# DEHN protects.

## Gas receiving station of the North Stream Pipeline

### Customer

GASCADE Gastransport GmbH

### Project overview

**Branch**

Gas transport
Pipeline technology

**Application**

Protection of the process control system

**Hardware**

Blitzductor XT
(combined lightning current and surge arrester with integrated LifeCheck monitoring)

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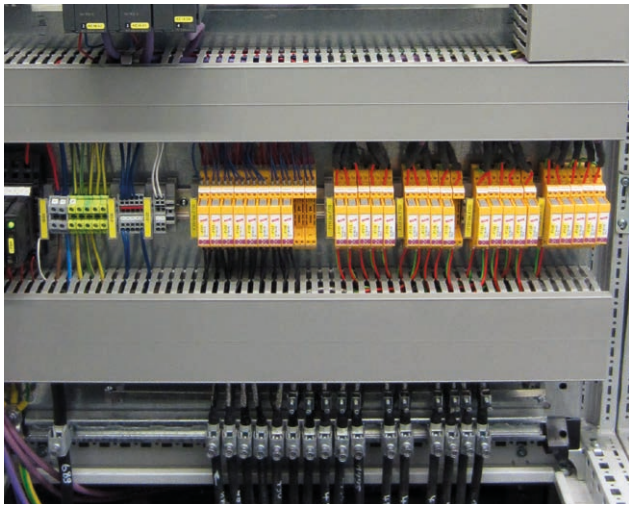
## Gas receiving station of the North Stream Pipeline



As the operator, GASCADE Gastransport GmbH is responsible for the safe and reliable operation of the natural gas receiving station in Lubmin near Greifswald. The natural gas arriving from western Siberia is distributed in the European pipeline network via the two connecting pipelines OPAL (Ostsee-Pipeline-Anbindungs-Leitung – Baltic Sea Pipeline Link) and NEL (Nordeuropäische-Erdgas-Leitung – North European Gas Pipeline).

### Challenge

As the requirements concerning the availability and safety of the pipeline are very high, special attention was devoted to the protection of the process control system (PCS). All the possible risks were assessed and economically viable lightning and surge protection measures determined as part of a risk analysis in compliance with IEC 62305-2. Conducted interference impulse could be led in from the outside via the many interfaces and cause considerable damage to the PCS.

### Solution

As a fundamental measure and the basis for effective equipotential bonding, a meshed earthing system was installed in the area of the gas receiving station. All the buildings are protected against direct lightning strikes by an external lightning protection system. The Profibus DP cables coming in from field devices are routed over Blitzductor XT combined lightning current and surge arresters. These pluggable arresters combine a high impulse current discharge capacity with a very low voltage protection level. The protective circuit is especially adapted to Profibus requirements and safeguards permanent bus communication without negatively influencing its performance or transmission reliability. The LifeCheck® monitoring technology simply and quickly checks the status of the surge arresters, allowing easy and prognostic maintenance. The LifeCheck® early warning system detects the imminent electrical or thermal overload of the protection modules in a matter of seconds using non-contact RFID technology.

### Advantages of the DEHN solution

- High discharge capacity and minimal space requirement (12 mm for 2 pairs)
- Maximum availability thanks to the permanent monitoring of arresters via LifeCheck
- Minimal wiring
- Interruption free exchange of protection modules

### Advantages for GASCADE

- Low maintenance costs and time due to automated and permanent arrester monitoring
- No need to disconnect the wiring to change the module (no loop checks)
- Optimum technical consultation and training on site

Source cover photo: Nord Stream AG



Surge Protection
Lightning Protection
Safety Equipment
DEHN protects©

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