
   The following Categories are available.



3. **Oil Record book Part I**, follow the layout and functionality used in SOLAS Logbooks described above.

4. **Logbook Entry Expanded**

5. **Edit & Remove Buttons**
   The EDIT button allows the user to open and correct a record that is completed.
   Click on EDIT, the input panel is opened were user can correct data.
   When user Completed the record TELSCOPE will,
   - Strike through the original Record.
   - Create a New Record.
   - Correct Tank Data

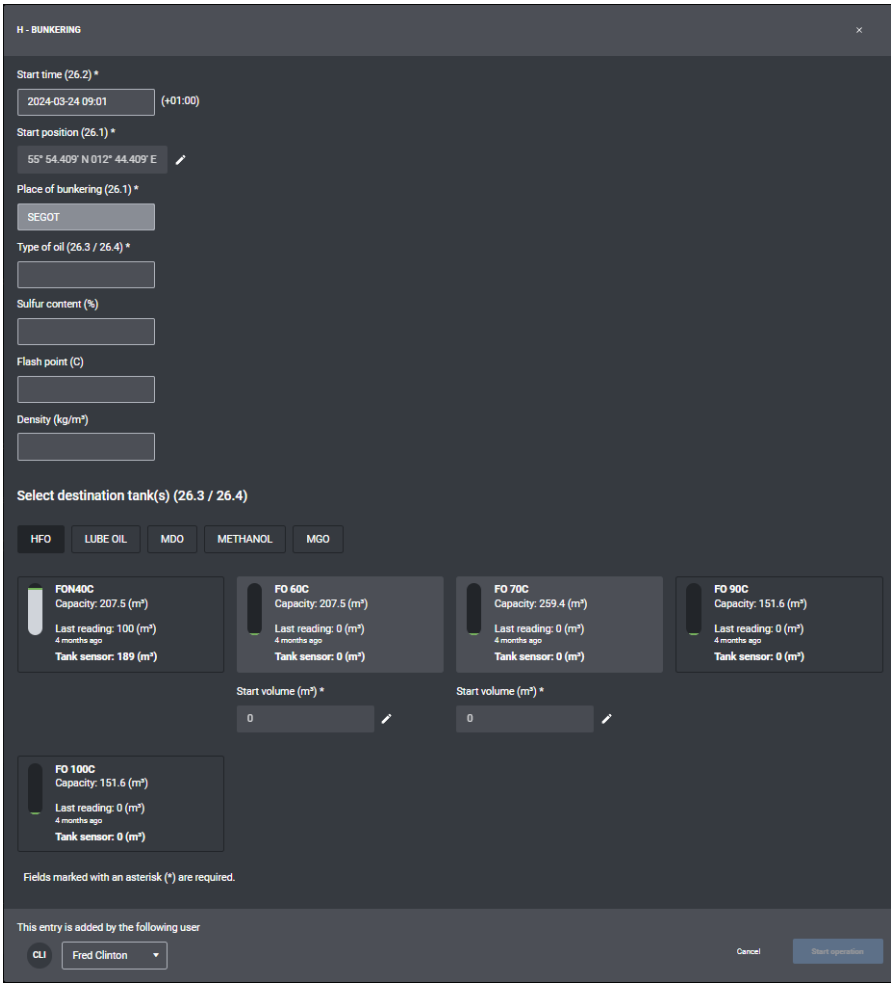
Note, edit function is only available for the recent records. Older records cannot be corrected this way as it will affect Start Volume and ROB values on all records afterwards. Older Record to be corrected as an operation - I Additional Procedures.

Register Machinery Space Operation

When a new operation is started the user shall start the corresponding operation in TELSCOPE.
Input of data follow the principals used in Ballast Water Record Book.

TELSCOPE will guide the user through the operation following the steps below.

START NEW OIL RBI OPERATION



1. **Click on New Operation** and select operation type.
This will open the Operations form that includes a tank layout.
In this example we use H Bunkering.
Principals are the same for all operations.
Fill in the form.

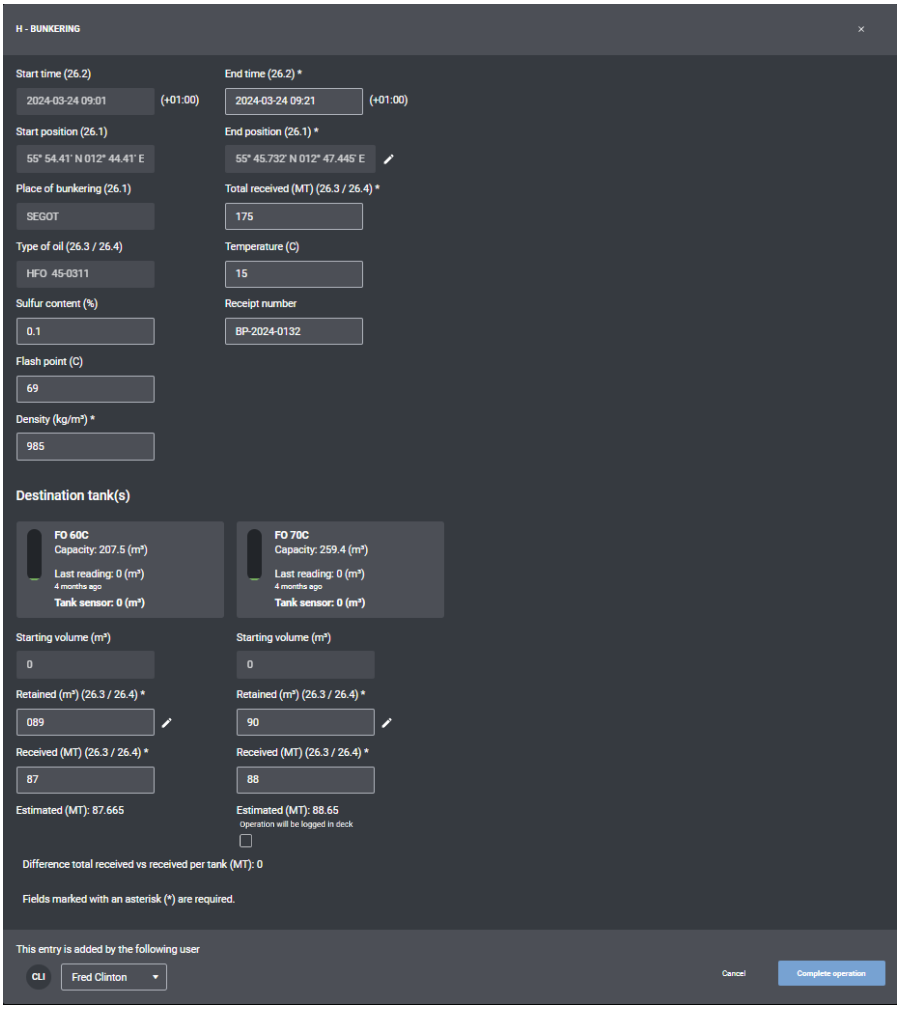
2. **Start Time**, adjust if needed.
If time is changed position and other data will be updated.

3. **Place of bunkering**
4. **Type of Oil**
5. **Sulphur Content (%)**
6. **Flash Point (°C)**
7. **Density (kg/m^3)**
8. **Select tank (-s)**
9. **Control start volume** (should be equal to Last Reading)
Start Volume can be adjusted by the user.
10. **Start Operation**

The operation will now appear among Ongoing Operations booth in Oil RB I and on the Dashboard.

COMPLETE OIL CARGO OPERATION

1. **Click on Complete Operation**
   Fill in the form.



2. **End Time**

Adjust Date and Time, if needed

3. **Place of bunkering**
4. **Type of Oil**
5. **Sulphur Content (%)**
6. **Flash Point (°C)**
7. **Density (kg/m³)**
8. **Total Received in MT**
9. **Temperature**
10. **Receipt Number**
11. **Retained (m³),**

This will be prefilled if Tank Sensor is connected, adjust if needed.

12. **Tick box for recording in deck Logbook**

13. **Received (MT) ***
    TELSCOPE estimate this value based Start Volume, Retained and Density
    Proposal is shown below as Estimated (MT)
    When Bunkering is done to several tanks the summary of Received in (MT) for all tanks must be equal to Total received (MT) otherwise the operation cannot be completed.
    TELSCOPE shows the difference between total received vs received per tank (MT): 0

14. **Complete Operation.**
    A record will be generated in the OIL RB I.
    Layout and functions as in other record books.
    Printed PDF report can be done se Reports.

MARPOL OIL RECORD BOOK II

TELSCOPE complies to the requirement outlined by The MARINE ENVIRONMENT PROTECTION COMMITTEE in

- MARPOL Annex 1 Regulation 36 Oil Record Book, Part II (OIL RBII)- Cargo/ballast operations
- RESOLUTION MEPC.312(74) GUIDELINES FOR THE USE OF ELECTRONIC RECORD BOOKS UNDER MARPOL CONVENTION.

TELSCOPE OIL RB II has been designed to

- Ensuring compliance with MARPOL Annex 1 requirements
- Simplifying and preventing human errors in the onboard work.
- Facilitating simple tools for the responsible officer and Master
- Ensuring uniform and consistent ORB Part II Record keeping that is aligned with and compatible with other TELSCOPE Record Books.

INTERTANKO Guide for Correct Entries in the Oil Record Book Part II Cargo and Ballast Operations has been used as an example for good record keeping during the development of TELSCOPE OIL RBII.

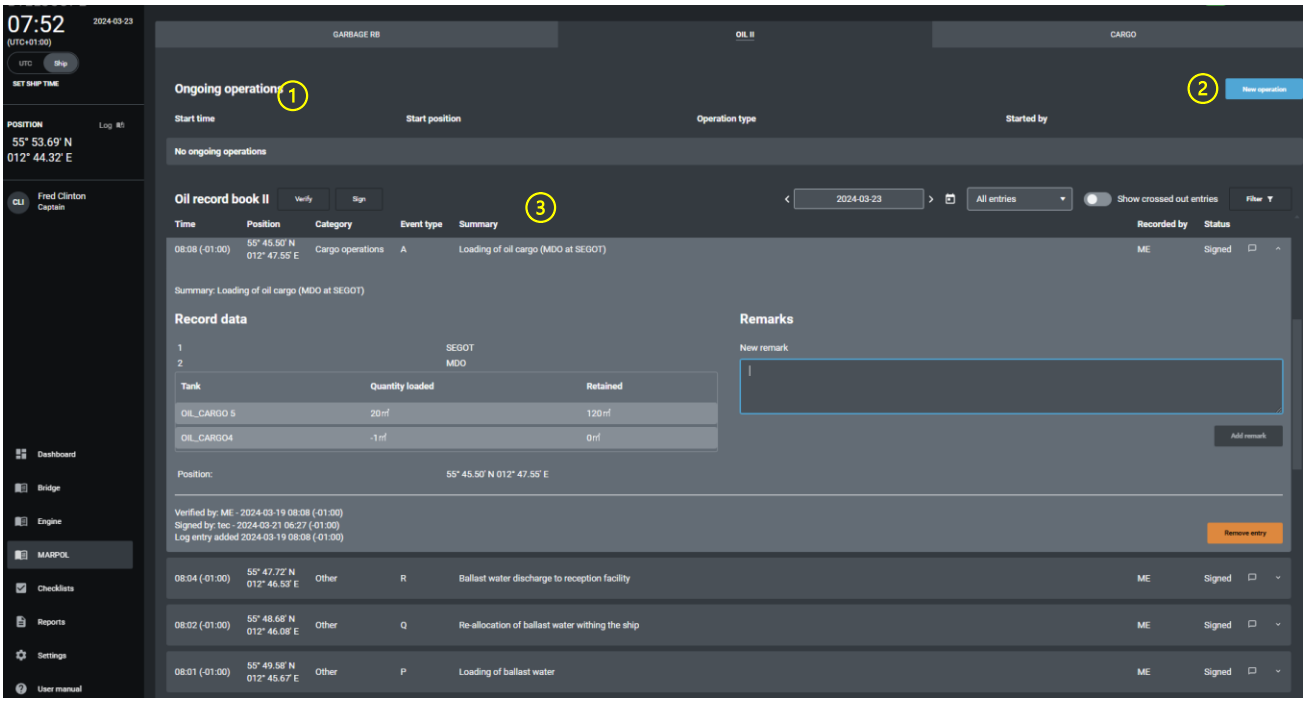
Note that some Flag state might not accept OIL Record Book Part II in electronic format or might have special requirement in addition. For more information about Flag State see Annex 1 in TELSCOPE User Manual-

Before TELSCOPE OIL RB II can be used Oil Cargo tank must be set up.
To do this

- Open Settings/Tanks
- Select Tank Type “OIL CARGO”
- Add Tank
    - Set name = Tank Certificate
    - Set location x and y
    - Set Capacity

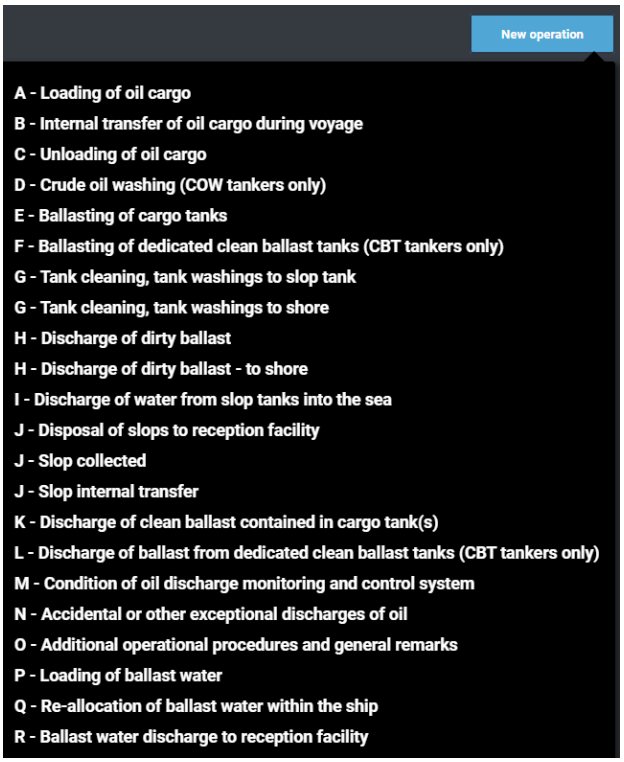
Oil RB II Page

Oil RB II is in the MARPOL Section. Layout and functionality follow the operational principles outlined for DECK, GMDSS and ENGINE Electronic Logbooks.
Numbers in the picture are described below.



1. Ongoing operation
   Show a list of ongoing Cargo Operations

2. New Operation
   Drop Down List for selection of New Operation.
   Starting time and position is recorded
   The following Categories are available.



3. Oil Record book Part II,
   Layout and functionality follow the operational principles outlined for DECK, GMDSS and ENGINE Electronic Logbooks.

Register New Oil Operation

When a new operation is started the user shall start the corresponding operation in TELSCOPE.
Input of data follow the principals used in Ballast Water Record Book and Oil RBI.

TELSCOPE will guide the user through the operation following the steps below.

START NEW OIL CARGO OPERATION

1. Click on New Operation and select operation type.
   This will open the Operations form that includes a tank layout.
   In this example we use Loading of Oil Cargo.
   Principals are the same for all operations.
   Fill in the form.

2. Start Time, adjust if needed.
   If time is changed position and other data will be updated.
3. Port/Facility
4. Receipt Number
5. Oil type
6. Select tank (-s)
7. Control start volume (should be equal to Last Reading)
   Start Volume can be adjusted by the user.
8. Start Operation

The operation will now appear among Ongoing Operations booth in Oil RB II and on the Dashboard.

COMPLETE OIL CARGO OPERATION

1. **Click on Complete Operation**
   Fill in the form
2. **Adjust Date and Time,** if needed
3. **Receipt Number**
4. **Total Content (m^3),**
   This will be prefilled if Tank Sensor is connected:
   Adjust if needed.
5. **Quantity Loaded (m^3) ***
   This value is calculated by TELSCOPE as *Total Content (m^3) - Start volume (m^3)*
   The pencil opens the field for manual correction.
6. **Complete Operation.**
   A record will be generated in the OIL RB II.
   Layout and functions as in other record books.
   Printed PDF report can be done se Reports.

MARPOL CARGO RECORD BOOK

TELSCOPE complies to the requirement outlined by The MARINE ENVIRONMENT PROTECTION COMMITTEE in

- MARPOL 73/78, Annex II Carriage of noxious liquid substances in bulk
- Appendix 2: Form of Cargo Record Book
- RESOLUTION MEPC.312(74) GUIDELINES FOR THE USE OF ELECTRONIC RECORD BOOKS UNDER MARPOL CONVENTION.

MARPOL Annex II Regulations for the control of pollution by noxious liquid substances in bulk sets out a pollution categorization system for noxious and liquid substances. The four categories are:

- Category X: Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.
- Category Y: Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
- Category Z: Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment; and
- Other Substances: substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities, or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

A Cargo Record Book shall be maintained on every vessel carrying noxious liquid substances in bulk, in accordance with the provisions of MARPOL 73/78, Annex II

- After completion of an operation, it shall be promptly recorded in the Cargo Record Book.
- In the event of an accidental discharge of a noxious liquid substance or mixture containing such a substance or a discharge an entry shall be made in the Cargo Record Book stating the circumstances of, and the reason for, the discharge.

TELSCOPE Cargo Record Book has been designed to

- Ensuring compliance with MARPOL Annex II requirements
- Simplifying and preventing human errors in the onboard work.
- Facilitating simple tools for the responsible officer and Master
- Ensuring uniform and consistent Cargo Record keeping that is aligned with and compatible with other TELSCOPE Record Books.

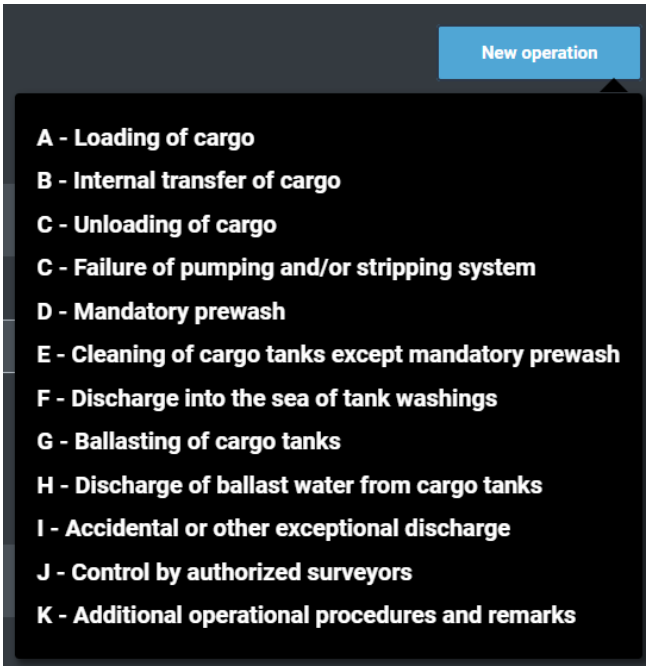
Note that some Flag state might not accept OIL Record Book Part II in electronic format or might have special requirement in addition. For more information about Flag State see Annex 1 in TELSCOPE User Manual-

Before Cargo record Book can be used Oil Cargo tank must be set up.
To do this

- Open Settings/Tanks
- Select Tank Type “OIL Chem CARGO”
- Add Tank
    - Set name = Tank Certificate
    - Set location x and y
    - Set Capacity

Functionality, Procedure, and tools in the Cargo Record Books are the same as in OIL RB I1 & II and SOLAS Record Books. Printed PDF report can be done se Reports.

The Following operations are supported by Click on New Operation.



CHECKLIST MODULE

TELSCOPE Checklist Module is designed to support the need for follow up, completion and recording of various task and controls as stated in the Safety Management System and Ship Operational Manual.
Checklist are organized by the following Categories, Deck, Engine, Safety, Cargo and Environmental.
Checklist actions can be recorded automatically in Deck, GMDSS or Engine Logbook.
The following can be recorded.

- Start of Checklist
- Checklist Completed
- Checklist Item Completed

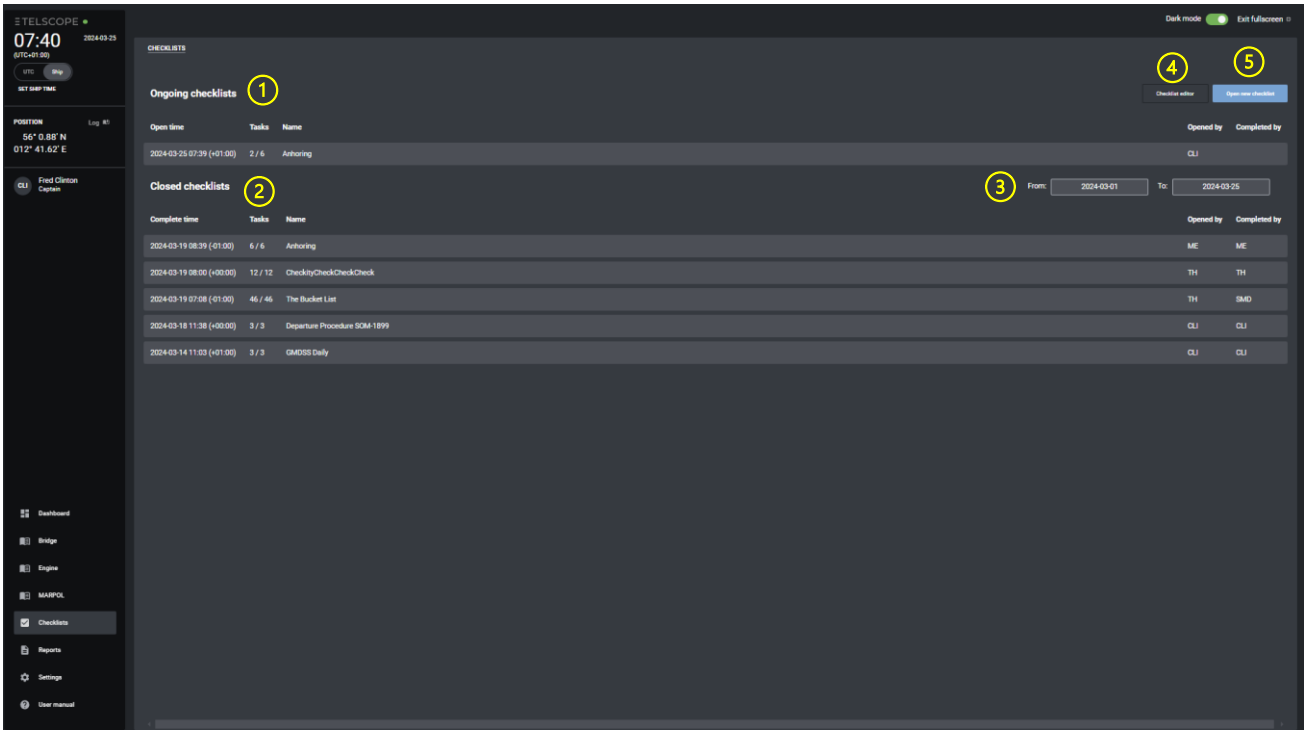
Checklist status

- **Published,** Checklist that fully comply to SMS and/or Ship Operations Manual.
- **Unpublished,** temporary checklist or copy of Published Checklist under revision, or where update made by user not authorized to Publish.

Publish and Unpublish of a Checklist can only be made by the Master and/or the responsible person in the shore Organisation.

Checklist page

Numbers in the picture are described below.

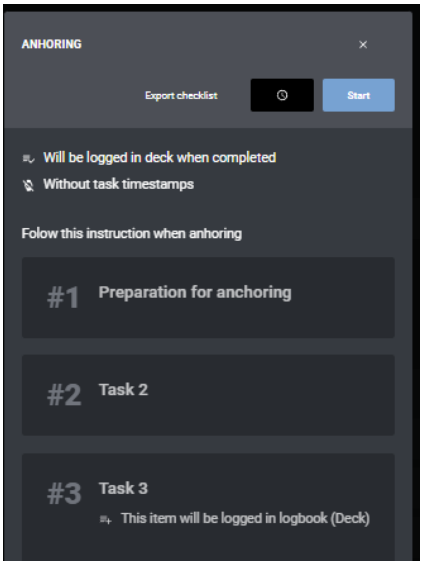


1. Ongoing Checklist show
   - Open time
   - Task completed x/y
   - Checklist name
   - Opened By
2. Closed/Completed Checklist
   - Completed time.
   - Task completed x/y
   - Checklist Name
   - Opened By
   - Completed By

3. Date Filter
4. Checklist Editor
   Opens the Checklist toolbox
5. Open New Checklist
   Opens a panel to open new checklist
   Checklist are grouped by,
   - Published / Unpublished
   - Category

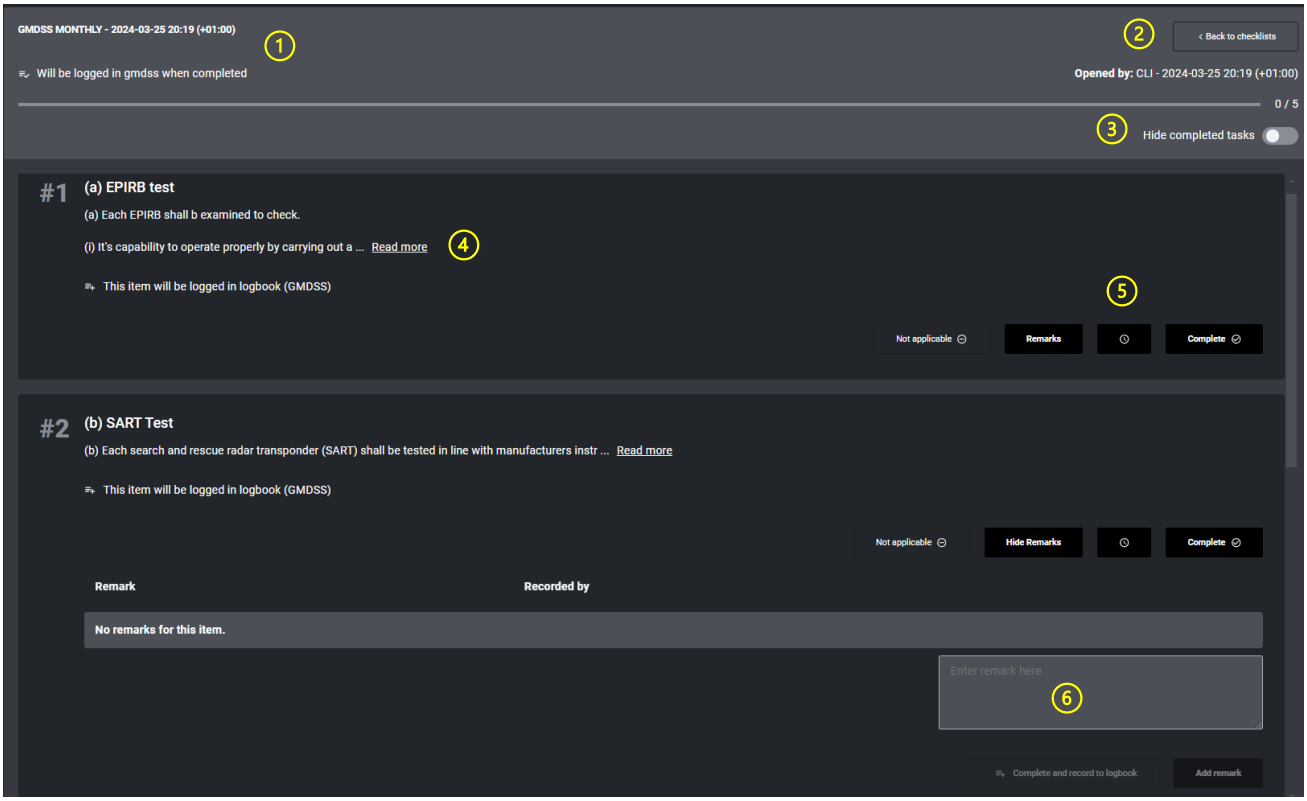
Work with Checklist

Start a new Checklist Module, Click on Open New Checklist and select a Checklist.
A panel is open where the user can.



- Export Checklist to a excel file.
- Adjust time of open Checklist
- Start Checklist

Numbers in the picture are described below.



1. Checklist name and
   Information when if Checklist will be recorded when opened and/or completed

2. Back to Checklist Page, User can later return to the checklist.
   Information of when and who opened the Checklist

3. Progress bar and status of completed and total checklist.
   Toggle that hide completed tasks.

4. Task information
   Info when a task will be recorded to Logbook

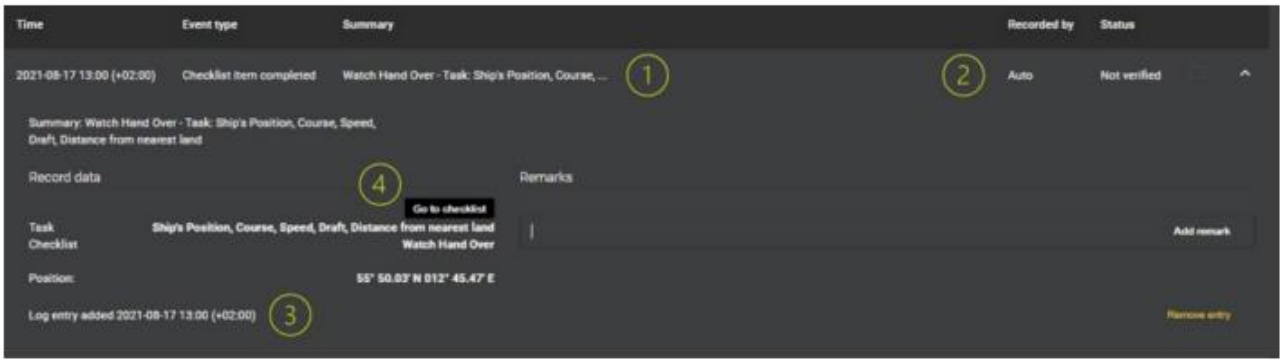
5. Buttons that allow the user to
   - Complete task
   - Adjust time and Completed task.
   - Add Remark
   - Set task to Not Applicable

6. Remark input
   Complete and Record to Logbook allow the user to record even if this not is default. can decide to record task.

When all task has been completed the user shall Complete the checklist and Verify by Pin-Code.
Checklist can be completed by other user, change user in the drop-down list.

Record in Logbook

When there is a Checklist record in the logbook the following information is available.



1. Event type, Checklist item Completed/Checklist Opened/Checklist completed Summary, name of the Task

2. Recorded by and Status initially it is Auto and Not Verified. To be verified by OOW.

3. Log Entry Added Date and Time

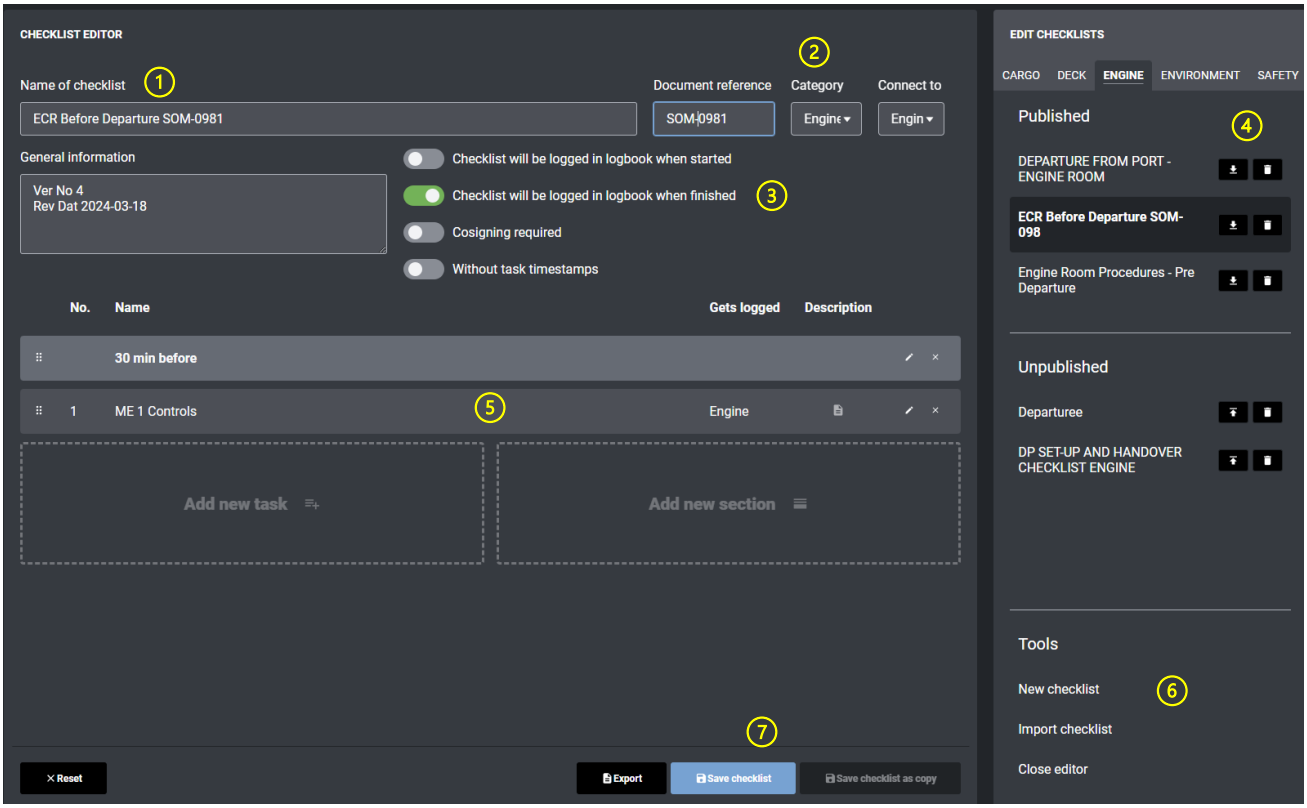
4. Go To Checklist - provide a direct link to the checklist and task.

CHECKLIST EDITOR

The checklist Editor provides tools to create, modify, publish and unpublish checklist.
Click on Checklist Editor that opens the Checklist Editor Panel.

Checklist Editor Panel

Numbers in the picture are described below.



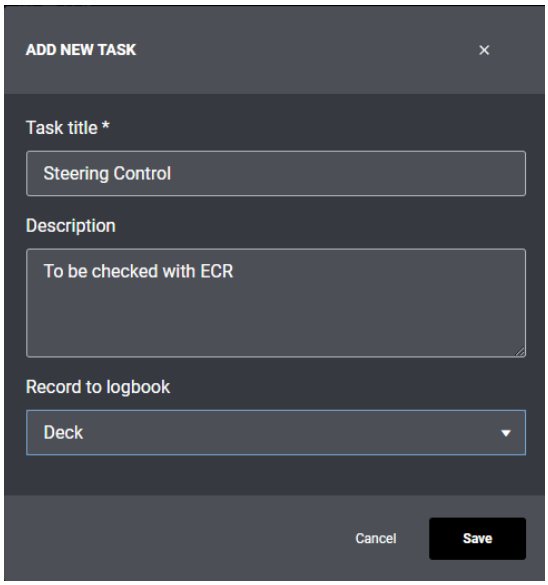
1. Name of Checklist.
   General Information field can be used to include instructions, document reference and other information. This information will be display on top of opened Checklist.

2. Document Reference Field
   Category Drop Down, select one of the five categories.
   Connect Checklist to Logbook, select in drop-down list.

3. Four Toggles
   - Checklist logged in Logbook when opened.
   - Checklist logged in Logbook when completed.
   - Cosigning required, 2nd user to verify Checklist when completed.
   - Without task time stamp, time will not be recorded when Check is completed.

4. List of Publish and Unpublish Checklist
   Click on UP/DOWN Arrow to Publish/Unpublish Checklist
   Click on Recycle Bin to Delete Checklist

5. Add New Task or Section, opens an input panel to create.
   - Sections and task can be moved, Click and Hold on the Six Dots – Drag UP/DOWN to move.
   - Gets logged shows if and where a task is recorded in logbook.
   - Description Icon appears if there is more information about the task.
   - Pencil Icon opens the task for editing.
   - x delete the record



6. Tools
   - New Checklist.
     Opens an empty panel for new Checklist.
   - Import
     Opens a panel for selection of Checklist from folder and import.
     Checklist file is .json file.
   - Close Editor

7. Four Buttons
   - xReset, roll back to the last saved version
     Changes will be lost.
   - Export
     File in. json format will be send to Download folder on workstation.
   - Save Checklist,
   - Save Checklist as a copy.

REPORT MODULE

Reports from Record Books, Checklist, Tank and Engine Readings can be created in TELSCOPE REPORT Module.

The report module shows.

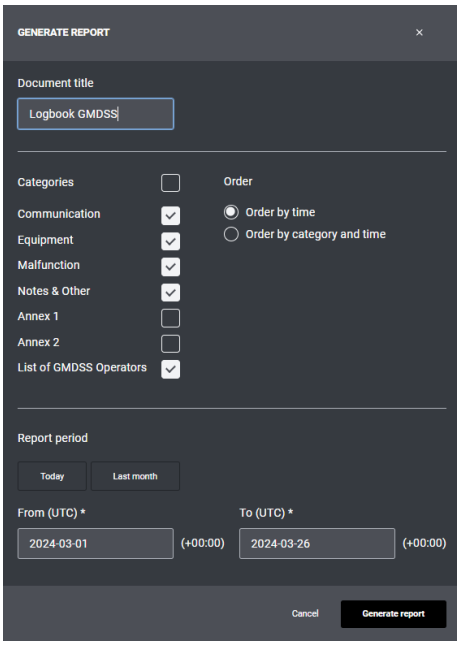
- List of draft reports
- Report history
  History of Noon reports
  Can be filtered to from – to date.

Create Report

Create report open a drop-down list for selection of report.

The report panel provides the following alternatives.

- Document title can be set.
- Select categories to be included in the report.
- Sorting order of records
- Report period.
  - From – To, default current month)
  - Today
  - Last month



Noon report

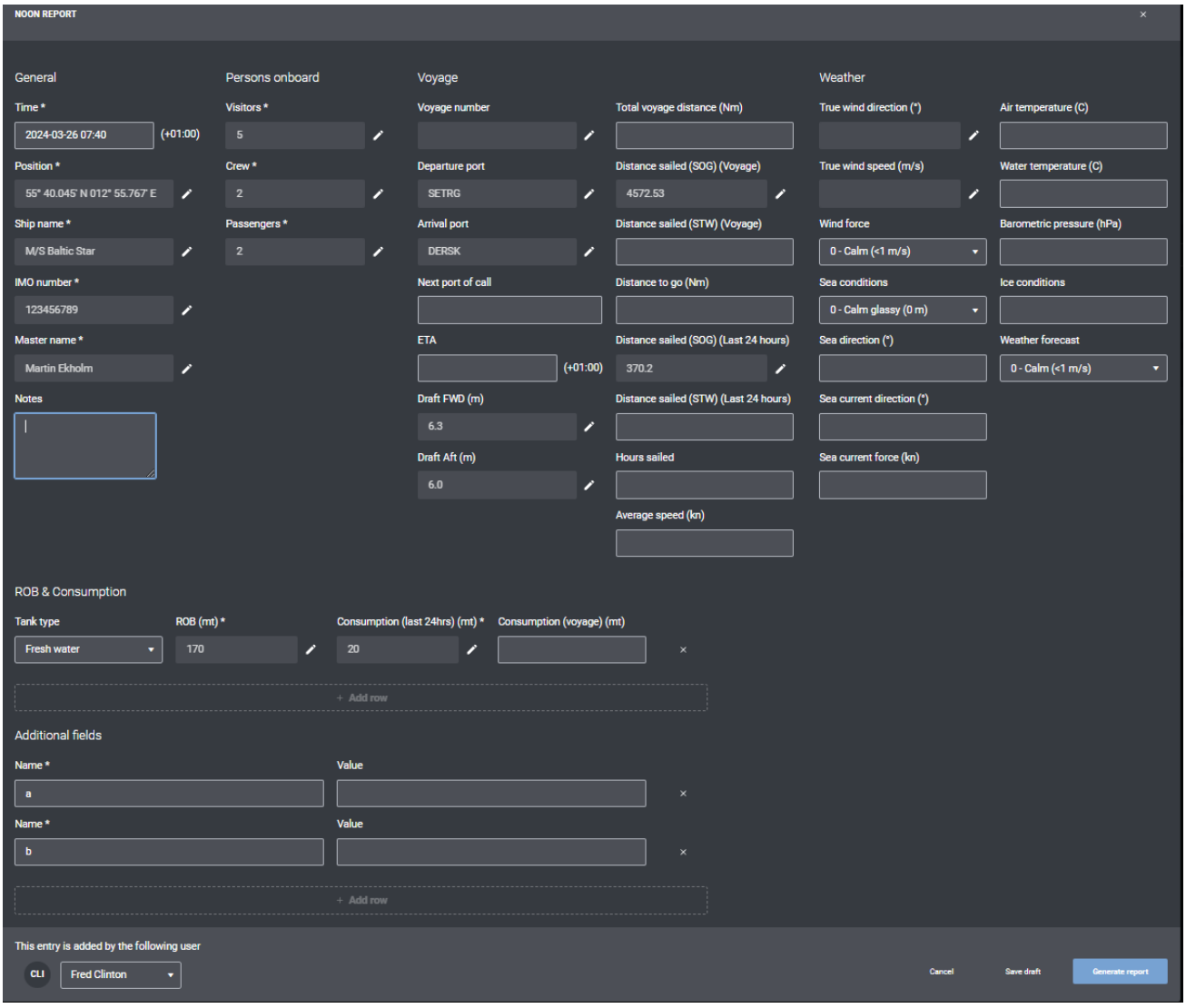
TELSCOPE Noon report consolidate data from different TELSCOPE sources into one singe form.

Manual input of data is still required but the Goal is to over time automate as much as possible.

Information is divided in the following groups.

1. General Information obtained from TELSCOPE.
2. Persons onboard information from POB panel
3. Voyage Data, require manual input.
4. Weather conditions
5. ROB & Consumption manual input or data taken from the corresponding tank readings. Data will be taken from reading done previously the same date..

6. Additional fields, user defined.



Save Draft, allows the user to save a report that not is complete.

Generate Report, export the report to Excel
Excel file can at any time be generated for Noon Report that is shown in History.

TELSCOPE SET UP AND COMMISSIONING

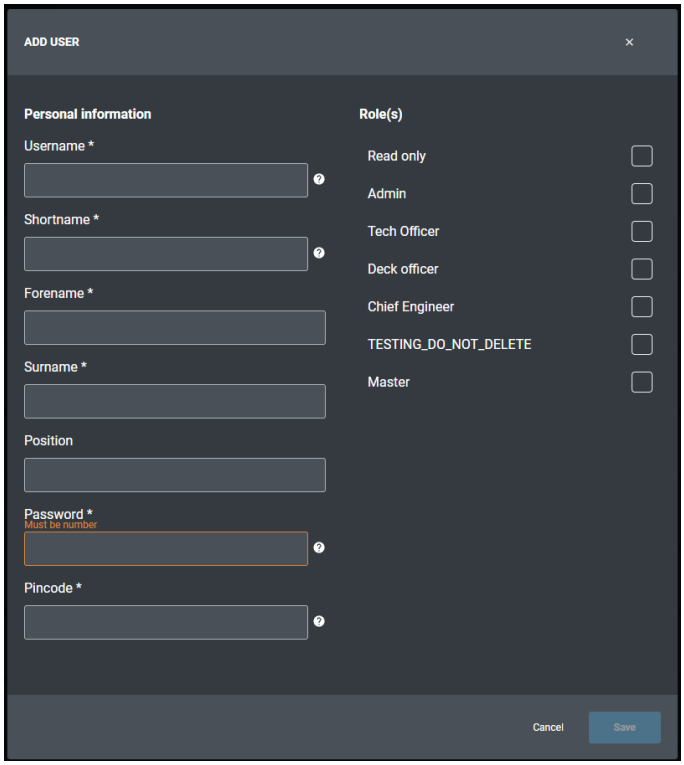
User Management

Users can be managed as follows

New User

Go to Settings/User and Click **ADD USER** and fill in the user credentials.

- User name, used together with password to login to TELSCOPE, can be email address or other username minimum 6 characters
- Short name, used to identify user that made entry in records, 2-4 characters.
- Set password and Pin code
- Assign one or several Roles



Deactivate User

If a user leave ship/company his/her user profile can be looked (not deleted)

Open User Profile, Edit Profile and select Deactivate User.

Deactivated user that returns to ship can be activated. Go to User List, change toggle Show inactivated users.

Open User Profile, Edit Profile and select Activate User.

Reset Password and Pin code.

The user reset password and pin code in the User Profile.

Click on “Reset Password” or Reset Pin Code”

Add new Password/Pin Code.

Confirm with Old Pin Code.

If the user forgot Password or Pin Code, the TELSCOPE administrator, normally Master and Chief Engineer, can reset it.

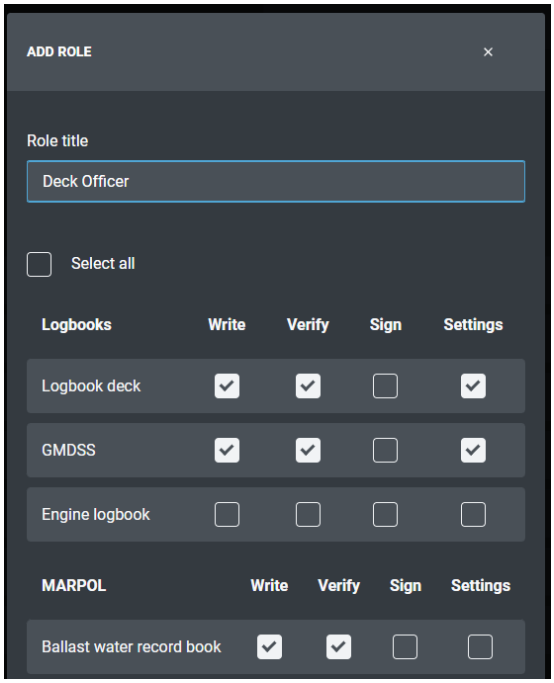
Role Management

For each Role credentials can be defined as follows:

- **Read**, all users can read TELSCOPE information.
- **Write,** user can add and edit information in TELSCOPE that have not been signed by MASTER
- **Verify,** user can verify records and readings
- **Sign,** user normally MASTER can sign records. User with Sign credentials can remove and edit Signed Records
- **Publish,** user can publish and unpublish Checklist
- **Edit,** user can work with Checklist Editor.

Create New Role

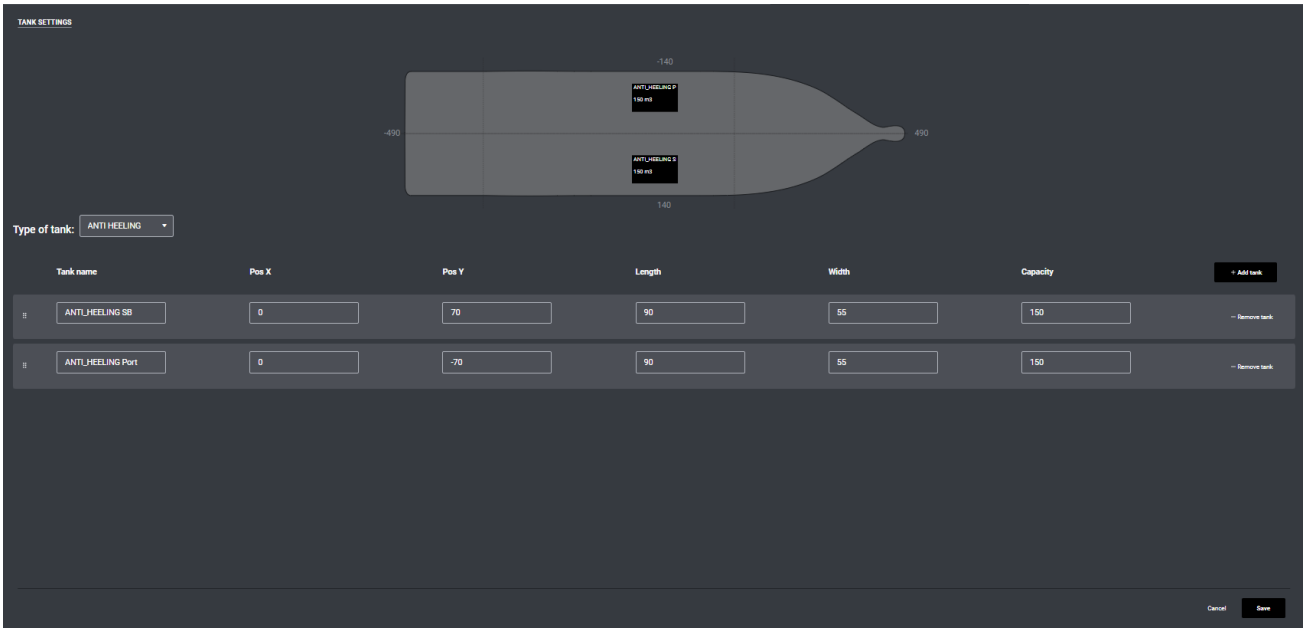
- Go to Settings / Role
- Click on Add New Role
- Set Role title
- Set credentials for the role
- Save



Tank set up

Tanks can be set up as follows,

- Go to Settings / Tanks
- Select Tank Type
- Click on Add Tank Button
- Set tank name (should be aligned with Ships GA and Tank certificate)
- Set position X, + is forward, - is aft, 0 is in the middle of the ship
- Set position y, + is starboard, - is Port, 0 is in the middle of the ship
- Set Length and width (size of the black text box)
- Set volume in m^3
- Add next tank
- Order of tanks in the table can be adjusted, click on the 6 dot icon´, drag and drop. This will affect position of tanks in the different modules like Ballast Water.
- Save



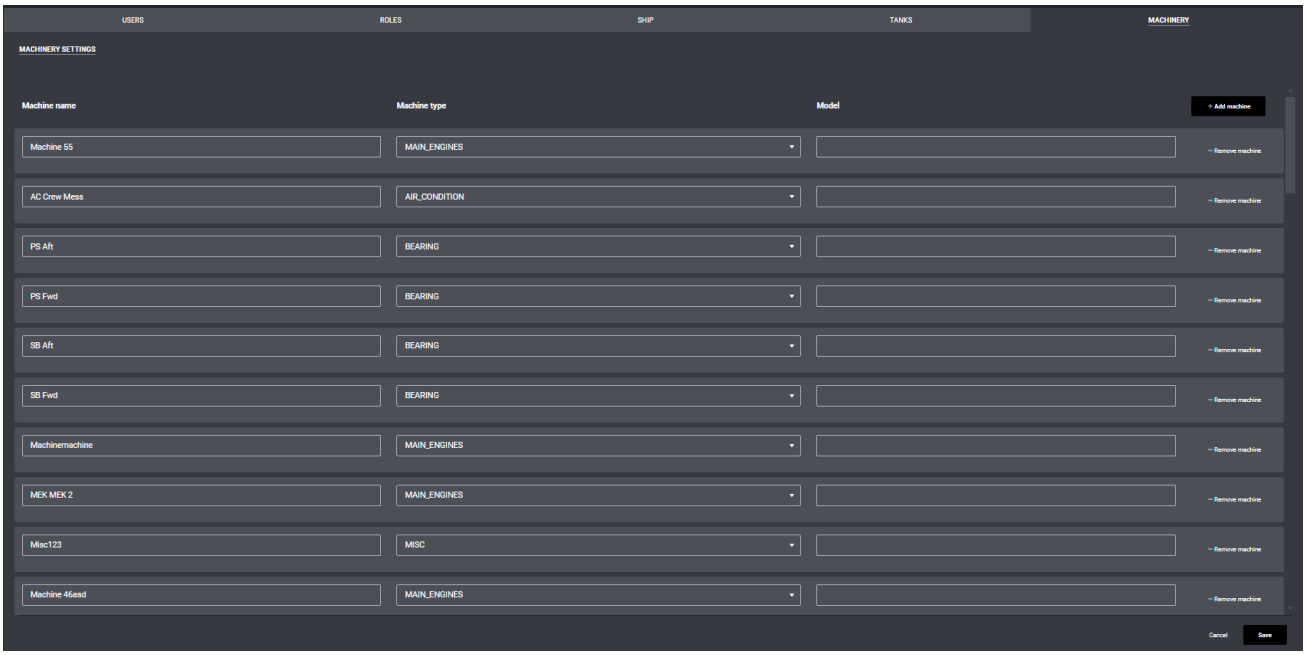
Tanks can be connected to Tank sensors.
Mapping of tanks is done remotely by TELKO support team.

Machinery set up

Machines can be set up as follows,

- Go to Settings /Machinery
- Click on Add Machinery
- Set Machine Name
- Select Machine Type
- Add information about model/type
- Add Next Machinery
- Save
- Configure Machinery Layout see below

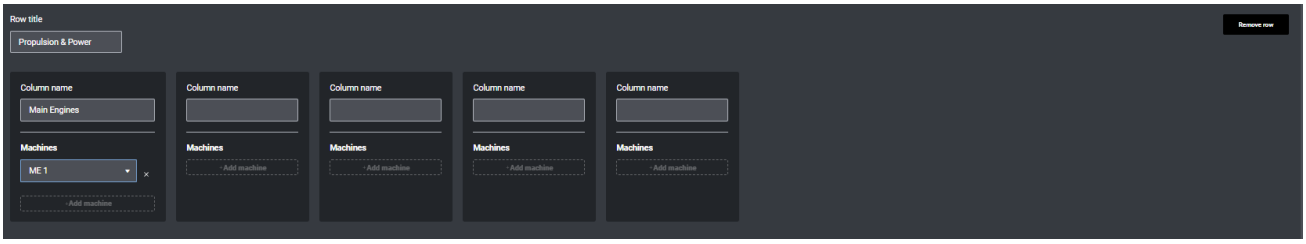
Note, you cannot change Machine type after Machine is saved.
IF you need to do this remove the Machine and Add new Machinery



Configure Machinery layout

The Machine Layout in Dashboard and Engine / operations can be arranged as follows

- Go to Engine /Machines / Operations
- Click on Operation Settings
- ADD New Raw – and give it a name
- Add New Column (group of machines)
- Add Machine
- Add next Group/machine
- Save



TROUBLESHOOTING

System notifications

TELSCOPE provides two types of notifications if malfunction is detected

Pop-up notification (orange) in the middle of the top row

The following notifications can appear

- 403 - Necessary permissions
- 422 – Server error (frontend send to backend without answer)
- 404 - Login error
- 429 - Wrong password many time
- 500 - Backend crash

Corrective actions: Wait (1 min) and try again if problem remains send a detailed description to https://telko.liveagent.se/submit_ticket or support@telko.no.

Alerts

The green indicator next to TELSCOPE Logo shifts to orange indicating an ALERT.

Click on TELSCOPE Logo to get more information.

The following alerts may be presented (All are priority Caution, category B):

- Storage fault
  Reasons: One of the redundant hard drives on the TELSCOPE server has failed.
  Advice: Contact your service supplier and obtain a new hard drive. Replace the failed hard drive following the instructions provided with the drive.

- Lost recording
  Reasons: Storage of a log entry has failed.
  Advice: Inspect the TELSCOPE logbooks and verify that all intended entries are present. Repeat entry of any missing log entries. Contact your service supplier if a missing log entry cannot be re-entered, or if the alert persists.

- UTC in fallback
  Reasons: TELSCOPE is not receiving time synchronization information from the connected GPS. Log entries can still be logged, but the timestamps are set from the server system clock.
  Advice: Inspect the alert hint text to be informed of the magnitude of the time discrepancy. Continue using logbooks normally. Check the TELSCOPE connection to GPS and check the GPS output of the sentence ZDA. Contact your service supplier for assistance if needed.

- Full 30-day log
  Reasons: There is not enough remaining storage space for 30 days of using the logbooks.
  Advice: Contact your service supplier to obtain new larger hard drives, and for assistance for removing records older than legally required for the vessel.

- Security breach
  Reasons: Multiple failed log-in attempts in quick succession has been detected.
  Advice: Inspect the TELSCOPE audit log and investigate the cause for the failed login attempts. Click the alert and confirm to clear the alert once the incident investigation has been concluded.

Server and Network problems

The following problems might occur on the ship

- The screen is black.
- TELSCOPE cannot be accessed from ships' workstations and/or mobile devices.
- Position, Navigation Data, Tank and Automation system are not updated

Troubleshoot TELSCOPE system by following the guide below.

1. Verify Power to the Server:
   Ensure that the server is connected to a power source and receiving power. If not, check the power cables and the supply outlet.

2. Check Server Status:
   Locate the server's power button at the front. A **green light** indicates that the server is powered on and functioning. If the light is off, try restarting the server by pressing the button.

3. Check Network Connectivity:
   Inspect the network connector port on the server (enp3s0 top left corner). A **flashing light** usually indicates active network communication. If there's no activity:
   - Ensure the Ethernet cable is properly connected.
   - Confirm that the switch or router to which the server is connected is operational.

4. Contact Onboard IT Support:
   If all the above checks are positive but TELSCOPE is still not working, there might be a network or configuration issue onboard. Engage your **IT department** for further investigation.

5. Escalate to Telko Service Department:
   If your IT department cannot resolve the issue, contact the Telko Service Department. Report the problem using the link below.

https://telko.liveagent.se/submit_ticket or support@telko.no.