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Decree-Law No ..... No .....

## **DL/XX/2024**

In 1990, the European Committee for Standardisation set up the Technical Committee CEN/TC 250 – *Structural Eurocodes* to draw up the Structural Eurocodes, representing the National Standardisation Organisations of the different Member States, the monitoring of this activity is carried out in Portugal by the Portuguese Technical Commission for Standardisation CT 115 – *Structural Eurocodes*, the Portuguese Institute of Quality, I.P., and the coordination by the National Laboratory of Civil Engineering, I.P., as a Sectoral Standardisation Organisation in this field.

The Structural Eurocodes are reference documents designed to ensure compliance of the design of buildings, bridges and other civil engineering works with the basic requirements laid down in Regulation (EU) No 305/2011 of the European Parliament and of the Council, of 9 March, known as the Construction Products Regulation, and transposed into national law by Decree-Law No 130/2013, of 10 September, relating to mechanical strength and stability, fire safety, safety and accessibility in use.

The Structural Eurocodes provide a basis for drawing up specifications for the execution of construction works and for the provision of related engineering services, and in accordance with the harmonised European technical specifications in force for construction products.



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In addition, the Structural Eurocodes facilitate the exchange of engineering services between Member States by promoting the internationalisation of the domestic construction sector, in particular those relating to structural design and consultancy, and creating employment opportunities.

Structural Eurocodes take the form of European standards, with each Member State retaining the possibility to add a national annex to each standard when transposing it into its national acquis.

Legislative Order No 21/2019, of 17 September, adopted the conditions for the use of the Structural Eurocodes in the structural designs of buildings, concrete structures and steel structures for buildings, also focusing on certain aspects of the structural designs of buildings performed using other materials. This package included provisions on the assessment and renovation of existing buildings with regard to earthquake resistance.

The conclusion of the publication of the set of standards making up the Structural Eurocodes represents a significant development with regard to the structural design rules that are now available in Portugal.

Thus, with the completion of the publication by the European Committee for Standardisation of the first generation of Structural Eurocodes as European standards, and with the Portuguese Quality Institute, I.P. having published a number of Portuguese versions of these standards and their national annexes, which allows the preparation of structural designs not included in the scope of



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Legislative Order No 21/2019, of 17 September, these standards should be given the same regulatory framework.

Since, in Portugal, the requirements relating to structural safety are regulatory in nature, the definition of the way in which the Structural Eurocodes are implemented takes the form of a Decree-Law.

This Decree-Law refers to the Structural Eurocodes already in force, as well as to the other rules relating to the structural design of buildings, bridges and other civil engineering works, including geotechnical aspects, verification of fire resistance, situations involving earthquakes, execution and temporary structures.

On the other hand, the current structural design regulations are fully repealed, and a transitional period of 3 years is established for all structural designs not included in the scope of Normative Order No 21/2019, of 17 September 2019, which is also repealed. The specific rules and general aspects of the implementing requirements included in the now repealed Regulations, which are not explicitly referred to in the Eurocodes, have legal frameworks in the following texts:

- Law No 31/2009, of 3 July, in its current version, which adopts the legal regime establishing the professional qualification required of technicians responsible for the preparation and endorsement of designs, supervision of works and works management, which is not subject to special legislation, and the duties applicable to them;



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- Decree-Law No 90/2021, of 5 May, updating the provisions on the production and control of hydraulic binder concrete and the implementation of concrete structures.

This Decree-Law was notified to the European Commission at the draft stage, in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council, of 9 September 2015, laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services.

Therefore:

In accordance with Article 198(1)(a) of the Constitution of the Portuguese Republic, the Government hereby decrees as follows:

## **Article 1**

### **Subject matter**

1 - This Decree-Law establishes the use of a set of European standards, known as the Structural Eurocodes, in the structural design of buildings, bridges and other civil engineering works, including geotechnical aspects, verification of fire resistance, situations involving earthquakes, execution and temporary structures, and o whole or parts of the structure or elements attached to this, where this is explicitly referred to in the standards.

2 - Special works designs that are not explicitly mentioned in the Structural Eurocodes and works not covered by paragraph 1 shall



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also be adhered to with NP EN 1990, which lays down the basis for the design of structures, and the specifications of the technical documents established by the competent authorities shall be complied with or, in cases lacking in legislation, monitoring committees shall be set up.

## **Article 2**

### **Structural or renovation designs for buildings, bridges and other civil engineering works**

1 - The European standards set out in the Annex to this Decree-Law, which forms an integral part thereof, and the standards explicitly referred to therein, must be complied with in the preparation of the structural designs provided for in paragraph 1 of the preceding article, and in the designs of all or parts of the structure or elements attached to it, where this is explicitly referred to in the standards.

2 - The European standards set out in the Annex to this Decree-Law, as well as the standards explicitly referred to therein, must also be complied with whenever there is a legal standard that requires the preparation of designs for the renovation of structures provided for in paragraph 1 of the preceding article.

## **Article 3**



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### **Earthquake-vulnerability assessment and earthquake building reinforcement design**

1 - Under Decree-Law No 555/99, of 16 December, in its current wording, extension, alteration or reconstruction works, where they are not covered by the provisions of Article 2, are subject to the preparation of a report assessing the building's earthquake vulnerability, in accordance with the terms to be established by order of the member of the Government responsible for the field of construction and housing, regardless of the date of the original construction.

2 - The Ministerial Order referred to in the preceding paragraph also provides for the situations in which the preparation of earthquake reinforcement design.

### **Article 4**

#### **Updating of standards**

1 - European standards, known as Structural Eurocodes, enter into force on the date of adoption and publication by the European Committee for Standardisation, with it being possible to use previous editions during the coexistence period.

2 - The National Laboratory of Civil Engineering, I.P. shall disseminate the updates of the lists of standards referred to in Article 2, by means of notices to be published in the 2nd series of *Portuguese Official Gazette*.



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## **Article 5**

### **Transitional Arrangements**

1 - For a period of 3 years from the date of entry into force of this Decree-Law, structural designs of buildings, bridges and other civil engineering works developed with the joint application of the Regulations on Safety and Actions for Building Structures and Bridges and the Regulations on Reinforced and Prestressed Concrete Structures may be submitted for approval to the competent entities, provided that they are not covered by the Structural Eurocodes listed in Annexes I, II and III to Normative Order No 21/2019, of 17 September, as amended.

2 - During the transitional period defined in the preceding paragraph, the use of the Structural Eurocodes and the regulations still in force shall not be permitted for the same structural designs of buildings bridges and other civil engineering works on a case-by-case basis in matters covered by the two regulatory frameworks.

## **Article 6**

### **Repeal**

The following are repealed:

- a) The Regulation on Safety and Actions for Buildings and Bridge Structures, adopted by Decree-Law No 235/83 of 31 May;



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- b) The Regulations of Reinforced and Prestressed Concrete Structures, adopted by Decree-Law No 349-C/83 of 30 July;
- c) Articles 2(2), 8, 16, and Article 17(1)(g) of Decree-Law No 95/2019 of 18 July;
- d) Legislative Order No 21/2019 of 17 September 2019.

### **Article 7**

#### **Entry into force**

This Decree-Law shall enter into force the day after its publication.

Seen and approved by the Council of Ministers of

The Prime Minister

The Minister of Housing





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## **ANNEX**

**(referred to in Article 2)**

### **Standards to be observed when preparing structural designs of buildings bridges and other civil engineering works**

- a) NP EN 1990:2009 - Eurocode - Basis of structural design;
- b) NP EN 1990:2009/A1:2019 - Eurocode - Basis of structural design;
- c) NP EN 1991-1-1:2009 - Eurocode 1 - Actions on structures - Part 1-1: General actions - Densities, self-weight, imposed loads for buildings;
- d) NP EN 1991-1-2:2010 - Eurocode 1 - Actions on structures - Part 1-2: General actions - Actions on structures exposed to fire;
- e) NP EN 1991-1-2:2010/AC:2013 - Eurocode 1 - Actions on structures - Part 1-2: General actions - Actions on structures exposed to fire;
- f) NP EN 1991-1-3:2009 - Eurocode 1 - Actions on structures - Part 1-3: General actions - Snow actions;
- g) NP EN 1991-1-3:2009/A1:2017 - Eurocode 1: Actions on structures - Part 1-3: General actions - Snow actions;
- h) NP EN 1991-1-4:2010 - Eurocode 1 - Actions on structures - Part 1-4: General actions - Wind actions;



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- i) NP EN 1991-1-4:2010/A1:2010 - Eurocode 1 - Actions on structures - Part 1-4: General actions - Wind actions;
- j) NP EN 1991-1-5:2009 -Eurocode 1 - Actions on structures - Part 1-5: General actions - Thermal actions;
- k) NP EN 1991-1-6:2021- Eurocode 1: Actions on structures - Part 1-6: General actions - Actions during execution;
- l) NP EN 1991-1-7:2021- Eurocode 1: Actions on structures - Part 1-7: General actions - Accident actions;
- m) NP EN 1991-2:2017 - Eurocode 1 - Actions on structures - Part 2: Traffic loads on bridges;
- n) NP EN 1992-1-1:2010 - Eurocode 2 - Design of concrete structures - Part 1-1: General rules and rules for buildings;
- o) NP EN 1992-1-1:2010/AC:2012 - Eurocode 2 - Design of concrete structures - Part 1-1: General rules and rules for buildings;
- p) NP EN 1992-1-1:2010/A1:2019 - Eurocode 2: Design of concrete structures - Part 1: General rules and rules for buildings;
- q) NP EN 1992-1-2:2010 - Eurocode 2 - Design of concrete structures - Part 1-2: General rules - Structural fire design;
- r) NP EN 1992-1-2:2010/A1:2019 - Eurocode 2 - Design of concrete structures - Part 1-2: General rules - Structural fire design;
- s) NP EN 1992-2:2018 - Eurocode 2 - Design of concrete structures - Part 2: Concrete bridges - Design and construction features;
- t) NP EN 1992-3:2020 - Eurocode 2: Design of concrete structures - Part 3: Silos and reservoirs;



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- u) NP EN 1993-1-1:2010 - Eurocode 3 - Design of steel structures - Part 1-1: General rules and rules for buildings;
- v) NP EN 1993-1-1:2010/A1:2017 - Eurocode 3 - Design of steel structures - Part 1-1: General rules and rules for buildings;
- w) NP EN 1993-1-2:2010 - Eurocode 3 - Design of steel structures - Part 1-2: General rules - Structural fire design;
- x) NP EN 1993-1-5:2012 - Eurocode 3 - Design of steel structures - Part 1-5: Plated structural elements;
- y) NP EN 1993-1-5:2012/A1:2019 - Eurocode 3 - Design of steel structures - Part 1-5: Plated structural elements;
- z) NP EN 1993-1-5:2012/A2:2019 - Eurocode 3 - Design of steel structures - Part 1-5: Plated structural elements;
- aa) NP EN 1993-1-8:2010 - Eurocode 3 - Design of steel structures - Part 1-8: Design of joints;
- bb) NP EN 1993-1-9:2010 - Eurocode 3 - Design of steel structures - Part 1-9: Fatigue;
- cc) NP EN 1993-1-10:2010 - Eurocode 3 - Design of steel structures - Part 1-10: Material toughness and through-thickness properties;
- dd) NP EN 1993-2:2022 - Eurocode 3: Design of steel structures - Part 2: Metal bridges;
- ee) NP EN 1994-1-1:2011- Eurocode 4 - Design of mixed steel-concrete structures - Part 1-1: General rules and rules for buildings;



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- ff) NP EN 1994-1-2:2011- Eurocode 4 - Design of mixed steel-concrete structures - Part 1-2: General rules - Structural fire design;
- gg) NP EN 1994-1-2:2005/A1:2016 - Eurocode 4 - Design of mixed steel-concrete structures - Part 1-2: General rules - Structural fire design;
- hh) NP EN 1994-2:2022 - Eurocode 4: Design of mixed steel-concrete structures - Part 2: General rules and rules concerning bridges
- ii) NP EN 1995-1-1:2022- Eurocode 5 - Design of timber structures - Part 1-1: General rules - Common rules and rules for buildings
- jj) NP EN 1995-1-2:2022 - Eurocode 5 - Design of timber structures - Part 1-2: General rules - Structural fire design;
- kk) NP EN 1995-2:2022 - Eurocode 5: Design and calculation of timber structures - Part 2: Bridges;
- ll) NP EN 1996-1-1:2005+A1:2015 - Eurocode 6 - Design of masonry structures - Part 1-1: General rules for reinforced and unreinforced masonry structures
- mm) NP EN 1996-1-2:2015 - Eurocode 6 - Design of masonry structures - Part 1-2: General rules - Structural fire design;
- nn) NP EN 1997-1:2010 - Eurocode 7 - Geotechnical design - Part 1: General rules;
- oo) NP EN 1997-1:2010/A1:2016 - Eurocode 7 - Geotechnical design - Part 1: General rules;
- pp) NP EN 1997-1:2010/A1:2016/Errata1:2019 - Eurocode 7 - Geotechnical design - Part 1: General rules;



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- qq) NP EN 1998-1:2010 - Eurocode 8 - Design of structures for earthquake resistance - Part 1: General rules, seismic actions and rules for buildings;
  - rr) NP EN 1998-1:2010/A1:2013 - Eurocode 8 - Design of structures for earthquake resistance - Part 1: General rules, seismic actions and rules for buildings;
  - ss) NP EN 1998-1:2010/Errata1:2022 - Eurocode 8 - Design of structures for earthquake resistance - Part 1: General rules, seismic actions and rules for buildings;
  - tt) NP EN 1998-2:2023 - Eurocode 8 - Design of structures for earthquake resistance - Part 2: Bridges;
  - uu) NP EN 1998-3:2017 - Eurocode 8 - Design of structures for earthquake resistance - Part 3: Assessment and retrofitting of buildings;
  - vv) NP EN 1998-5:2010 - Eurocode 8 - Design of structures for earthquake resistance - Part 5: Foundations, retaining structures and geotechnical aspects;
  - ww) NP EN 1999-1-1:2022 - Eurocode 9 - Design of aluminium structures - Part 1-1: General rules;
  - xx) NP EN 1999-1-2:2022 - Eurocode 9 - Design of aluminium structures - Part 1-2: Structural fire design;
  - yy) NP EN 1999-1-3:2022 - Eurocode 9 - Design of aluminium structures - Part 1-3: Structures subject to fatigue.
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