

# EUROPASS CERTIFICATE SUPPLEMENT

## TITLE OF THE DIPLOMA (ES)

*Técnico en Construcción*

## TRANSLATED TITLE OF THE DIPLOMA (EN)<sup>(1)</sup>

*Technician in Construction*

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(1) This translation has no legal status.

## DIPLOMA DESCRIPTION

**The holder of this diploma will have acquired the General Competence with regard to:**

Performing masonry and concrete works, complying with the established conditions and time limits, as well as the requirements of quality, safety and environment, organizing, controlling and evaluating the works.

**Within this framework, the PROFESSIONAL MODULES and their respective LEARNING OUTCOMES acquired by the holder are listed below:**

### “Construction”

The holder:

- Identifies the main types of construction, relating the processes to carry it out to its basic features.
- Relates the documents of a project type with their role in the construction process, identifying the relevant information for the implementation.
- Characterizes the agents involved in the construction works, relating the roles to their duties and responsibilities.
- Identifies professionals and professions executing building works, relating the construction processes in which they are involved with the operations they perform.
- Identifies professionals and professions executing civil works, relating construction the processes in which they are involved to the operations they perform.
- Identifies the main materials used in construction, relating their basic characteristics to the applications and the conditions of use.

### “Interpretation of Construction Drawings”

The holder:

- Represents construction elements, sketching freehand views, details and perspectives.
- Represents built spaces, drawing freehand contoured sketches of plans, elevations and sections.
- Identifies construction elements related to foundation work and building and civil works structures, interpreting plans, elevations, sections and details, obtaining their dimensions and creating lists of exploded framework.
- Identifies construction elements related to housing construction and building distribution, interpreting plans, elevations, sections and details, obtaining their dimensions and calculating lengths, areas and volumes.
- Identifies construction elements related to fields, roads and infrastructure works, performing land surveys, obtaining their dimensions and calculating heights and slopes.
- Identifies elements of the facilities referred to masonry and concrete works, relating the application symbolism to the elements represented.
- Obtains information from construction drawings, consulting, editing and printing data by means of computer-aided design applications.

### “Factories”

The holder:

- Organizes and identifies the works to be performed, preparing the work place and selecting the resources.
- Restates the beginning and rising of factories, determining the needs for forming parts and marking, positioning and fixing references.
- Builds factories for coating, receiving bricks or blocks with mortar or plaster pastes, ensuring that the parts thicken and meeting the conditions of verticality and flatness.
- Builds factories of masonry of ordinary concert, and carious, ashlar and irregular-spun natural stone, received either dry or with mortars, to obtain resistant fences or walls, ensuring its tie and complying with the conditions of verticality, flatness, rigging and finishing.
- Places regular and irregular stone blocks (ashlar) by dry bonding systems, with anchors and/or mortars or other adhesives, to obtain load-bearing elements, enclosures and finishing and individual elements, ensuring that they thicken and complying with the conditions of verticality, flatness, and finish rigging.

- Complies with the rules on labour risk prevention and environmental protection related to the processes of commissioning work of factories and coatings, identifying the associated risks, the measures and the equipment to prevent them.

### **“Coatings”**

The holder:

- Organizes the execution works for coatings with pastes and mortars, identifying the work to be performed, conditioning the pit and selecting resources.
- Makes exterior plaster and trims, applying layers of mortar and / or paste, providing of auxiliary means and complying with quality conditions.
- Makes screeds planes, applying layers of concrete, mortar and/or paste, providing of auxiliary means and complying with quality conditions.
- Makes plasters and renders, applying layers of mortar and/or paste with different texture finishings, providing of auxiliary means and complying with quality conditions.
- Complies with the rules on labour risk prevention and environmental protection related to the processes of lying of coatings, identifying the associated risks, measures and equipment to prevent them.

### **“Formworks”**

The holder:

- Organizes the work for formwork execution, identifying the work to be performed, conditioning the workplace and selecting resources.
- Restates the beginning of horizontal, vertical and inclined formworks, using manual techniques and checking its dimensions and specifications.
- Builds horizontal, vertical and inclined formworks cutting and joining wood or similar items and placing them in the work.
- Assembles prefabricated elements for formwork, following the assemblage instructions and providing of auxiliary means to ensure the stability of the whole.
- Strips concrete elements disassembling, cleaning, restoring and classifying its parts.
- Complies with the rules on labour risk prevention and environmental protection related to the processes of lying of formwork, identifying the associated risks, the measures and the equipment to prevent them.

### **“Reinforced Concrete”**

The holder:

- Organizes work for the execution of reinforced concrete, identifying the works to be performed, conditioning the workplace and selecting resources.
- Prepares passive reinforcement for reinforced concrete elements, performing cutting, folding and binding.
- Places in the work passive reinforcement for the implementation of reinforced concrete elements, providing bars and separators according to specifications of construction details.
- Takes part in organizing the placing of concrete, providing the means for landfill operations, to ensure compaction and control the curing process.
- Complies with the rules on labour risk prevention and environmental protection related to the processes of concrete lying, identifying associated the risks, the measures and the equipment to prevent.

### **“Organization of Construction Works”**

The holder:

- Characterizes implementation processes of masonry and concrete works, sequencing its phases and detailing the features of the materials to be used.
- Obtains information to carry out masonry and concrete works, interpreting the technical documentation.
- Allocates resources for the execution of work units, determining the activities to be performed.
- Plans masonry and concrete works, sequencing activities and adapting resources.
- Prepares budgets of concrete and masonry works, measuring and valuing work units.
- Organizes implementation activities of masonry and concrete pits, receiving materials, distributing storage areas and stockpiles and checking tasks performed.
- Identifies the risks and the safety measures associated with concrete and masonry works, analyzing the plans for labour risk prevention and identifying the specific resources.

### **“Urbanisation Works”**

The holder:

- Organizes the workplace in order to execute urbanization works, pavements, curbs, sills, urban furniture, sanitation items and service networks, identifying the works to be performed, conditioning the workplace and selecting resources.
- Reorganizes pavements and elements of urbanization works, using the appropriate means and with the required accuracy.

- Performs tasks of reorganization for service network elements, using the appropriate means and with the required accuracy.
- Executes element and pavements in urbanization works, in compliance with the prescriptions received and checking its proper implementation.
- Executes service network elements, following the prescriptions received and checking its proper implementation.
- Complies with the rules on labour risk prevention and environmental protection related to the implementation of development works, pavements, curbs, floors, urban furniture and sanitation items and service networks, identifying the associated risks, measures and equipment to prevent them.

### **“Flooring, Tiling and Plating”**

The holder:

- Organizes the workplace for the implementation of flooring, tiling and plating, identifying the works to be performed, conditioning the pit and selecting resources.
- Restates the placing of pieces, selecting the type of gear and the width of the joint, determining the needs of the parts' forming and checking its proper implementation.
- Performs flooring, tiling and plating, fixing their pieces with pastes, mortars, adhesives and/or metal elements, and solving intersections.
- Performs finishing works of flooring, tiling and plating, performing intersections and carrying out treatments and cleaning operations.
- Complies with the rules on labour risk prevention and environmental protection related to the implementation processes of flooring, tiling and plating, identifying the associated risks, measures and equipment to prevent them.

### **“Roofs”**

The holder:

- Organizes the workplace for the implementation of roofs, identifying the works to be performed, conditioning the workplace and selecting resources.
- Reorganizes roofs, identifying the elements to be performed and marking its position and dimensions.
- Build gables of sloping roofs, raising lightened walls, placing boards and arranging leveling layers thermal insulation.
- Hedges with ceramic tiles, concrete or natural pieces, fixing the support elements, solving intersections and providing singular elements.
- Builds flat roofs, lifting of lightened walls, placing boards or making lightweight concrete layer and providing thermal insulation layers.
- Hedges with plates, panels and prefabricated slabs, attaching its elements to the structure using hooks and screws.
- Complies with the rules on labour risk prevention and environmental protection related to the processes of implementation of building roofs, identifying the associated risks, the measures and the equipment to prevent them.

### **“Waterproofing and Insulation”**

The holder:

- Organizes the workplace for the implementation of waterproofing and insulation, identifying the works to be performed, conditioning the workplace and selecting resources.
- Reorganizes waterproofing and insulation, identifying the elements that are to be implemented, tagging their position, marking and setting references.
- Executes the elements of waterproofing and insulation system on roofs, providing layers of insulation, levelling and membranes, and performing leak testing.
- Executes the elements of waterproofing and insulation system on walls and sills, arranging layers of insulation, levelling and waterproofing membranes.
- Executes the elements of waterproofing and insulation system on facades and medians, arranging layers of insulation and bituminous primer.
- Runs the elements of a thermal and acoustic insulation system in intermediate floors and partitions, arranging layers of insulation and setting them to the walls.
- Complies with the rules on labour risk prevention and environmental protection related to the processes of waterproofing execution, identifying the associated risks, the measures and the equipment to prevent them.

### **“Professional Training and Guidance”**

The holder:

- Selects job opportunities, identifying the different possibilities of labour integration, and the alternatives of lifelong learning.
- Applies teamwork strategies, assessing their effectiveness and efficiency on the achievement of the company's goals.
- Exercises rights and complies with the duties derived from labour relationships, recognising them in the different job contracts.
- Determines the protective action of the Spanish Health Service in view of the different covered eventualities, identifying the different types of assistance.
- Assesses the risks derived from his/her activity, analysing job conditions and risk factors present in his/her labour setting.

- Participates in the development of a risk prevention plan for a small enterprise, identifying the responsibilities of all the agents involved.
- Applies protection and prevention measures, analysing the risk situations in the labour setting of the Technician in Construction.

#### **“Business and Entrepreneurial Initiative”**

The holder:

- Recognizes skills related to entrepreneurial initiative, analysing the requirements derived from job positions and business activities.
- Defines the opportunity of creating a small enterprise, assessing the impact on the performance setting and incorporating ethic values.
- Carries out the activities for the setting-up and implementation of a company, choosing its legal structure and identifying the associated legal obligations.
- Carries out basic administrative and financial management activities of an SME, identifying the main accounting and tax obligations and filling in documentation.

#### **“On the Job training”**

The holder:

- Identifies the structure and the organization of the company, relating them to the production and the marketing of the products obtained.
- Applies ethical and work habits in the development of their profession, according to the characteristics of the job and the procedures established by the company.
- Organizes the execution of masonry and concrete works, conditioning the workplace, planning activities, evaluating and measuring units of work and developing budgets.
- Performs factory jobs and cladding works, controlling specifications on thickness, flatness and finishings.
- Builds sloping and flat roofs, performing stakeout and having layers of insulation and waterproofing, auxiliary complements and cover materials.
- Performs reinforced concrete elements, producing and assembling formwork, making and placing armor and collaborating in the setting of concrete.
- Performs urbanization works, reorganizing and implementing complementary and individual elements and providing linear pipelines without pressure.
- Performs flooring, tiles and plates, reorganizing the placement of the pieces and ensuring flatness and proper disposal of joints.

### **RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE DIPLOMA**

The Technician in Construction works in the construction sector, in small, medium and large construction companies and public organizations, either as an employee or self-employed, developing masonry and/or concrete works for construction, rehabilitation, maintenance and reform in building and civil works.

The most relevant occupations or jobs are the following:

- Head manager of masonry factories.
- Head manager of urbanization masons.
- Head manager of formwork workers.
- Head manager of rebar workers.
- Rebar foreman.
- Head manager of roof builders.
- Head manager and/or responsible of floor and tile operators.
- Mason.
- Face bricks setter.
- Prefabricated blocks setter.
- Partition mason.
- Construction stone mason.
- Stone work mason.
- Officer of views.
- Urbanization mason.
- Paver with cobblestones.
- Paver with tiles and slabs.
- Paver with concrete base.
- Pitman in sanitation networks.
- Formworker.
- Building formworker.
- Civil works formworker.
- Rebar worker.
- Roofs mason.

- Roofer.
- Tiles' assembler.
- Slate manufacturer.
- Slate setter.
- Assembler of panels and plates.
- Continuous coat facades setter.
- Floor and tile setter.
- Installer of waterproofing systems for buildings and civil works.
- Installer of waterproof terraces

### **AWARD, ACCREDITATION AND LEVEL OF THE DIPLOMA**

**Name of the body awarding the diploma on behalf of the King of Spain:** Spanish Ministry of Education or the different Autonomous Communities according to their areas of competence. The title has academic and professional validity throughout Spain.

**Official duration of the education/ training leading to the diploma:** 2000 hours.

**Level of the diploma (national or international)**

- NATIONAL: Post-Compulsory Secondary Education
- INTERNATIONAL:
  - Level 3 of the International Standard Classification of Education (ISCED3).
  - Level \_\_\_\_\_ of the European Qualifications Framework (EQF\_\_).

**Entry requirements:** Holding the Certificate in Compulsory Secondary Education or holding the corresponding access test.

**Access to next level of education/training:** This diploma may provide access to Higher Technical Cycles provided that an entrance exam is passed.

**Legal basis:** Basic regulation according to which the diploma is established:

- Minimum teaching requirements established by the State: Royal Decree 1575/2011, of 4 November, according to which the diploma of Technician in Construction and its corresponding minimum teaching requirements are established.

**Explanatory note:** This document is designed to provide additional information about the specified diploma and does not have any legal status in itself. An Annex I may be added and will be filled in by the corresponding Autonomous Community

## INFORMATION ON THE EDUCATION SYSTEM

