



LNG Valves

Office: **Newcastle upon Tyne**

Date: **27 January 2016**

This Certificate is issued to Evolution Valves and certifies that the undersigned Surveyor to Lloyd's Register EMEA did, at their request, attend the works of Evolution Valves on the 24 September 2015 and 25th January 2016 to inspect the undernoted items:

4 off Cryogenic Double Offset Butterfly Valves Serial Number 11241, 11242, 11243, 11244.

The following scope of work was carried out with satisfactory results in accordance with the requirements of Lloyds Registers Rules for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk 2015.

Review of material test certificates previously certified by Bureau Veritas in accordance with the above rule requirements. It was noted that no impact testing or record of reduction in area testing. These tests are to be completed on a sacrificial casting of the same heat batch and acceptance of the above valves will be subject to the satisfactory completion of this testing.

The casting works was noted as Norton cast products. For valve 11242 valve was cast at Noel Village and supplied with LR certificates certificate number COV1518925.

Reports for DPI and radiography reviewed, radiographs reviewed, previous acceptance by Bureau Veritas noted and repeat dye penetrant inspection carried out on random sample and all found satisfactory.

Witnessed pneumatic pressure test to 6 barg for seat leakage, 22 barg seat hydro test, 30 barg body hydro test, design pressure 19.6 barg, all found sound and tight using calibrated test gauges.

Valves have not been fire tested and as such should not be used for terminal end valves which perform an ESD function.

For identification purposes the items were additionally hard stamped.

NWC1500296 ML 5-8



LR032.2013.12

M. Lilley
Surveyor to Lloyd's Register EMEA

a member of the Lloyd's Register group.

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