

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Position Reference System**with type designation(s)
SceneScan

Issued to

Guidance Marine Ltd.
Leicester, LEICESTERSHIRE, United Kingdom

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

Temperature	D
Humidity	B
Vibration	C
EMC	B
Enclosure	C/IP66

Issued at **Høvik** on **2019-12-16**This Certificate is valid until **2021-12-15**.for **DNV GL**DNV GL local station: **Manchester**Approval Engineer: **Jens Erling Bråten**

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Jan Tore Grimsrud
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.



Product description

SceneScan is a high accuracy laser sensor which provides positional information to a Dynamic Positioning control system allowing automated approach and or station keeping relative to a structure or a vessel. The system does not require a reflector, but establish a reference through scanning the vessel or structure and producing a map/image. This map is compared to the current scan by the SceneScan Sensor navigation algorithm, which is used to track a local position.

System Software: 1.1.1

Application/Limitation

The Type Approval covers hardware and software listed under Product description. When the Laser positioning sensor is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV GL for evaluation and approval.

Major changes in the software are to be approved before being installed in the sensor.

Type Approval documentation

Tests carried out

IACS UR E10 (rev.6) and IEC 60945 ed.4 (exposed)

Marking of product

- Guidance Marine, SceneScan, Part and Serial numbers
- Class 1M Laser Product

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

A renewal assessment will be performed at renewal of the certificate.