PERMA-PIPE®

FLOW-THERM™

SUBSEA INSULATION

Partners In Excellence

SUBSEA INSULATION

The offshore production environment is challenging for operators. Subsea system operating temperatures require careful engineering and management to avoid costly downtime and lost output. Insulation is a cost-effective way to reduce heat loss on subsea pipelines and equipment. Properly designed and applied, subsea insulation will prevent hydrates from forming or wax from building up, leading to restricted or blocked piping and costing operators millions of dollars.

FLOW-THERM™ PERFORMANCE

FLOW-THERM™ is a highly efficient and cost-effective subsea insulation with excellent compressive resistance. It has high strength, great adhesion, and exhibits toughness when applied on subsea flowlines and risers, field joints, and equipment, such as jumpers, pipeline end terminations (PLETs), pipeline end manifolds (PLEMs), inline structures, shrouds, doghouses, and any moldable structures for deep and ultra-deepwater applications.

FLOW-THERM subsea insulation is available in three different materials: silicone (Si) rubber, polymer alloy, and glass syntactic polyurethane (GSPU), suitable for various operating conditions and applications.

MAXIMUM OPERATING TEMPERATURE

FLOW-THERM Si (Silicone Rubber)
356 °F (180 °C)

FLOW-THERM RS 3604 (Polymer Alloy)
284 °F (140 °C)

FLOW-THERM GSPU (Glass Syntactic Polyurethane)
226 °F (109 °C)

[Please see datasheet for more info]

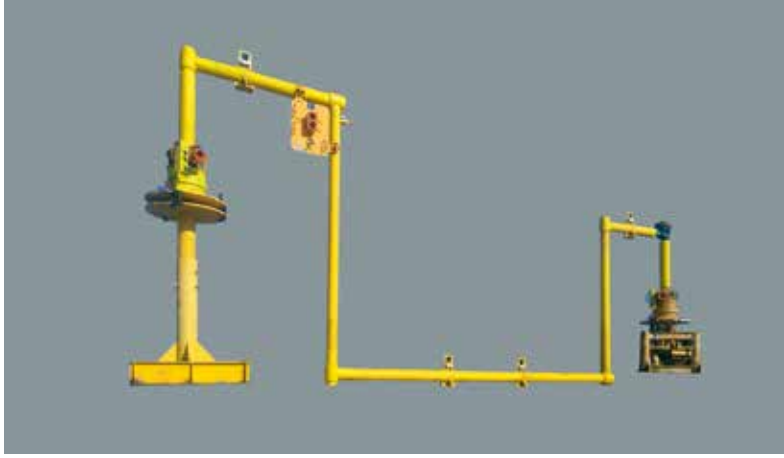
FLOW-THERM™ FEATURES

- Si is a thermally stable, flexible coating with high tensile strength, high elongation, and low thermal conductivity.
- Si has been tested by the Subsea Wet Insulation Systems Joint Industry Project (SWIS JIP) at 356 °F (180 °C).
- RS 3604 is a moldable system with a fast cycle time that exhibits superior thermal and hydrolytic stability compared to conventional polyurethanes.
- RS 3604 has been tested at 284 °F (140 °C) and is currently under test at 302 °F (150 °C) and 356 °F (180 °C).
- GSPU has excellent material flexibility, low thermal conductivity, and optimum temperature performance.
- GSPU can be reeled at a radius as low as 13 ft (4 m) and has successfully undergone low-temperature bending trials at 10 °F (-12 °C).
- Successfully GSPU tested under simulated service conditions for one year at 226 °F (108 °C) by the SWIS JIP.

FLOW-THERM™ SOLUTIONS

FLOW-THERM provides long-term thermal insulation and protection on subsea pipelines and equipment in deep and ultra-deepwater applications. It also complies with all industry specifications to ensure quality, consistency, safety, and efficiency. Our offshore and subsea manufacturing is located strategically in New Iberia, Louisiana, USA, and supported by our corporate office in Spring, Texas, USA.

Our portable equipment spreads, experienced field crews, proximity to subsea equipment fabricator's yards and lay contractor spool bases mean that we are available when you need us. As a result, PERMA-PIPE can mobilize quickly and meet the critical path schedules required for the offshore industry. Further, PERMA-PIPE offers turnkey services to meet operational and project challenges beyond the insulation system that our clients have come to trust. We provide project planning, design assistance and calculations, project management, pre-fabrication services, and field service training certification to reduce your installation, environmental, and safety concerns from start to finish.



FLOW-THERM™ OPTIONS

Premier Engineered Series:
FLOW-THERM Si
FLOW-THERM RS 3604

Standard Series:
FLOW-THERM GSPU

Carrier Pipe Options:
Carbon Steel
Stainless Steel
Clad Pipe

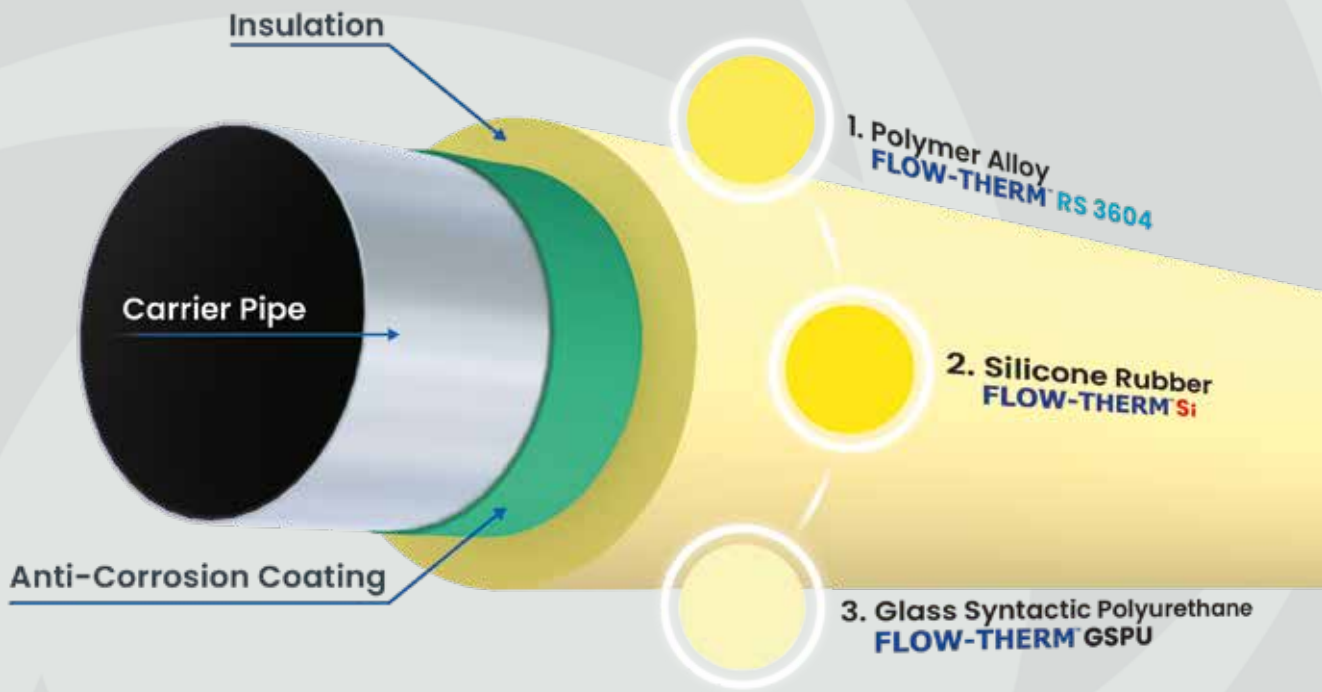
Applications:
Subsea Processing Equipment
Subsea Components
Offshore Pipelines
Field Joint Coatings
Custom Structures

PARTNER WITH PERMA-PIPE

PERMA-PIPE International Holdings, Inc. (NASDAQ:PPIH) is a global engineered pipe services company offering core competencies in anti-corrosion coatings, insulation solutions, containment systems, leak detection systems, engineering support, field service, and custom fabrication.

When you do business with PERMA-PIPE, you partner with a company that has served the industry for over 100 years and has vast experience in all the markets we serve. You are not just buying a long-lasting, reliable piping system; you are also investing in a partnership with a company that stands behind its products and services while providing lasting peace of mind.

TYPICAL FLOW-THERM™ MATERIAL OPTIONS



PERMA-PIPE®

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