

CONSTRUCTION AND RECONSTRUCTION HIGH-PRESSURE GAS PIPELINES

We provide constructions and reconstruction of high-pressure gas pipelines of all categories, and medium-pressure and low-pressure pipelines (Subgroup B2, B1, A3 and A2).

Our Company is also involved in the construction of industrial pipelines, product mains, heat systems, water mains and compression sewers. Our activities include building work related to construction.

We will prepare:

- budget
- project documentation
- gas pipelines and product mains
- gas connections
- pressure tests
- revisions



Since 2016, GASCONTROL, MORAVSKÝ PLYNOSTAV and GASCONTROL POLSKA own complete automatic welding sets and also have qualified personnel.

Technology for automatic welding in GC GROUP:

- Vietz Arcotrac 1100 welding tractors
- Liebherr welding tractors
- Lincoln STT semi-automatic welding power supplies
- Lincoln Piper Plus automatic welding machines
- Automatic welding machine guide bed DN 500 - DN 1000
- Inner centrators DN 500 - DN 1000
- Internal and external preheaters DN 500 - DN 1000
- Vietz welding tents
- Welding machine ORBITAL
- Pipe benders 40t, 60t, 90t



Technical parameters of the Piper Plus

The equipment is assembled specifically for the construction of HP gas and product pipelines:

- Carriage travel speed range: 0-2000 mm/min
- Wire feed speed: 0.8-30.5 m/min
- Wire diameter range: 0.9-1.6 mm
- Delay time: 0-10s right and left
- Beveling: 0.25-50 mm
- Trolley weight: 17.1kg
- Parameter range control via control panel

GASCONTROL, společnost s r.o.
Dělnická 883/46
735 64 Havířov
Prostřední Suchá
Czechia
T: +420 596 496 411
E: gascontrol@gascontrol.cz
www.gascontrol.cz

Member of
GC GROUP

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Welding work is carried out in accordance with ČSN EN ISO 3834-2 "Quality requirements for fusion welding of metallic materials" on the basis of welding procedures developed in accordance with ČSN EN ISO 15614-1 (so-called WPS) under the supervision of a welding technologist. The welding technologist holds the title of International Welding Engineer (IWE).

All welders have the appropriate qualification proven by the appropriate test according to ČSN EN 9606:2014 or ČSN 050705:2002 or ČSN EN 12732. All certificates are continuously maintained, even for steel materials with a yield strength R_e above 360 N/mm².

Passive and active corrosion protection on completed pipelines. As part of active PKO we supply cathodic protection stations, electrically polarized drainage, ground anodes, etc.



High-pressure Pipeline Restoration

Restoration includes a thorough revision of the pipeline based on specific tests of the technical parameters of steel and the pipeline. This is a set of activities on the existing steel pipeline that will extend its service life and make the high-pressure pipeline capable of continued safe operation, namely:

- separation of the pipeline from the system and provision of its passability by replacing any parts of the pipeline with inadmissible geometry; concurrently, executing a repair or replacement of non-functional valves and fittings, and replacement or removal of non-functional components
- cleaning the pipeline and executing any potential internal inspection using a geometric and intelligent 'cleaning pig', repairs of defects found during the inspection
- repair of defects in insulation in connection to the results of the corrosive survey using the Pearson method and results of the corrosive activity of the environment
- division of the pipeline into individual working sections, filling the sections with water and executing two cycles of voltage repARATION
- repairs of supercritical defects that open during pressure repARATION



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- performing a pressure test at the pressure level defined on the basis of the previous tests and conduct of the pipeline during pressure repair (the new level of operating pressure may be the same, or even higher than the original pressure level, however, it may be lower exceptionally)
- elimination of free standing water from the pipeline and drying the pipeline to the residual value of the temperature of condensation of water in air in the pipeline below $-20\text{ }^{\circ}\text{C}$

We have to emphasize that in order to keep the requirements of the operation of the individual sections we use a special technology by T. D. Williamson, Inc., which our Company owns, to a large extent. An advantage of such an implemented repair of a high-pressure pipeline is the large financial savings when compared with standard reconstruction.

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Cutting-out

- useless parts of the pipeline, such as drainage fittings
- non-functional branches, including line closures
- useless connections with other pipelines



Repairs

- sleeves and anti-corrosion protection equipment
- insulation of the pipeline on the basis of readings taken
- repairs of earthing and pipeline accessories
- any potential defects of the pipeline after a pressure test



Replacements

- damaged parts of the pipeline
- non-functional line closures
- pipeline elbows to allow cleaning with a cleaning plunger



And more

- pressure repair
- execution of pressure tests
- drying pipelines
- connecting a repaired pipeline back to the HP system
- preparation and submission of documentation of the actual execution, and geodetic documentation