

LOGSTOR Onshore



Crossing frontiers with pre-insulation

● distributing energy efficiency

Pre-insulated pipe systems for onshore use

- LOGSTOR is certified in accordance with ISO 9001, ISO 14001 and OHSAS 18001.
- All products are pre-qualified, tested and documented in accordance with EN 253.
- Ideal for transport of liquids and gases with temperatures ranging from -200°C to 146°C using pipe with standard polyurethane (PUR) foam insulation. Liquids and gases with higher temperatures can be transported using polyisocyanurate (PIR) foam insulation or a combination of mineral wool and PUR.
- Waterproof, durable and UV-resistant pipe jacket made of high-density polyethylene (HDPE).
- Computer-controlled fusion-welded field joints ensure a completely watertight pipe system.

Built-in durability

LOGSTOR Oil & Gas develops, manufactures and supplies pre-insulated, energy-efficient pipeline systems to meet client-specified requirements for onshore oil and gas applications.

These pre-insulated pipe systems are based on the use of closed-cell polyurethane foam applied directly onto the media steel pipe – or onto any anticorrosion coating – and covered by an outer jacket made of high-density polyethylene.

The pre-insulated pipe lengths are manufactured under carefully monitored conditions in which temperature and humidity are controlled to ensure the high quality standards for which LOGSTOR is renowned.

Design, engineering and project management

LOGSTOR Oil & Gas offers a wide range of engineering activities from conceptual studies to detailed thermal hydraulic analyses of pre-insulated pipe designs. Stringent project management and control ensure that we meet our clients' expectations of product reliability and punctual delivery as specified. A central project management unit dedicated to specific projects co-ordinates the resources and processes and ensures direct, safe and efficient communication with our clients throughout the project.

Health, safety, environment and welfare

LOGSTOR focuses strongly on minimising any risk of accidents associated with working conditions and to ensure that products and raw materials are protected against anything that could cause defects or delay production.

LOGSTOR has thus implemented a complete HSE and welfare policy that incorporates the requirements of the ISO 14001 and OHSAS 18001 standards. LOGSTOR also complies with the Danish Occupational Safety and Health Act and the Danish Environmental Act.

Via continuous monitoring of these focal points, in conjunction with staff training, we strive after continuous improvement of safety standards and better protection of the environment, to the benefit of ourselves and our clients.



Applying LOGSTOR pre-insulated pipe systems

- HT/HP flowlines or transmission lines
- Transporting liquids and gases such as waxy crude oil, heavy fuel oil, hot bitumen, wet crude gas and condensate
- Sulphur pipelines
- Monoethylene glycol (MEG) pipelines



It's all about confidence



EN 253 as reference

Low K-value

Fusion-welded
field joints

Leak detection
system

Heat tracing system

Insulation effect

The LOGSTOR insulation system consists of closed-cell polyurethane foam that retains its structural integrity over a maintenance-free service life of at least 30 years. LOGSTOR PUR insulation material provides a thermal conductivity down to 0.024 W/mK.

Buried pipelines

LOGSTOR pre-insulated pipe is a fully bonded system that allows the pipe to expand and move as one single pipe. For buried systems the forces created by the expansion of the media pipe, as a result of the high temperatures of the liquids and gases passing through, are

transmitted from the inner pipe through the PUR foam and the HDPE jacket to the surrounding soil, via friction.

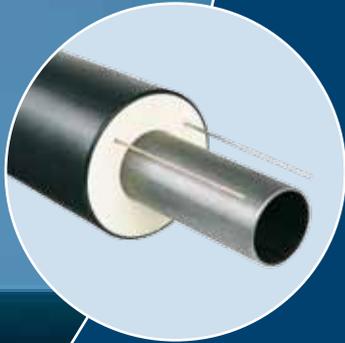


Local manufacturing

Newly developed flexible manufacturing facilities enable LOGSTOR to insulate steel pipes locally under temperature and humidity controlled conditions. These facilities provide quality standards that are fully on a par with those available at the major LOGSTOR manufacturing facilities in Northern Europe.

Because logistics often play a major role in oil and gas pipeline projects, local production using LOGSTOR flexible manufacturing facilities can result in significant savings in logistics costs.





Leak detection

LOGSTOR provides electronic leak detection and monitoring systems that enable you to check the integrity of the insulation system on a continuous basis.

The pipes are equipped with two non-insulated copper wires embedded in the PUR insulation. Detectors (DC 12V required) positioned along the pipeline continuously monitor for broken wires and alterations in the electrical resistance in the insulation material. Any defects in the jacket (indicated by the presence of water in the PUR foam) are detected immediately. A signal is then transmitted to a control centre, enabling you to take prompt remedial action. The exact location of the defect is determined using an impulse reflectometer.

Heat tracing

LOGSTOR pre-insulated pipes, bends and fittings are available with a heat tracing system incorporated into the PUR insulation. This heat tracing capability makes it easier to maintain the temperature of the liquid in the media pipe using either skin effect, hot oil or steam.

LOGSTOR provides the required interface to the supplier of the heat tracing components. It is standard procedure to mount the tracer tube onto the media pipe prior to insulation. This tracer tube is either welded or strapped to the media pipe in accordance with instructions provided by the supplier of the particular heat tracing system.

LOGSTOR Oil & Gas has a substantial reference list that documents our experience in working with numerous suppliers of skin effect heat tracing system components.



World leader

LOGSTOR is the world's leading manufacturer of energy-efficient pre-insulated pipe systems for transporting gases and liquids with operating temperatures from -200°C to 315°C.

*Our main business areas are district heating and cooling, oil and gas, marine and industry.
More information at www.logstor.com*



End-to-end system integrity: Field joints

The LOGSTOR fusion-welded field joint system is designed to remain sealed throughout its 30-year service life. This provides maximum safety and reliability at the same time as keeping heat loss to a minimum at all times.

The system is centred around a computer-controlled thermoplastic welding process that ensures joints of unparalleled strength and sets significant new benchmarks in operating reliability.

Two types of joints are available – the EW field joint and the BandJoint system.

Both the EW field joint and the BandJoint provide a completely watertight seal, on account of the way the field joint sleeve is welded to the pipe jacket. The computer-controlled weld ensures built-in quality assurance on the basis of the data stored in the welding computer.

The field joint sleeve is made of the same material as the pipe jacket, and has the same thickness. This makes it possible to transmit any stresses that may arise, avoiding any risk of interface failure between the field joint and the pipe.

Each field joint is injected with the same PUR foam as used in the pipe joints. This ensures consistent mechanical and insulating properties from one end to the other.

Shrinkable field joints, types SX and BX, are also available.

All LOGSTOR field joints comply with the EN 489 standard. LOGSTOR sales engineers provide advice about which type of field joint is most suitable for each particular project.



EW field joint properties:

- Only two circumferential welds
- Available in any length
- Suitable for dimension reduction
- Mounted before welding the media pipe



BandJoint properties:

- Has an additional horizontal weld
- Available in 4 standard lengths
- Not suitable for dimension reduction
- Mounted after the media pipe has been welded

Fusion-welded field joints are used in the process of directional drilling.



Pre-insulated pipes are ideal for transferring hot bitumen at an average operating temperature of 140°C.



Pre-insulated pipes are designed to resist severe weather conditions.



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