Certificate No: LR2556860TM
Issue Date: 07/05/2025
Expiry Date: 06/05/2028

Lloyd's Register Approved Service Supplier

Company	**3D Test Solutions B.V.**
Address	Boelewerf 1 d-e, Ridderkerk, 2987 VD, Netherlands
Scope	**Thickness Measurement of Hull Structure - Type B (Ships- all Vessels as defined in MQPS, Book N, Procedure 17-1)**
Remote Inspection System (RITS-TM) Manufacturer and Model	**Flyability Elios 3 + UT Payload Aerial Drone** Video Resolution: 4K 3840 x 2160 @ 30 fps. Thermal Camera: 160 x 120 @ 9 fps. Lighting System: 16000 Lumen. LIDAR Sensor: Ouster OSO-32 beams. Remote Controller / Tablet: Real Time Video and UAV telemetry, status, payload / control settings. Inspector Software: Live A Scans, Location tagged measurements
Ultrasonic Equipment Manufacturer and Model	**Cygnus Instruments** Dual element 2, 5 & 7.5 MHz Transducers. Measurement Range 0.8 - 250 mm Resolution 0.1 mm Accuracy +/- 0.1 mm
Applicable scope of use	Drone supplied with limited cleaning ability. Surfaces are to be clean and free of any dusty oil residue. Trained and experienced Pilots required to operate drone. Not GPS Stabilized - Indoor use only. Non ATEX zones only. Drone cannot land in fluids. Operates in empty Cargo Tanks/Holds & large Ballast Tanks. Access through Manholes of 600 x 400 mm.

Phil Leaver

NDE team Leader to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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Automation capabilities Auto landing on signal loss.

This is to certify that Lloyd's Register has approved the above firm in accordance with the requirements of the Lloyd's Register Approval for Thickness Measurement of Hull Structure in accordance with Lloyd's Register's Rules and Regulations for Classification of Ships as amended from time to time. The thickness measurements may be used by Lloyd's Register Group surveyors or shipowner's representatives when making decisions affecting classification, certification or the operation of a ship.

Personnel Authorised to carry out Thickness Measurement Survey's pertinent to this approval are listed on the final page of this certificate.

The approval is conditional upon the aforementioned firm maintaining its audited scheme and notifying Lloyd's Register of any significant changes to that audited scheme including changes to personnel, equipment or procedures.

This certificate is issued to the above firm and is valid until the date given above.

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Supervisors

B. Cartens

B. Huisman

J. Hooijmeijer

J. Wuurman

L. Groeneveld

Operators

J. Wilhelm

K. Biesbroek

Drone Pilot

D. Knukkel

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