

COMMEMORATIVE BOOKLET OF POSSIBLE HAZARDS AND RISK FACTORS, COMMON SAFETY REQUIREMENTS WHILE WORKING IN THE NATURAL GAS TRANSMISSION SYSTEM AND/OR ITS SAFETY AREA

1. All persons must familiarize themselves with this booklet prior to commencement of work, provision of services or other activities in existing natural gas transmission system objects (facilities) and / or their protection zone.
2. Hazardous and harmful factors for work in natural gas transmission system objects:
 - 2.1. ignition or explosion of a gas-air mixture;
Explanation. Natural gas has no odour, colour, is lighter than air, non-toxic, flammable and explosive. The minimum gas ignition concentration (minimum gas volume in the gas-air mixture when the gas may ignite) is 5% (lower explosion limit) under normal conditions (0° C) and 15% maximum explosion limit (upper explosion limit) here is the percentage of gas in the air;
 - 2.2. odorant;
Explanation: Ethylmerkapthan is used to give a natural gas odour, a poisonous, flammable, colourless liquid with a boiling point of 37° C. Odorant has a very unpleasant, intense smell, even small amounts causes headaches and vomiting. Higher odorant concentrations act as a poison to the nervous system, at the onset of seizures, paralysis, or death. The maximum permissible odorant vapor concentration in the air is not more than 1.0 mg/m³. Used in gas distribution stations.
 - 2.3. rotating and moving parts of machines, mechanisms, and installations;
 - 2.4. electricity current;
 - 2.5. a fall from a height or a collapse of soil in a mine;
 - 2.6. falling objects, falling from height (performing works in excavations, wells);
 - 2.7. presence in one movement zone for pedestrians and vehicles;
 - 2.8. X-ray;
Explanation. The pipelines for the arterial gas pipeline are welded and the quality of the weld is checked by the x-ray (X-ray) of the seams. In order to avoid radioactive irradiation by X-ray apparatus, people shall be allowed to be at least 40 m away from it, except in the case of service personnel;
 - 2.9. ionizing rays;
 - 2.10. infestation by bites of animals, ticks;
 - 2.11. industrial dust;
 - 2.12. wetlands;
 - 2.13. harmful chemicals, vapours, gases, aerosols;
 - 2.14. ergonomic factors;
 - 2.15. noise (during gas release or gas distribution (compressor) stations).

Safety and health of employees

3. The work supervisor or other responsible person, when organizing works in the existing natural gas transmission system objects or their protection zone, must create safe

conditions for the employees performing the works and ensure that the work performed does not endanger the surrounding persons.

4. Work must be carried out in accordance with the requirements of the legislation on safety and health at work, collective safety measures must be put in place, and workers shall be provided with adequate personal protective equipment to prevent hazards and risks.
5. In all cases, when carrying out work in a potentially explosive atmosphere, the workers performing them must wear antistatic work clothes, wear non-sparking shoes, use non-sparking tools.
6. During the execution of the work, the employees must work only with the proper tools with protective equipment and devices. When working near potentially hazardous equipment, in a potentially explosive atmosphere, walking is allowed only in a designated area.
7. In case of hazardous circumstances in the work environment, unexpectedly unfavourable changes in technology, organizational, meteorological conditions or inability to comply with the instructions set out in the instructions or in the account, the work supervisor shall immediately stop the work. The work can only be continued only after eliminating faults and unfavourable conditions and ensuring the safety and health of workers.
8. The employee shall take measures in accordance with the possibilities and competence to eliminate causes and failures, which may cause injuries, accidents, and immediately inform the work supervisor about the works in the existing natural gas transmission system object.
9. In a functioning natural gas transmission system object, weld metal by gas and electricity, use open fire only upon receipt of account-permission for those works. These works are carried out in accordance with the Minister of Social Security and Labour of the Republic of Lithuania, the 30th of September Order no. A1-262 "Regulations for Safety of Workers in Potentially Explosive Atmospheres". Assignments are issued by persons authorized by the order of the manager of the company performing the work.
10. All excavation work is carried out in accordance with the "Safety Requirements for Ground Excavation in Arterial Gas Pipeline Protection Area".

Fire safety requirements

11. The person responsible for fire safety in the objects of the natural gas transmission system where the works are performed must:

11.1. control the implementation of fire safety legislation while working or providing services;

11.2. discontinue work if they can cause a fire or explosion;

11.3. provide workplaces with appropriate fire extinguishing agents, indicatory signs, warning signs, and fire safety signs. Entries to places where potentially explosive

atmospheres may occur must be marked by  sign;

11.4. in case of fire in the facility, firefighting, evacuation of people and property will be organized until fire rescue forces arrive;

11.5. know the main characteristics of the hazards of materials used in buildings, structures, technological processes, production facilities, stored, used and produced (released) in the production process.

12. Every natural person on the Company's premises, buildings, structures and territories must:
 - 12.1. know the locations of fire-fighting, communication and signalling equipment in their workplace, to be able to use them;
 - 12.2. not create conditions for the occurrence or spread of fire in their actions or inactivity.
13. Smoking is allowed only in designated areas.
14. Smoking and use of open fire (except welding, cutting works) are prohibited on site. It is forbidden to use equipment, tools and other objects that could make a spark in areas where potentially explosive atmospheres may occur.
15. The working environment of the site of the operating objects is classified in Zone 2 according to the locations, where explosive atmospheres may occur. In potentially explosive atmospheres, work equipment, work mechanisms, appliances, and protective equipment (systems) may only be used when the manufacturer's documentation indicates that they can be used safely in a potentially explosive atmosphere. The ends of the ladder must be fitted with rubber tips to prevent sparking. Tools used for workplace lighting must have CE marking and be safe for use in explosive atmospheres and comply with legal regulations.
16. Entry to the territory of a functioning natural gas transmission system object is only possible with permits. All cars and construction machinery must be technically sound.
17. Burn oily cleaning waste, rubbish, grass and so on. (to be stored in closed, non-conductive containers filled to deliver to the waste handler).

In case of gas - air mixture explosion, fire

18. Proceed calmly, do not disrupt, actually assess the situation and immediately notify the System Management Centre.
19. Call special services by emergency telephone 112, landline phones: firefighters rescue - 01; Telia Network - 101; Bite and Tele2 - 011; Police - 02; ambulance - 03.
20. Evacuate to a safe place.
21. Give first aid to victims.
22. Extinguish fire with available primary firefighting equipment. Extinguishing media - powder (ABC, BC type) and carbon dioxide extinguishers, non-flammable cloth, sand. Electrical devices with voltage (up to 1000 V) are most effective in extinguishing gas and powder ABC fire extinguishers. Extinguishing media, which are not recommended for use - foam extinguishers, water. Water flow can be used to cool closures and pipelines.
23. Persons, who hear an audible signal informing about a fire, must immediately leave the room (the territory of the object) through the escape exit.
24. Evacuation exits are marked in suspended evacuation plans and marked with signs.
25. When there is a risk that material values may be damaged by fire, after the evacuation of the workers, the removal of tangible assets to a safe zone must be organized.
26. Before extinguishing an electrical appliance, it is necessary to switch off the voltage at the burning and nearby electricity installation. If the automatic fuses do not work, the power supply to the burning unit must be switched off manually (the electrical panel deployments

are indicated in the evacuation plan). If this is not possible, electrical equipment up to 1000 V can be extinguished with powder extinguishers and carbon dioxide fire extinguishers.

First aid

27. For first aid measures for gas suffocation:

- 27.1. signs of gas suffocation - general weakness, headache, nausea, vomiting, discoloration of the skin and mucous membrane, may change (more or less frequent) pulse, breathing, the victim loses consciousness, seizures may begin;
- 27.2. get out, bring the victim out of the gas leaking room;
- 27.3. unbutton the collar, let fresh air in;
- 27.4. if the victim is unconscious, lay him/her on the side, prevent choking (if he/she is vomiting);
- 27.5. if necessary, make artificial respiration and external heart massage;
- 27.6. If you do not feel well, you should call an ambulance for medical assistance.

28. First Aid Measures After Odorant Poisoning:

- 28.1. take out of a dangerous environment. Symptoms of poisoning may appear after a few hours. Do not leave the victim unattended;
 - 28.2. Inhalation - Call a physician immediately. If an employee is unconscious, put him/her in a stable position;
 - 28.3. Skin Contact - Remove contaminated clothing immediately. Rinse skin well with water. Pull off the dirty clothes;
 - 28.4. Eye Contact - Rinse eyes immediately with running water. Remove contact lenses if used. Wash wide open eyes. Preserve the intact eye. Seek medical attention if eye irritation persists.
 - 28.5. Ingestion - rinse mouth. **Do not induce** vomiting. Do not give milk or alcoholic beverages. Immediately bring the victim to hospital.
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