Recommended Practice for Wet and Dry Thermal Insulation of Subsea Flowlines and Equipment

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1 General

1.1 Scope

This recommended practice (RP) provides guidance for the performance, qualification, application, quality control, handling, and storage requirements of wet and dry thermal insulation for subsea applications in the petroleum and gas industries. This guideline also covers the inspection of the insulation, and the repair of insulation defects. For flowlines, the installation method is not defined and may be either S-lay, J-lay, or reel-lay. This guideline is intended to cover all three installation methods. This guideline also takes into consideration the design and structural handling of subsea trees, manifolds, pipeline end terminations (PLETs), flowline jumpers, etc. as it pertains to the placement of structure, sacrificial anodes, handling appurtenances, etc. to ensure the integrity of the insulation's construction.

Annex A specifies the minimum requirements for the performance qualification testing and inspection testing requirements for wet insulation systems (insulations in direct contact with seawater).

Annex B specifies the minimum requirements for the performance qualification testing and inspection testing requirements for dry insulation systems (insulations not in direct contact with seawater).

This document is not intended to address either installation procedures or proprietary fabrication of any particular insulation type.

1.2 Applicability

This RP is applicable to the following systems and components:

— flowlines and risers;

— christmas tree, valve block, and piping;

— manifold valves and pipework;

— PLET piping;

— jumpers (i.e. piping and bends);

— connectors and fittings;

— valves and chokes.

2 Normative References

The following reference 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 amendments) applies.

API Recommended Practice 5L1, *Recommended Practice for Railroad Transportation of Line Pipe*

API Recommended Practice 5LW, *Recommended Practice for Transportation of Line Pipe on Barges and Marine Vessels*