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Certificate No: LR2019845TA
Issue Date: 6 June 2020
Expiry Date: 11 June 2025

Reference: 203170AvdV-PRJ11100275479

LLOYD'S REGISTER TYPE APPROVAL

Issued by: Rotterdam Technical Support Office
Issued to: VAF Instruments B.V.
For: TSense and TTSense, Torque measurement system

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure TA14 Version 03 (July 2017) and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

PB-660-GB-0119 T-Sense Product Bulletin

TIB-661-GB-0319 T-Sense Optical Torque Measuring systems valid for T-Sense serial numbers 13.1204 and higher

PB-663-GB-0119 TT-sense Product Bulletin

TIB- 674-GB-0320 TT-Sense Optical Torque and Thrust measuring systems valid for TT-sense serial numbers 18.2652 and higher

KSD.2.8 Procedure software release

KSD 2.8.A Flow chart software release

Test program TT-Sense rev C

TEST REPORTS

2156301.0501-EMC EMC test report for an Optical Torque measurement system, model T-Sense (Control box 0399-0403, Rotor 200 to 1000mm) dated 06-05-2015

2156301.0502-EMC Environmental test report for an Optical Torque measurement system, model T-Sense (Control box 0399-0403, Rotor 200 to 1000mm) dated 28-02-2013

Final test report T-Sense Test report of the Optical Torque measurement system model T-Sense (Control box 0399-0403) Rotor 200 to 1000 mm dated 25-07-2013

IP4- test Rotor Enclosure IP44 T-Sense dated 27-05-2014

M10.0002-2010.7123 Vibration test on an optical torque sensor according to the IEC 60068-2-6 dated 2-12-2010

Factory audit form

M18.005-P18.004 Climate test reports dated 30-11-2018

272892-2018-AQ-NLD-RvA Management System Certificate ISO9001:2015 dated 5 November 2018

18C00990RPT02 Electromagnetic Compatibility Test Report dated 08-04-2019

Functional test TT-Sense dated 17-04-2019

Functional test TT-Sense dated 29-10-2018

Rotor Enclosure IP44 TT-Sense test dated 19-11-2015

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M18.004-P18.003 Vibration test report dated 21-11-2018

M19.001-P19.001 Vibration test report dated 05-02-2019

Product Quality assesment form dated 10-09-2020

A.W. van der Velden Lead Electrical Surveyor to Lloyd's Register EMEA A member of the Lloyd's Register Group

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