

# TYPE APPROVAL CERTIFICATE

## This is to certify:

That the **Electronic record book (ELRB)**

with type designation(s)  
**TelScope**

Issued to

**Telko AS**  
**TJØME, Norway**

is found to comply with

**DNV GL rules for classification – Ships**

**ISO 21745:2019 Electronic record books for ships – Technical specifications and operational requirements**

**IEC 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results**

**IEC 62288 Ed. 2.0 (2014-07) 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 (2016-08) Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 1: Single talker and multiple listeners**

**IEC 61162-2 Ed. 1.0 (1998-09) Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 2: Single talker and multiple listeners, high-speed transmission**

## Application :

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.**

Issued at **Høvik** on **2022-01-06**

This Certificate is valid until **2027-01-05**.

for **DNV**

DNV local station: **Norway CMC, East-South**

Approval Engineer: **Frederik Tore Elter**

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**Trond Sjøvåg**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.  
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

TelScope Electronic Record Book (ELBR) for Deck, Radio GMDSS and Engine, comprises of the following:

| Description | Type designation        | Location  |
|-------------|-------------------------|-----------|
| Computer    | HT B30GI STC-A2T-M10010 | Protected |
| Display     | HD 24T22 TID-MA4-FAGA   | Protected |
| Keyboard    | NSI RKCT92S1969 W MC1   | Protected |
| Trackball   | ELK rev.1.0             | Protected |

**Software:** TELSCOPE, SW version 1.x (x – revisions for minor updates and fixes of version included in certification)

**Operating system:** Linux version: Ubuntu 20.04

## Application/Limitation

- TelScope may provide electronic records and logs for Deck, Radio GMDSS and Engine.
- TelScope is to be installed in accordance with manufactures documentation.
- This certification of TelScope is for stand-alone installation. Connections to external network interfaces are to be in accordance with ISO 21745, 4.2.1.1 Tampering avoidance, as applicable for the installation onboard. Network installations may be part of third-party scope, and to be certified as required for the installation.
- TelScope may interface to the VDR in accordance with IMO Resolution MSC.333(90), and IEC 61162-1 or -2, as described in manufacturers documentation. EUT is not tested to support interface to VDR in accordance with recommendation in ISO 21475 clause 4.2.1.5.
- Depending on vessel installation; interfaces, presentation and recorded data may be adapted for the vessel, in accordance with manufactures documentation referenced in this certificate.
- TelScope may provide functionality for onboard electronic checklists, integrated with electronic records and logs as an additional function. Checklists templates may be defined by the vessel's management, in accordance with manufactures documentation referenced in this certificate, hence checklist content is not part of certification.
- The final acceptance of the ELRB is subject to the decision of the Flag state Administration under which the vessel sails.
- TelScope is tested for listed standards and record functions. When installed onboard, a "Declaration of electronic record book" shall be issued to the ship by the Flag Administration or on behalf of the Flag by a Recognized Organization.

## Type Approval documentation

| DNV No. | Document No.                    | Rev.       | Title                                                                                                                                                                                                                   |
|---------|---------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 58      | 21st December 2021              | Rev.4      | Report: TELSCOPE Test Report ISO 21745-2019 for Deck, Engine and Radio Books (inc. testing: IEC 62288:2014, IEC 60945:2002, IEC 61162-1:2016 incl. Corr.1 (2008), IEC 62923-1:2018 and IEC 62923-2:2018) Draft 21-12-21 |
| 57      | 857710-TelScope-Dashboard*      |            | Manual: TelScope Dashboard (inc, Alert Description)                                                                                                                                                                     |
| 56      | 343149-Server-setup*            |            | Manual: TelScope Server setup (inc, Alert Description)                                                                                                                                                                  |
| 55      | 194063-Network-Setup--Security* | 2021-12-17 | Manual: Instalation Manual Network Setup & Security                                                                                                                                                                     |
| 54      | 857710-TelScope-Dashboard*      | 2021-12-17 | Manual: User Manual TelScope Dashboard                                                                                                                                                                                  |
| 48      | E12134.04                       |            | Report: NEMKO, IEC 60945, Including Trackball EUT                                                                                                                                                                       |
| 43      | DOC205967-1                     | Rev. 1     | Report: IEC62288 flicker test report HD24T22                                                                                                                                                                            |
| 42      | DOC102352                       | Rev. 2     | Report: IEC 62288 Conformance test report HD 24T22 MMD-MA1-FAGA-ES                                                                                                                                                      |
| 41      | DOC102352                       | Rev.1      | Report: IEC 62288 Conformance test report HD 24T22 MMD-MA1-FAGA-ES                                                                                                                                                      |
| 40      | T208006-5-DANAK - 19/14501      |            | Report: Delta IEC 60945 Keyboard-NSI bvba-RKCT92S0001-W-MC1                                                                                                                                                             |
| 39      | MRA0000016                      | Rev. 3     | Certificate: IEC60945 Display                                                                                                                                                                                           |
| 38      | MRA000003D                      | Rev. 0     | Certificate: IEC60945 Computer                                                                                                                                                                                          |

| DNV No. | Document No.                          | Rev.             | Title                                                                                                                                                                                                       |
|---------|---------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 37      |                                       |                  | Delta: Attestation of Conformity Marine type approval test - Certificate no. 1339                                                                                                                           |
| 31      | 09.09.2001                            | Rev. 1           | Report: TELKO, Conformance test of TELSCOPE with: SOLAS Chapter V, regulation 28, as amended by res.MSC99(73), IMO guidance A 22/Res.916 (Testing of recording of specific ELRB functions and data storage) |
| 29      | 2013-3135                             | REVISION NO. 00  | Report: EMC AND ENVIRONMENTAL TESTING OF MARITIME COMPUTER HT B22GE STC-C4K-M100                                                                                                                            |
| 28      | 20178                                 | Revision: 0      | Report: Applica IEC 60945 , HD 24T21 MEC-M3K-AAB9-ES                                                                                                                                                        |
| 26      | 170905002TR1                          | 2018/04/09       | Report: CAL IEC 60945: HT B30KH STC-A37-EB3G00-ES-3 Technical Report                                                                                                                                        |
| 25      | 21110                                 | Revision no.: 0  | Report: Applica IEC 60945: EMC and Environmental testing of HT B30KH STC-A37-EB3G00-ES Compact Fan-less Computer                                                                                            |
| 24      | 21111                                 | Revision no.: 01 | Report: Applica IEC 60945: EMC and Environmental testing of Compact Fan-less Computer HT B30GH STC-A3x-M13200-ES                                                                                            |
| 23      | 2012-3081                             | REVISION NO. 01  | Report: IEC 60945 EMC and Environmental testing of Maritime Multi Display HD 15T21 STD-MA1-FAGA                                                                                                             |
| 8       | 852507-Work-with-Electronic-Logbooks* | 1.7              | Manual: TELKO TelScope, Work with Electronic Logbooks                                                                                                                                                       |
| 7       | 055105-Work-with-Checklist*           | 1.7              | Manual: TELKO TelScope, Work with Checklist                                                                                                                                                                 |
| 6       | 839090-The-Logbook-Entry*             | 1.7              | Manual: TELKO TelScope, The Logbook Entry                                                                                                                                                                   |
| 5       | 857710-TelScope-Dashboard*            | 1.7              | Manual: TELKO TelScope, TelScope Dashboard                                                                                                                                                                  |
| 4       | 108013-Introduction*                  | 1.7              | Manual: TELKO TelScope, Introduction                                                                                                                                                                        |
| 3       | 187699-Get-Started*                   | 1.7              | Manual: TELKO TelScope, Get Started                                                                                                                                                                         |
| 2       | 549088-Checklist-Editor*              | 1.7              | Manual: TELKO TelScope, Checklist Editor                                                                                                                                                                    |

\*Note: Document from: <https://telko.liveagent.se/><\*>.

## Tests carried out

- Environmental testing: IEC 60945 (2002) (inc. corr.1:2008)
- Performance testing: ISO 21745 (2019)
- Presentation testing: IEC 62288 (2014)
- Interface: IEC 61162-1 (2016)
- Interface: IEC 61162-2 (1998)
- BAM: IEC 62932-1 (2018) and IEC 62932-2 (2018)
- Compliance with applicable parts IMO resolution A.916(22).

## Marking of product

The Manufacturer and Type Designation to be applied to the equipment in a clearly visible location. In addition, the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.

## Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

The scope of the periodical/renewal assessment is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.