

GAS INSTALLATION. TEST OF KNOWLEDGE

e-learning material

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Virtual and Intensive Course
Developing Practical Skills
of Future Engineers

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Practical Skills of Future Engineers

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1. Classification of natural gas:

- _____

- _____

Answer:

- **combustible,**
- **ballast gases.**

2. Which are combustible gases:

- nitrogen N_2 ;
- carbon monoxide CO ;
- oxygen O_2 ;
- carbon dioxide CO_2 ;
- propylene C_3H_6 ;
- methane CH_4 ;
- pentane C_5H_{12} ;
- hydrogen H_2 .

Answer:

- ~~nitrogen N_2 ;~~
- **carbon monoxide CO ;**
- ~~oxygen O_2 ;~~
- ~~carbon dioxide CO_2 ;~~
- **propylene C_3H_6 ;**
- **methane CH_4 ;**
- **pentane C_5H_{12} ;**
- **hydrogen H_2 .**

3. Which are ballast gases:

- methane CH_4 ;
- carbon monoxide CO ;
- ethane C_2H_4 ;
- nitrogen N_2 ;
- hydrogen H_2 ;
- carbon dioxide CO_2 ;
- prophane C_4H_8 ;
- oxygen O_2 .

Answer:

- ~~methane CH_4 ;~~
- ~~carbon monoxide CO ;~~
- ~~ethane C_2H_4 ;~~
- **nitrogen N_2 ;**
- ~~hydrogen H_2 ;~~
- **carbon dioxide CO_2 ;**
- ~~prophane C_4H_8 ;~~
- **oxygen O_2 .**

3. Classification of outdoor gas pipelines (the transported gas pressure):

- _____
- _____
- _____

Answer:

- **Gas main (5,0-16,0 bar);**
- **Medium pressure gas network (0,1-5,0 bar);**
- **Low pressure gas network (to 0,1 bar).**

4. Classification of gas equipment for a building (categories):

- _____
- _____
- _____

Answer:

- **A type;**
- **B type;**
- **C type.**

5. Why does odor need to be added to the natural gas?

Answer: The “rotten egg” smell is an odorant called **mercaptan** that is added to the gas before it is delivered to the user. **The odor is added to allow detection of a gas leak.**

6. Choose the pipe diameter and SDR for the outside low pressure gas supply pipeline. Object: a single-family house.

Answer:

dn32x3,0 SDR 11

dn32x2,3 SDR 15, 17 or 17,6

7. Choose the pipe diameter and SDR for the outside medium pressure gas supply pipeline. Object: a single-family house (or a small family house).

Answer:

dn20x3,0 SDR11

dn20x3,0 SDR 15, 17 or 17,6

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