

# Rules on mechanical resistance and stability of construction works †

Article 10 shall continue to apply until the laws regulating the competence of inspectors in a particular field of work in accordance with the GZ-1, second paragraph, are brought into line with GZ-1 (see Article 155 of GZ-1).

## ● Rules on mechanical resistance and stability of construction works (Official Gazette of the Republic of Slovenia, No. 101/05, 61/17 – GZ and 199/21 – GZ-1)

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Note: The unofficially consolidated version of the regulation is only an information working device against which the body does not guarantee compensation or otherwise.

The unofficial consolidated text of the Rules on mechanical resistance and stability of construction works includes:

- Rules on mechanical resistance and stability of buildings (Official Gazette of the Republic of Slovenia, No. 101/05 of 11.11.2005),
- Building Act - GZ (Official Gazette of the Republic of Slovenia, No. 61/17 of 2.11.2017)

## **RULES** **on mechanical resistance and stability of construction works** **(Unofficial consolidated version No 1)**

### **I. GENERAL PROVISIONS**

#### **Article 1** **(content of the rules)**

- (1) These Rules lay down requirements to ensure mechanical resistance and stability of buildings throughout their lifespan and aimed at limiting threats to people, animals and property in buildings and in their immediate vicinity.
- (2) This Rules shall apply to the design, construction and maintenance of new buildings, the reconstruction of existing and replacement construction. It shall apply to reconstructions of buildings where technical possibilities are given to meet the requirements of these Rules and provided that this does not contradict the conditions of protection of cultural heritage.

#### **Article 2** **(relationship with other regulations)**

Particular requirements for mechanical resistance and stability may be regulated differently for any type of building by special regulation than herein, if this is necessary due to the peculiarities of a particular type of building. In such a case, the provisions of these Terms of Reference shall apply only to those requirements not regulated by a special regulation.

#### **Article 3** **(definitions)**

- (1) The terms used in this Rules have the following meanings:

1. Eurocodes are standards which lay down principles and rules to ensure the safety, usability and durability of buildings, describe the basics of their design and verification and provide guidance for achieving those aspects of the reliability of installations;

2. the principles of the Eurocodes are general provisions and definitions for which there is no choice to choose otherwise, as well as requirements and analytical models that may not be changed unless explicitly provided for in the Eurocodes;

3. The rules of the Eurocodes shall be universally recognised rules which comply with the principles of the Eurocodes and meet their requirements.

(2) Terms in the field of building construction not defined herein have the same meaning as set out in the Building Construction Act (Official Gazette of the Republic of Slovenia, No. 102/04 – official consolidated text and 14/05 – pr., hereinafter: the Building Construction Act) and in the Eurocode SIST EN 1990.

## **II. REQUIREMENTS FOR MECHANICAL RESISTANCE AND STABILITY**

### **Article 4**

#### **(ensuring mechanical resistance and stability)**

(1) The buildings must be designed, built and maintained in such a way that the effects to which they are likely to be exposed during their construction and use will not cause:

- destruction of all or part of the buildings,
- deformations greater than the permissible levels,
- damage to other parts of the buildings, to fittings and installed equipment due to major deformation of the load-bearing structure, or
- damage caused by an event the extent of which is disproportionately large in relation to the root cause.

(2) Buildings must be designed, built and maintained in such a way that their load-bearing structure in the event of fire retains the required load-bearing capacity for a period of time determined for each group of buildings by fire safety regulations.

(3) The requirement laid down in the third indent of the first paragraph of this Article shall not apply to an earthquake with a low probability of an event as defined in a Eurocode consisting of standards of SIST EN 1998.

## **III. MODALITIES OF COMPLIANCE**

### **Article 5**

#### **(use of Eurocodes)**

(1) The requirements for mechanical resistance and stability of buildings may be met:

- by design and construction in accordance with the principles and rules of the Eurocodes, or
- adhering to the principles and applying the rules of Eurocodes *mutatis mutandis* when designing and constructing buildings (e.g. very unusual geometry of a building) or using building materials (e.g. glass) that are not directly addressed by the Eurocodes.

(2) When designing and constructing in accordance with the second indent of the preceding paragraph, solutions which comply with the principles of the Eurocodes and do not contradict the rules of the Eurocodes shall be permitted.

(3) The list of Eurocodes referred to in the first indent of the first paragraph of this Article shall be published by the minister responsible for spatial planning in the Official Gazette of the Republic of Slovenia.

### **Article 6**

#### **(application of other rules)**

(1) When designing, constructing and maintaining buildings, the rules laid down in other standards, technical guidelines or other technical documents may be used instead of the rules of the Eurocodes, provided that they are

capable of ensuring at least an equivalent level of compliance with the requirements of these Rules, taking into account the principles of the Eurocodes.

(2) When applying the rules referred to in the preceding paragraph, the impacts on structures taken into account shall not be less than those determined in accordance with the standards groups SIST EN 1991 and SIST EN 1998 (e.g. payload in buildings, snow load map, design seismic acceleration map), taking into account partial load factors according to SIST EN 1990.

#### **Article 7**

##### **(execution of construction work)**

Construction works that can affect the mechanical resistance and stability of buildings should be carried out in accordance with Slovenian standards on the method of carrying out construction work, in particular groups of standards on the construction of concrete structures and on the construction of steel and aluminum structures.

### **IV. DESIGN DOCUMENTATION**

#### **Article 8**

##### **(indication of design base)**

The responsible designer shall explicitly state in the technical report of the design of building structures of the project for obtaining a building permit whether the plan has been drawn up on the basis of the rules of the Eurocodes or on the basis of the second indent of the first paragraph of Article 5 hereof or Article 6 hereof.

#### **Article 9**

##### **(audit obligation)**

(1) In addition to the cases listed in the Construction of Buildings Act, the revision of a design documentation for obtaining a building permit is also mandatory when the designer designs a less complex building in accordance with the second indent of the first paragraph of Article 5 hereof or in accordance with Article 6 hereof.

(2) The building of the audit referred to in the preceding paragraph shall be solely to check the flawlessness and computational correctness of those components of the construction design of the building structures in the project for obtaining a building permit, demonstrating that the submitted project meets the essential requirement of mechanical resistance and stability of a building of at least an equivalent level as if they had been used of the Eurocodes.

(3) In the summary of the audit report within the meaning of the regulation governing design and technical documentation, the responsible auditor shall enter only those data that are essential for the scope of the audit referred to in the preceding paragraph. By signing the audit report, it confirms that its revision indicates that the project meets the essential requirements of mechanical resistance and stability of the facility.

### **V. INSPECTION**

#### **Article 10**

##### **(expired)**

**Rules on mechanical resistance and stability of buildings (Official Gazette of the Republic of Slovenia, No. [101/05](#)) contains the following transitional and final provisions:**

### **VI. TRANSITIONAL AND FINAL PROVISIONS**

#### **Article 11**

##### **(transition period)**

(1) Designers and contractors shall comply with the provisions hereof by 31 December 2007 at the latest.

(2) Notwithstanding the preceding paragraph, a plan of building structures of a project for obtaining a building permit for which the contract was concluded by 31 December 2007 may be drawn up in accordance with the regulations referred to in Article 12 hereof, whereby the designer responsible must explicitly state in the technical report of the design of the building structures that he has applied the regulations of this paragraph to the design.

(3) Notwithstanding the first paragraph of this Article, the plans of construction structures in the remaining types of design and technical documentation shall comply with the regulations that were taken into account when drawing up the project referred to in the preceding paragraph.

(4) Notwithstanding the first paragraph of this Article, the works of construction contractors shall be carried out in accordance with the regulations taken into account when preparing the documentation referred to in the preceding paragraph.

(5) Notwithstanding the second to fourth paragraphs of this Article, after 31 December 2008, only a project made in accordance with these Rules may be attached to the application for a building permit.

## **Article 12**

### **(termination and application of relevant regulations)**

(1) From the date of application of these Rules, the following shall cease to apply:

- the Ordinance on which construction works are considered to be major construction works under the Seismological Service Act (Official Gazette of the Republic of Slovenia, No. 12/86), and
- Ordinance on the design and execution of construction works in earthquake zones (Official Gazette of the Socialist Republic of Slovenia, No. 18/63).

(2) From the date of application of these Rules the following shall cease to apply:

- Rules on technical norms for the renovation, reinforcement and reconstruction of buildings damaged by an earthquake, as well as for the reconstruction and revitalization of buildings of civil engineering (Official Gazette of the Socialist Federal Republic of Yugoslavia (SFRY), No. 52/85),
- Rules on technical norms for the construction of buildings of civil engineering in seismic areas (Official Gazette of the SFRY, No. 31/81, 49/82, 29/83, 21/88 and 52/90),
- Rules on technical norms for loads on load-bearing building structures (Official Gazette of the SFRY, No. 26/88),
- Rules on technical norms for the foundation of construction works (Official Gazette of the SFRY, No. 15/90 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Rules on technical norms for concrete and reinforced concrete (Official Gazette of the SFRY, No. 11/87 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Rules on technical norms for concrete and reinforced concrete, prepared with natural and artificial lightweight aggregate filler (Official Gazette of the SFRY, No. 15/90 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Rules on technical norms for the design, production and implementation of structures with prefabricated elements made of unreinforced and reinforced cellular concrete (Official Gazette of the SFRY, No. 14/89),
- Rules on technical regulations on wind operation on steel load-bearing structures (Official Gazette SFRY, No. 41/64),
- Rules on technical measures and conditions for the installation of steel structures (Official Gazette of the SFRY, No. 29/70),
- Rules on technical regulations on weld quality for steel load-bearing structures (Official Gazette of the SFRY, No. 41/64 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Rules on technical regulations for the tolerance of dimensions and shapes in steel load-bearing structures (Official Gazette of the SFRY, No. 41/64 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Rules on technical requirements for light steel buildings in steel load-bearing structures (Official Gazette of the SFRY, No. 6/65 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Rules on technical regulations for simple building structures in steel load-bearing structures (Official Gazette of the SFRY, No. 6/65 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Rules on technical norms for load-bearing steel structures (Official Gazette of the SFRY, No. 61/86 and Official Gazette of the Republic of Slovenia, No. 52/00),

- Rules on technical measures and conditions for the protection of steel structures against corrosion (Official Gazette of the SFRY, No. 32/70 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Rules on technical standards for steel wires, rods and ropes for pretensioning structures (Official Gazette of the SFRY, No. 41/85 and 21/88 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Rules on technical standards for determining the size of bridge loads (Official Gazette SFRY, No 1/91),
- Rules on technical norms and conditions for the design and construction of road tunnels (Official Gazette of the SFRY, No. 59/73),
- Rules on technical standards for the construction of overhead power lines (Official Gazette of the SFRY, No. 51/73, 11/80, 36/86 and 65/88),
- Rules on technical norms for the construction of overhead power lines with a nominal voltage from 1 kV to 400 kV (Official Gazette of the SFRY, No. 65/88),
- Rules on technical measures for the construction, installation and maintenance of antenna devices (Official Gazette of the SFRY, No. 1/69),
- Ordinance on mandatory certification of bolts, nuts and washers for binding load-bearing steel structures (Official Gazette of the SFRY, No. 61/85 and Official Gazette of the Republic of Slovenia, No. 52/00),
- Order on compulsory certification of general-purpose steel ropes (Official Gazette SFRY, No 61/83).

#### **Article 13**

##### **(entry into force)**

These Rules shall enter into force on the fifteenth day following their publication in the Official Gazette of the Republic of Slovenia and shall apply from 1 January 2006."

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**Building Act - GZ (Official Gazette of the Republic of Slovenia, No. [61/17](#)) with regard to the expiry of Article 10 of the Rules, it provides:**

#### **Article 122**

##### **(expiry and application of enforcement rules)**

[...]

(3) Upon the entry into force of this Act, the following shall cease to apply:

Article 10 of the Rules on Mechanical Resistance and Stability of Buildings (Official Gazette of the Republic of Slovenia, No. 101/05),

- [...]

(4) The provisions of the preceding paragraph shall apply until the laws regulating the competence of inspectors in a particular field of work in accordance with the third paragraph of Article 8 of this Act are brought into line with this Act.

[...];

**and contains the following final provision:**

#### **Article 126**

##### **(entry into force and application of the Act)**

This Act shall enter into force on the fifteenth day following its publication in the Official Gazette of the Republic of Slovenia and shall apply from 1 June 2018."