Thread Compounds for Casing, Tubing Line Pipe, and Drill Stem Elements

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1 Scope

This standard provides requirements, recommendations, and methods for the testing of thread compounds intended for use on threaded casing, tubing, and line pipe connections; and for thread compounds intended for use on rotary shouldered connections. The tests outlined are used to evaluate the critical performance properties and physical and chemical characteristics of thread compounds under laboratory conditions.

These test methods are primarily intended for thread compounds formulated with a lubricating base grease and are not applicable to some materials used for lubricating and/or sealing thread connections. It is recognized that many areas can have environmental requirements for products of this type. This standard does not include requirements for environmental compliance. It is the responsibility of the end-user to investigate these requirements and to select, use and dispose of the thread compounds and related waste materials accordingly.

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 (including any errata or addenda) applies.

ASTM D217, *Standard Test Methods for Cone Penetration of Lubricating Grease*

ASTM D2265, *Standard Test Method for Dropping Point of Lubricating Grease over Wide Temperature Range*

ASTM D4048, *Standard Test Method for Detection of Copper Corrosion from Lubricating Grease*

ASTM E11, *Standard Specification for Wire Cloth and Sieves for Testing Purposes*

ISO 2137, *Petroleum products and lubricants—Determination of cone penetration of lubricating greases and petrolatum*

ISO 2176, *Petroleum products—Lubricating grease—Determination of dropping point*

3 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1
API connection
A threaded assembly of tubular components manufactured in accordance with API 5B.

3.2
API modified reference standard formulation
A casing, tubing, and line pipe (CT and LP) thread compound that is formulated in accordance with the requirements of Annex B, to include the limitations and tolerances in Tables B.1, B.2, and B.3.

NOTE The reference standard formulations are not intended for general field service.

3.3
API modified thread compound
A compound designated as modified thread compound is a compound that meets the material constituents and performance tests as stipulated in Annex A.

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