Republic of Latvia

Cabinet

Regulation No. 336

Adopted 30 June 2015

**Regulations Regarding Latvian Construction Standard LBN 241-15 “Internal Natural Gas Installation Pipework”**

*Issued pursuant to*

*Section 5, Paragraph one, Clause 3 of the Construction Law*

1. This Regulation approves Latvian Construction Standard LBN 241-15 “Internal Natural Gas Installation Pipework” (hereinafter — the Latvian Construction Standard LBN 241-15).

2. The Ministry of Economics shall recommend to the national standardisation body a list of standards that need to be developed, adapted and applied in connection with this Regulation.

3. The national standardisation body shall publish a list of Latvian national standards to be applied for the purpose of enforcement of the Latvian Construction Standard LBN 241-15 on the website www.lvs.lv.

4. Building designs, which have been developed and co-ordinated according to specific procedures prior to the date of coming into force of this Regulation in accordance with the requirements of the laws and regulations applied at the relevant time period, need not to be revised in accordance with the requirements laid down in the Latvian Construction Standard LBN 241-15. Building designs which have been developed on the basis of planning and architectural orders issued until 1 October 2014 need not be revised in accordance with the requirements of this Regulation.

Prime Minister Laimdota Straujuma

Acting for the Minister for Economics —

Minister for Health Guntis Belēvičs

**In the wording provided by the Ministry of Economics**

Approved by

Cabinet Regulation No. 336

of 30 June 2015

**Regulation Regarding Latvian Construction Standard LBN 241-15 “Internal Natural Gas Installation Pipework”**

**1. General Provisions**

1. The Latvian Construction Standard LBN 241-15 “Internal Natural Gas Installation Pipework” (hereinafter — the Construction Standard) prescribes technical requirements for designing, works and commissioning of an internal natural gas installation pipework.

2. Terms used in the Construction Standard:

2.1. building design — a set of graphical and textual documents necessary for the construction intention of the internal natural gas installation pipework;

2.2. construction works — works performed in order to install (assemble, place), rebuild, restore, preserve, and demolish (disassemble) the internal natural gas installation pipework;

2.3. gas appliance — an appliance fuelled with natural gas;

2.4. gas appliance installation — equipment from an closing device upstream the gas appliance up to a flue gas discharge system. Gas appliance installation consists of a gas pipe connecting the gas appliance to its upstream closing device, a gas appliance, and devices necessary for the air supply to enable the combustion of natural gas and devices necessary for the discharge of flue gas;

2.5. tightness test — a specific procedure for determining whether the internal natural gas installation pipework meets the tightness requirements;

2.6. internal natural gas installation pipework (hereinafter — the installation pipework) — a pipework for natural gas (regulators, pipes, fittings, closing devices, valves, vent pipes etc. from the inlet closing device up to the gas appliance installation) and the gas appliance installation;

2.7. insulating joint — a fitting installed to electrically interrupt one section of a gas pipework from another;

2.8. purging — an operation for the discharge of air or inert gas from the installation pipework and replacement thereof gas, or vice versa;

2.9. maximum operating pressure (MOT) — maximum pressure at which the installation pipework can be continuously operated under normal operating conditions provided that there are no disruptions of the operating mode or gas flow;

2.10. meter — a device to be used alone or in combination with auxiliary devices for the performance of measurements;

2.11. closing device — a device intended for the interruption of the gas flow in the pipework;

2.12. reverse flow protection system – a security device which activates when reverse flow of gases occurs;

2.13. repairs — work performed to ensure safe operation of the installation pipework, including partial or complete replacement of separate sections of gas pipelines, parts or units of gas appliance installations and appliances, and, where necessary, development of a technical solution for repairs;

2.14. air duct — a duct which services one fire safety section and is connected to the riser duct, ventilation chamber, equipment servicing the room to be ventilated, or directly with outdoor air;

2.15. technical solution — a set of the necessary graphical and textual documents drawn up and/or approved by a certified person, featuring the solutions for relocation, placement, restoration, preservation and demolition of the installation pipework and serving as the basis for the commencement of construction works.

3. The Construction Standard prescribes technical requirements for designing, construction works and commissioning of the installation pipework with the maximum operating pressure of up to 1.6 MPa (16 bar) in residential and non-residential buildings.

4. In respect of designing, works and commissioning of the installation pipework, the requirements laid down in the laws and regulations in force and in the Latvian National Standards (hereinafter — the LVS) shall be applied, as well as the requirements laid down in international standards and standards of other organisations adapted in the status of Latvian National Standards, and standards published by the national standardisation body on the website www.lvs.lv, including:

4.1. LVS 419:2010 “Internal Gas Installation Pipework. Construction” (hereinafter — the LVS 419);

4.2. LVS 420:2010/AC:2014 “Gas Appliances. Conditions for Installation of Gas Appliances”;

4.3. LVS 445:2011 “Operation and Maintenance of Natural Gas Distribution and Consumer Supply Systems with Max. Operation Pressure 1.6 Mpa (16 bar)” (hereinafter — the LVS 445).

5. For the purpose of designing, construction works and acceptance into operation of the installation pipework, the requirements of those Latvian National Standards shall be applied, which have been listed and published by the non-profit-making State limited liability company “Latvijas standarts” on its website, as recommended by the Ministry of Economics.

6. The installation pipework shall be designed, constructed and operated in a manner which ensures that its operation during the entire service life is safe, energy efficient and compliant with the engineering and technical quality principles. The installation pipework shall be operated and repaired in accordance with the LVS requirements.

7. After having co-ordinated with the supplier of natural gas, in gas-supplied rooms the user shall be permitted to replace and move such gas appliances (gas cookers, laboratory burners and other gas appliances) within the same room whereof the products of combustion are not directed to a flue.

8. In order to replace or move within the same room any appliance where the products of combustion are directed to a flue, a permission from the gas supplier and a statement on the technical condition of the flues and air ducts must be received, and a technical solution must be developed.

9. In order to install new or additional appliance installations, as well as in order to move the existing appliance installations to another room, technical rules and a statement on the technical condition of the flues and air ducts must be obtained from the gas supplier, and a building design must be developed.

10. It is permitted to use non-odourised gas in industrial companies for manufacturing purposes, provided that the building design provides for safety measures for safe use of non-odourised gas in the manufacturing process.

11. The maximum operating pressure of the installation pipework in residential and non-residential buildings (except for industrial manufacturing buildings and warehouses) shall not be higher than 0.01 MPa (0.1 bar), and not higher than 0.4 MPa (4.0 bar) in industrial manufacturing buildings and warehouses. As an exception, in industrial manufacturing buildings, where dictated by the manufacturing process, a higher maximum operation pressure is permissible, up to 1.6 MPa (16 bar), and the building design and technical solution shall provide for the necessary safety measures for work environment.

12. The gas pressure in the installation pipework upstream the gas appliances shall correspond to that indicated in the manufacturer's instructions and within the ranges laid down in Paragraph 11 of this Construction Standard.

13. The internal diameter of the gas pipes in the installation pipework shall be determined with hydraulic calculations, provided that all consumers receive a continuous flow of natural gas at maximum gas consumption per hour.

The aggregate pressure loss in the pipework of the installation pipework shall be assumed within the range that ensures the necessary minimum pressure to each single gas appliance; however not lower than 0.0017 MPa (17 mbar). When making the calculations, hydrostatic pressure (Pa) shall be taken in to account.

14. In the cases where natural gas is supplied, however, a transition to liquefied petroleum gas is anticipated, the installation pipework shall be designed in such a manner that it can be later used for liquefied petroleum gas, in accordance with the requirements of the Latvian Construction Standard LBN 243-15 “Internal and External Liquefied Petroleum Installation Pipework”.

15. The installation pipework shall be designed in a manner that prevents air, oxygen or other gases, when used together with natural gas, from penetrating into the natural gas system. In such cases it is necessary to use reverse flow protection systems.

**2. Pipework**

16. Steel pipes in in the installation pipework shall be joined by welding, copper pipes – by welding, pressing or brazing. It is also permitted to use other types of non-dismantable joints, as well as dismantable joints in the points where gas appliance installations, appliances, closing devices and meters are connected, and in connections of gas appliances installations, provided that this has been envisaged by the manufacturer and they meet the requirements of the applicable standards.

17. The installation pipework shall have open-type pipework. It is permitted to install pipework in building structures, provided that measures have been envisaged for enabling the building work, operation and repairs thereof.

18. With technical substantiation, it is permitted to build a gas pipeline (provided it does not have any dismantable joints) through rooms in residential and non-residential buildings where gas is not used.

19. If the facade gas pipework is integrated downstream the inlet closing device in the finishing structures of the external walls of the building — wells or ducts —, their dimensions shall enable the building works, operation and repairs of the gas pipework. The wells and ducts shall be ventilated by separate sections or in whole, and they shall be hermetically sealed off from other finishing structures of the external wall and rooms in the building.

20. If the natural gas meter and the accounting meter (hereinafter the meter) has been installed in a stand-alone cabinet, the section between the inlet closing device and inlet to the building shall be a branch pipe with a thread closing.

21. It is necessary to install closing devices:

21.1. in the inlet of the gas pipeline (on the facade or in the combined inlet of the house);

21.2. upstream each meter;

21.3. upstream the gas appliance, except where the distance between the meter and the gas appliance is less than 2 m and not more than one gas appliance is installed;

21.4. upstream the burners and pilot lights in gas-fuelled industrial equipments;

21.5. in the vent pipes.

22. It is prohibited to install closing devices in gas pipelines that are integrated in the building structures.

23. In points where gas pipelines traverse the building structures, they shall be placed in a shell designed to secure a safe operation of the gas pipelines.

24. Metal gas pipelines, also the ones placed in ducts, shall be protected against corrosion in accordance with LVS EN ISO 12944-4:1998 “Paints and Varnishes. Corrosion Protection of Steel Structures by Protective Paint Systems.”

25. In buildings where the gas pipeline may have electric contact with earthed metal structures, engineering networks and conducting parts of electric installations, the installation pipework shall be separated from the underground gas pipelines systems with insulating joints at the inlets of metal gas pipelines.

26. The installation pipework shall be electrically uninterrupted. To balance the electric potential between the gas pipeline, other engineering networks and metal structures of the building, the gas pipeline shall be connected to the potential equalization system of the building (neutral wire, safety earthing system).

27. When the installation pipework is designed and constructed, each end user of natural gas shall have own meter.

28. In residential buildings meters shall be installed in a place that is accessible to the natural gas supplier and the maintenance staff of the installation pipework, in a lockable cabinet outside the building, in the stairwell or other premises for common use, except where it is impossible from the technical aspect to install such meter in a building that has already been commissioned, it shall be installed in an apartment. The rooms where meters are installed shall be equipped with an air duct that ensures continuous circulation of air.

29. It is permitted to equip meters with a telemetry or telecontrol system enabling automated remote readings, to be used as a basis for payments for natural gas.

30. The type of the meter shall be selected depending on the maximum and minimum natural gas consumption per hour. The gas supplier is entitled to require that the meter be equipped with temperature or temperature and pressure volume adjusters. Only meters that have a manufacturer's certificate stating that they are suitable for outdoor operation may be installed outside buildings.

**3. Construction Products**

31. For the construction of an installation pipework, only such components of pipework and construction products, power devices, gas appliance installations, gas appliances and closing devices shall be used that are safe for operation and meet the requirements laid down in the laws and regulations in force in the Republic of Latvia.

32. The installation pipework shall be built of metal (steel, copper) pipes. To connect a gas appliance, it is permitted to use reinforced flexible metal pipes, the compliance thereof for this use being certified, while, in order to connect laboratory burners, draught and underpressure meters, it is also permitted to use reinforced flexible material pipes, the compliance whereof for this use being certified.

33. The assortment of construction products, closing devices, other types of materials, structures to be used in the installation pipework and other binding technical specifications shall be indicated in the building design or technical solution.

34. It is permitted to use only such welding or brazing materials (electrodes, welding wires, fluxing agents, brazing fillers, addition materials) that are suitable for welding, brazing or pressing (in respect of copper) of the respective brand of pipes and fittings. Prior to starting welding, brazing or pressing, the materials and construction products shall be inspected visually and tested for the suitability for use.

**4. Gas Appliance Installations and Appliances**

35. It is permitted to install gas appliances that, according to standard LVS EN 437+A1:2011 “Test Gases. Test Pressures. Appliance Categories” are suitable for type 2 group H natural gas.

36. It is permitted to install such gas appliance installations and appliances (including outdoor and indoor fireplaces, grills, lanterns and other appliances) the conformity to the purpose of use whereof has been certified in accordance with the requirements laid down in the laws and regulations in force in the Republic of Latvia.

37. Gas appliance installations shall be classified depending on the supply of air for combustion of natural gas and the method for discharging flue gas, according to the applicable standards.

38. It is permitted to install C1 type gas appliances (horizontal balanced flue gas appliances) in low-rise (up to three storeys inclusive) apartment buildings for the purpose of heating and hot water in individual apartments, except for construction projects, as well as in houses with single or two apartments and non-residential buildings.

39. The installation of gas appliance installations and appliances shall be designed in accordance with the procedures laid down in the laws and regulations, and it is permitted to install them according to the manufacturer's instructions in rooms with adequate ventilation and air supply for operating gas installations and appliances to enable the combustion of natural gas.

40. The measurements of rooms (volume) required for the installation of gas appliance installations and appliances shall be determined according to the applicable standards and the installation and operating instructions for gas appliance installations and appliances supplied by manufacturers.

41. Smoke stacks, flues, outlets and connecting sections thereof, designated for discharge of combustion products from gas appliance installations and appliances, shall conform to the laws and regulations of the Republic of Latvia in respect of fire safety, and the respective construction standards and applicable standards.

42. When several gas appliance installations are used in one room with aggregate nominal heat capacity above 50 kW, or placed in the basement or semi-basement floor irrespective of the aggregate capacity, automatic shut-down devices for natural gas concentration supply with gas leakage detectors shall be installed.

43. It is not permitted to supply the air necessary for combustion via openings in external walls of buildings to the gas appliance installations that are installed in rooms where people are constantly present.

44. When placing gas appliance installations for heating and hot water (boilers) with aggregate nominal heat capacity not higher than 500 kW in the basements of buildings, in addition to a gas leakage detector and automatic shut-down devices for natural gas concentration supply, mechanical ventilation shall be installed.

45. For heating of non-residential buildings and separate rooms it is permitted to also use incandescent and candescent burners as well as infrared burners.

**5. Designing of the Installation Pipework**

46. When designing the installation pipework or developing technical solutions, development of a building design or technical solution shall be ensured within the scope laid down in general and special construction standards.

47. The person drawing up the building design or the technical solution shall be responsible for the conformity of the building design or technical solution and documentation thereof with the requirements of the laws and regulations governing construction, of construction standards, as well as contracts entered into by the designer and the commissioning party according to civil legal procedures.

48. In residential and non-residential buildings purge ducts shall be envisaged in accordance with the requirements of the LVS 419.

**5.1. Requirements for the Construction of the Installation Pipework in Residential Buildings**

49. In new buildings it is permitted to install gas appliance installations and appliances for cooking in the kitchen of the apartment or another suitable room with a window, which is designed in a way that the room can be ventilated. An air duct is necessary in a room where gas appliance installations, which would ensure continuous circulation of air, are installed and the ceiling is not lower than 2.5 m. In residential buildings that are not new buildings, it is permissible to install gas appliance installations and appliances in a room where the ceiling is not lower than 2.2 m.

50. It is permitted to install gas appliance installations in multi-storey multi-apartment buildings for communal heating and hot water:

50.1. in the basement and semi-basement floor of the building, if the aggregate nominal heat capacity of gas appliance installations (boilers) is not higher than 500 kW;

50.2. on the ground floor of the building, if the aggregate nominal heat capacity of gas appliance installations (boilers) is not higher than 500 kW;

50.3. in the attic and penthouse of the building, if the aggregate nominal heat capacity of gas appliance installations (boilers) is not higher than 2.0 MW;

50.4. it is permitted to install container-type gas appliance installations on the roof of the building with a nominal heat capacity of up to 10.0 MW.

51. The rooms referred to in Sub-paragraphs 50.1, 50.2, and 50.3 of this Construction Standard shall have windows in size not smaller than 0.05 m2 per 1 m3 of the room volume, and the ceiling shall be not lower than 2.2 m. The gas-supplied room referred to in Sub-paragraph 50.1 of this Construction Standard shall be hermetically sealed off, and automatic shut-down devices for natural gas concentration supply with gas leakage detectors shall be installed in the room.

52. The rooms referred to in Paragraph 50 of this Construction Standard with the following gas installations:

52.1. gas appliance installations with capacity 500 kW and lower shall be separated from other rooms with fireproof partitioning walls having fire resistance not lower than EI-60, fireproof ceiling having fire resistance not lower than R-60, and fireproof door having fire resistance not lower than EI-30;

52.2. gas appliance installations with capacity above 500 kW in buildings which are more than 10 storeys high shall be separated from other rooms with fireproof partitioning walls having fire resistance not lower than EI-120, fireproof ceiling having fire resistance not lower than R120, and fireproof door having fire resistance not lower than EI-90.

53. It is permitted to install gas appliance installations for heating and preparation of hot water with nominal heat capacity of up to 35 kW in a family residential house or for a separate apartment, in the kitchen of the apartment or another room not used for dwelling, which is equipped with an air duct that ensures continuous circulation of air (a window is not compulsory). The ceiling in the room shall be not lower than 2.0 m.

54. It is permitted to install gas appliance installations for heating and hot water with nominal heat capacity of up to 35 kW in a bathroom, provided it has an openable window in an external wall, and an air duct that ensures continuous circulation of air. The window shall be not smaller in size than 0.05 m2 per 1 m3 of the room volume. The ceiling in the room shall be not lower than 2.5m.

55. For the purpose of heating separate rooms, including dwelling rooms, it is permitted to use industrially manufactured infrared and convection gas appliance installations – fireplaces, heaters, thermal units and similar appliances that have a centralised and sealed off discharge of flue gas in the atmosphere.

**5.2. Requirements for the Construction of the Installation Pipework in Non-residential Buildings**

56. It is permitted to install gas appliance installations with organised discharge of flue gas in the atmosphere in non-residential buildings and rooms. It is permitted to install one natural gas cooker and laboratory natural gas burners without organised discharge of flue gas.

57. Gas appliance installations, except for heating and hot water, shall be installed only in rooms with an openable window in an external wall, and an air duct that ensures continuous circulation of air. If the room does not have an openable window in an external wall, it is necessary to plan discharge of flue gas with automatic switch. The ceiling in the room shall be not lower than 2.5 m.

58. Gas appliance installations for heating and hot water with aggregate nominal heat capacity of up to 35 kW shall be installed in accordance with the requirements laid down in Paragraph 53 of this Construction Standard.

59. It is permitted to install gas appliance installations in non-residential buildings (except for industrial manufacturing buildings and warehouses) for heating, hot water and cogeneration:

59.1. in the basement and semi-basement floor of the building, if the aggregate nominal heat capacity of gas appliance installations (boilers) is not higher than 500 kW;

59.2. on the ground floor of the building, if the aggregate nominal heat capacity of gas appliance installations (boilers) is not higher than 500 kW;

59.3. in the attic and penthouse of the building, if the aggregate nominal heat capacity of gas appliance installations (boilers) is not higher than 2.0 MW;

59.4. it is permitted to install container-type gas installations on the roof of the building with a nominal heat capacity of up to 10.0 MW.

60. The rooms referred to in Sub-paragraphs 59.1, 59.2, and 59.3 of this Construction Standard, as well as the rooms in gas-supplied industrial manufacturing buildings and warehouses shall have windows in size not smaller than 0.05 m2 per 1 m3 of the room volume, and the ceiling shall be not lower than 2.2 m. The gas-supplied room referred to in Sub-paragraph 59.1 of this Construction Standard shall be hermetically sealed off, and automatic shut-down devices for natural gas concentration supply with gas leakage detectors shall be installed in the room.

61. The rooms referred to in Paragraph 59 of this Construction Standard with the following gas installations:

61.1. gas appliance installations with capacity of 500 kW and lower shall be separated from other rooms with fireproof partitioning walls having fire resistance not lower than EI-60, fireproof ceiling having fire resistance not lower than R-60, and fireproof door having fire resistance not lower than EI-30;

61.2. gas appliance installations with capacity higher than 500 kW in buildings more than 10 storeys high shall be separated from other rooms with fireproof partitioning walls having fire resistance not lower than EI-120, fireproof ceiling having fire resistance not lower than R120, and fireproof door having fire resistance not lower than EI-90.

62. The designing of the installation of gas appliance installations in industrial manufacturing buildings and warehouses shall be performed in accordance with the requirements laid down in the respective laws and regulations.

63. It is prohibited to install boilers under lobbies, halls, assembly halls, classrooms and other rooms which can accommodate more than 50 persons simultaneously.

64. An annexed boiler house together with the adjacent building shall be considered as one building, unless separated by a fireproof wall in accordance with the provisions of Sub-paragraph 61.2 of this Construction Standard.

**6. Construction Work of the Installation Pipework**

65. Construction work of the installation pipework shall be performed in accordance with the procedures laid down in the laws and regulations and the building design or technical solution.

66. The pipework shall be joined in accordance with the LVS EN 1775:2011 “Gas Supply. Pipework for Buildings. Maximum Operation Pressure Less Than or Equal to 5 bar. Functional Recommendations” and other applicable standards.

67. When constructing the installation pipework welding of metal pipes shall be performed by welders who have been certified for arc and gas welding of metal pipes and welding of copper pipes in accordance with standards and other laws and regulations.

68. The brazing of copper pipes for the installation pipework shall be performed by brazers in accordance with the standard LVS EN ISO 13585:2012 “Brazing. Qualification Test of Brazers and Brazing Operators (hereinafter – ISO 13585:2012)”.

69. The performer of construction work or repairs shall certify the continuity of the welder's and brazer's work at least once per every six months.

70. Welding coordination shall be carried out in accordance with standards LVS EN ISO 14731 “Welding Coordination. Tasks and Responsibilities” and LVS EN 12732:2012 “Gas Infrastructure. Welding of Steel Pipework. Functional Requirements” (hereinafter – LVS EN 12327).

71. The preparation of the steel pipes for welding, the selection of addition materials for welding and the welding shall be performed in accordance with standard LVS EN 12732.

72. All welded joints, except for the brazed ones, shall be inspected visually in accordance with standards LVS EN ISO 17637:2011 “Non-Destructive Testing of Welds. Visual Testing of Fusion-Welded Joints (ISO 17637:2003)” and LVS EN 12732. Brazed joints shall be inspected in accordance with standard LVS EN 12799:2001/A1:2004 “Brazing - Non-Destructive Examination of Brazed Joints” (hereinafter – LVS EN 12799).

73. The quality of welded joints of the pipework shall be tested in accordance with standard LVS EN 12732. The quality of the brazed joints shall be tested in accordance with standard LVS EN 12799. The commissioning party may request additional quality examinations and determine the type and scope thereof.

74. The results of the quality examinations shall be documented.

75. If the welded or brazed joints do not meet the quality requirements, they shall be rejected and cut out. It is permissible to repair arc-welded and brazed joints. The quality examination shall be repeated after the repairs.

**7. Commissioning of the Installation Pipework**

76. The constructed installation pipework shall be commissioned in accordance with the laws and regulations governing the acceptance into operation of buildings and the standard LVS 445.

77. The performer of construction work shall be responsible for the quality of construction work.

78. Interim operations in the construction work of the installation pipework, as well as the quality inspection shall be performed in accordance with the relevant construction standards, laws and regulations and applicable standards.

79. For quality surveillance of the construction work and for the commissioning of the constructed installation pipework and gas appliance installations in accordance with the procedures laid down in the laws and regulations, a certified construction supervisor shall be engaged.

80. Following the completion of the installation pipework construction work, the installation pipework shall be subject to pressure and tightness testing with air or inert gas.

81. Tightness may be tested simultaneously with pressure testing, using the same environment and reducing the pressure down to the threshold established for tightness testing, and summing up the testing times.

82. Gauges of accuracy class not inferior to 0.6 and maximum measurement range 150 % of the testing pressure shall be used for pressure testing and tightness testing.

83. Digital or liquid gauges, which ensure measuring of the head loss with accuracy not lower than 0.01 MPa (0.1 mbar), shall be used for tightness testing.

84. The pressure test has been passed provided that no deficiencies have been detected during the testing and the pressure in the gas pipeline has remained constant during the entire testing time.

85. The tightness test has been passed provided that no headloss has been detected between the start and end of testing, or if headloss can be explained with the fluctuations of ambient temperature and atmospheric pressure. The testing time and pressure for pressure testing and tightness testing shall be as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No. | Internal installation pipework | Maximum operation pressure (MOP), MPa (bar) | Pressure test | | Tightness test | |
| testing pressure (STP), MPa (bar) | testing time | testing pressure (TTP), MPa (bar) | testing time |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Residential buildings and non-residential buildings (except for industrial manufacturing buildings and warehouses) | not higher than 0.005  (0.05) | 0.1 (1.0) | necessary for inspection of the constructed internal installation pipework; however, not less than 10 minutes | 0.005  (0.05) | 5 minutes |
| above 0.005 to 0.01 (inclusive) (0.05 to 0.1) | 0.1 (1.0) | necessary for inspection of the constructed internal installation pipework; however, not less than 10 minutes | 0.01 (0.1) | 10 minutes |
| 2. | Industrial manufacturing buildings and warehouses | not higher than 0.005  (0.05) | 0.1 (1.0) | necessary for inspection of the constructed internal installation pipework; however, not less than 10 minutes | 0.005  (0.05) | 10 minutes |
| above 0.005 to 0.1 (inclusive) (0.05 to 1.0) | 0.2 (2.0) | 1 hour | 0.1 (1.0) | 1 hour |
| above 0.1 to 0.3 (inclusive) (1.0 to 3.0) | 0.45 (4.5) | 1 hour | 0.3 (3.0) | 1 hour |
| above 0.3 to 0.4 (inclusive) (3.0 to 4.0) | 0.6 (6.0) | 1 hour | 0.4 (4.0) | 1 hour |
| above 0.4 to 0.6 (inclusive) (4.0 to 6.0) | 0.8 (8.0) | 1 hour | 0.6 (6.0) | 1 hour |
| above 0.6 to 1.2 (inclusive) (6.0 to 12.0) | 1.6 (16.0) | 1 hour | 1.2 (12.0) | 1 hour |
| above 1.2 to 1.6 (inclusive) (12.0 to 16.0) | 2.2 (22.0) | 1 hour | 1.6 (16.0) | 1 hour |

Acting for the Minister for Economics —

Minister for Health Guntis Belēvičs