



# DEHN protects.

Open Grid Europe's Compressor Station  
in Werne

## Customer

Open Grid Europe GmbH

## Project overview

### Branch

Gas transport  
Pipeline technology

### Application

Realisation of an isolated  
external lightning protection  
system for the Werne compressor  
station

### Hardware

HVI® Conductor  
Stainless steel earthing system  
in accordance with DIN 18014

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## Open Grid Europe's Compressor Station in Werne



### Open Grid Europe GmbH

Die Open Grid Europe GmbH (OGE) with its headquarters in Essen is Germany's leading natural gas transmitter with a gas pipeline network of roughly 12,000 km. One of the most important hubs in the natural gas grid is the OGE compressor station in Werne: here 13 pipelines come together from different directions. They transmit natural gas from the Netherlands (so-called L gas) and from the North Sea (H gas) to the Ruhr area and then on southwards. As about a quarter of Germany's natural gas consumption flows through the Werne compressor station, the expansion of the location as a central point in the gas supply grid is also part of the grid development plan. In future, it will be possible to reverse the gas flow so that it can flow both north and south. In addition, OGE is upgrading the compressor station for the impending conversion from L to H gas. With this "fitness programme" OGE is shaping up to guarantee the supply reliability and flexibility required in the grid development plan: the transmission capacity in Werne will be increased to 6.5 mill. m<sup>3</sup>/h by the end of 2018.

### Challenge

Specialist companies are needed for the optimum realisation of lightning protection concepts designed in 3D – in the case of the Werne compression station, this was the company Wipperfurth GmbH. It is absolutely essential that the installers are both familiar with the materials shown in the detailed drawings and install them correctly. Appropriate personal product training sessions ending with a certificate were held in advance. Once completely fitted, the installation has to be approved by a "certified lightning protection specialist for areas with a potentially explosive atmosphere". The acceptance report "Inspection of the lightning protection system in potentially explosive areas" according to DIN EN 62305-3 incl. supplements is part of the explosion protection documentation.

### Solution

The lightning protection concept with a highly efficient configuration of the air-termination devices and down conductors was successfully implemented in ex areas (and non-ex areas) using certified system components by DEHN. The preparatory 3D planning and resulting detailed drawings made it possible to make huge savings on installation resources, time and costs.



Photos: Isolated external lightning protection system with HVI installation on the Werne compressor station

### Advantages of the DEHN solution

- ➔ Shorter installation time thanks to the optimum configuration of the external lightning protection
- ➔ Quick and easy installation due to a large number of detailed drawings
- ➔ Reduction of installation errors
- ➔ Approval by a technical expert (competent body/ accreditation body) is less time consuming
- ➔ Optimum use of natural components (e.g. lamp posts)
- ➔ Wide range of HVI system components
- ➔ 15 years of experience in the area of isolated lightning protection systems
- ➔ Multifaceted technical support during implementation
- ➔ Cost reduction due to shorter installation times
- ➔ Effective, tried and tested and durable system