Layflat Hose Assemblies for the Transport of Water in Oilfield Applications

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Layflat Hose Assemblies for the Transport of Water in Oilfield Applications

1 Scope

This specification provides requirements for the manufacture and qualification of layflat hose assemblies in onshore oilfield water transfer applications. Also included are performance requirements for materials, hose, and couplings.

These products consist of single or multiple layers of woven polymeric fibers lined with a polymeric material that is suitable for onshore oilfield water transfer service. The layflat hose assemblies addressed under this specification are capable of being spooled for storage, transport, and installation by both the original equipment manufacturer and the operator.

This specification is limited to hose and couplings and fittings and does not relate to other system components and appurtenances. Where other system components (e.g., elbows, tees, valves) are of conventional construction, they will be governed by other applicable codes and practices.

This document does not include products acceptable for use in sour services as defined by NACE MR0175/ISO 15156.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document applies (including any addenda/errata).

ASME[1] *Boiler and Pressure Vessel Code*

ASTM[2] B117, *Standard Practice for Operating Salt Spray (Fog) Apparatus*

ASTM D412, *Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension*

ASTM D471, *Standard Test Method for Rubber Property—Effect of Liquids*

DIN[3] 14811, *Fire-fighting hoses—Non-percolating layflat delivery hoses and hose assemblies for pumps and vehicles*

DIN 53504, *Testing of rubber—Determination of tensile strength at break, tensile stress at yield, elongation at break and stress values in a tensile test*

ISO[4] 15156, *Petroleum and natural gas industries — Materials for use in H2S-containing environments in oil and gas production — Part 1: General principles for selection of cracking-resistant materials*

ISO 23936-2, *Petroleum, petrochemical and natural gas industries — Non-metallic materials in contact with media related to oil and gas production — Part 2: Elastomers*

ISO 4671:2007, *Rubber and plastics hoses and hose assemblies — Methods of measurement of the dimensions of hoses and the lengths of hose assemblies*

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1 American Society of Mechanical Engineers, Two Park Avenue, New York, New York 10016-5990, www.asme.org

2 ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428 www.astm.org

3 German Institute for Standardization, Am DIN-Platz, Burggrafenstrabe 6, 10787 Berlin, Germany, www.din.de

4 International Organization for Standardization, www.iso.org