



NEMO 1.1

Epoxy-Urethane Based Subsea Insulation System

NEMO 1.1 is an epoxy-urethane based subsea insulation field joint and custom coating system designed for flow assurance.

SYSTEM DESCRIPTION

- Layer 1: Anti-corrosion – Fusion Bonded Epoxy / Primer / Epoxy Paint
- Layer 2: Thermal insulation – Low pressure castable Epoxy Urethane Hybrid

SUPERIOR INSULATION PROPERTIES AND UNMATCHED MECHANICAL PROPERTIES

- Delivers excellent long-term thermal insulation performance in subsea environments
- Chemical and fusion bonding produces a continuous interface between structures, field joint systems and line pipe coating
- Robust bonding at interfaces, combined with a high modulus of elasticity, mitigate risks of cracking and delamination during reeling, installation and operation
- With short gel and de-mould times, as well as a low cure exotherm, the system has been optimised for critical path production environments
- Like to like bonding creates a congruous coating integrating field joints and structures into factory applied coating - ensuring continuous application and effective rework potential
- Predictable end of life thermal conductivity and compression for solid systems
- Fully qualified to ISO 12736

INSTALLATION

- NEMO 1.1 can be used for both structures (SURF & SPS) and field joints (Hybrid and Full System)
- NEMO 1.1 is a mobile solution. Material can be applied onshore for subsequent reeling and offshore installation, as required, as well as offshore, on S-lay and J-lay pipelaying vessels.
- Low application temperature and small equipment footprint mean NEMO 1.1 is perfect for moulding in situ. Applications include:
 - Field joints
 - Xmas trees
 - Jumpers
 - Spools
 - Manifolds
 - PLETS
 - Bends
 - Halfshells

LINE PIPE COMPATIBILITY

- Thermoflo® (Polyurethane syntactic)
- Thermotite® (PP foam)
- Thermotite® ULTRA
- Wetisokote® (SLPP syntactic)

VALUE ADDED SERVICES

- NEMO 1.1's versatility can lead to a reduction in project qualification costs
- Product is supported by Shawcor's global technical services and project management teams
- Shawcor's global footprint ensures clients are supported with their HSEQ requirements and their delivery schedules are met
- Application equipment and technicians can be quickly mobilized to any location or worksite required by the customer

TYPICAL PROPERTIES	NEMO 1.1
Max Operating Temperature	95°C (203°F)
Max water depth	3000 m (9842.52 ft)
Thermal Conductivity at 23°C	≤ 0.195w/m.K
Hardness at 23°C	≥ 90 shore A after 24 hours
Density at 23°C	1114 kg/m ³ ±5%
Elongation at break at 23°C	≥ 110 %

CUSTOM COATING LOCATIONS

EMAR

- Orkanger, Norway
- Ellon, Scotland

Asia Pacific

- Kuantan, Malaysia

Client Locations

- Mobile custom coating solutions

FIELD JOINT LOCATIONS

- Spoolbases
- Onshore multi-jointing sites
- Offshore on pipelaying vessels

TRACK RECORD

- EMAS – Chevron TVEX
- Technip – Chevron Blind Faith 2
- Technip – Woodside Greater Enfield

Head Office & Americas

5875 N. Sam Houston Pkwy W.
Suite 200
Houston, Texas 77086, USA
t +1 281 886 2350

Europe, Middle East, Africa & Russia

Dellaertweg 9-E,
Gebouw "Le Carrefour",
2316 WZ Leiden,
The Netherlands
t +31 071 808 0270

Asia Pacific

101 Thomson Road
#17-01/02 United Square
Singapore 307591
t +65 6732 2355

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