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# Technical Rule – Standard

## **DVGW G 415** September 2015

**Design, Construction and Operation of Biogas Pipework  
with an Operating Pressure up to and including 5 bar**

**GAS**

The DVGW is the technical and scientific association of gas and water engineers and comprises approximately 14,000 members. For more than 150 years, the DVGW has been setting the technical standards for the safe, secure and reliable supply of gas and water, actively initiating the exchange of ideas and information in the gas and water sectors and encouraging and promoting on-going progress in the sectors through practical guidance.

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## Foreword

This Standard has been elaborated by the "Biogas Pipework" project group of the Technical Committee on "Gas Distribution". This DVGW Standard can be used as a guideline as it summarises the minimum requirements specified in the DVGW Sets of Rules that shall be observed by design firms, specialist contractors, operators and the involved authorities during the design, construction and operation of gas pipework for the transmission of untreated or partially treated biogas. The clause on "Design" also draws attention to the fact that the pertinent approvals and/or permissions shall be obtained prior to the start of construction of pipework planned to cross e.g. water bodies, roads and railways.

Gases produced by fermentation processes such as e.g. biogases obtained from agriculture that are generally used to meet internal requirements and/or to power decentralised systems such as e.g. combined heat and power plants, are untreated or partially treated biogases that are not considered gases in accordance with DVGW Standard G 260.

Nonetheless, the documents that form part of the DVGW Set of Rules that are referred to in this Standard shall also be applied to pipelines that transmit untreated or partially treated biogas.

This Standard supersedes DVGW Guideline G 415:2011-06.

## Amendments

The following amendments have been made in comparison with DVGW Guideline G 415:2011-06:

- a) Editorial revision
- b) Restriction of the scope of application to a maximum admissible operating pressure up to and including 5 bar
- c) Additional notes on how to install valves, fittings and vents and on piggability
- d) Restriction of the scope of application to cover only polyethylene
- e) Additional notes on how to mark a biogas pipeline on site
- f) Additional notes on occupational safety and hygiene
- g) Additional notes on staff requirements for operation

- h) Additional notes on the use of temporary shut-off devices, the emptying of condensate traps and the pigging of pipeline sections
- i) Additional notes on information about pipework

**Earlier editions**

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