VALIDATION CRITERIA
CBA TRAINING REQUIREMENTS:
CONTENT

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1. PURPOSE

The purpose of this document is, on the one hand, to:

- Establish workplace health and safety requirements for our partner companies and self-employed workers.
- Incorporate the occupational health and safety training requirements for our personnel into this document.

And, on the other hand, to:

- Set criteria to validate the documentation on prevention submitted through ATLAS, the computer application to manage documents relating to the Coordination of Business Activities (CBA) between EDP and the contractors and self-employed workers.

This document establishes for each of the training courses:

- Its THEORETICAL CONTENT that serves EDP to validate the documentation provided by contracting companies and self-employed workers and, to all of them, to design the necessary training.
- The need for PRACTICAL TRAINING, required on those training courses when so stated in the document.
- The MINIMUM LENGTH for each of the required training courses.
- REFRESHER COURSES, as deemed necessary for the training.

However, there is still the need to comply with the legal obligations regarding workplace health and safety applicable, in each case, to the activity being tendered/contracted.

The workplace health and safety requirements will be made known to the contractors and self-employed workers in the calls to tender. They will therefore be aware of what will be required if any training courses envisaged in the document are applicable, both at the start of providing the service and during its implementation.

As regards the own workforce, given that the aforementioned training requirements have been added to this ***6th edition***, the workers will be informed of that fact through the consultative bodies in the organisation.

It should be noted that in the case of the own workforce, this document must be aligned with what is established in the ***IT/SP-0007 "Training in Occupational Health & Safety. Defining content and procedures" work instruction***.

Additionally, and in order to make it more user friendly, the document now includes a list of contents that will make it easier to find the different training criteria.

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FIRE FIGHTING (DURATION: 4 HOURS) THEORETICAL-PRACTICAL REFRESHER: 3 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Legislation 2. Basic fire concepts 3. Classification of the different types of fires 4. Preventive measures 5. Fire-fighting techniques 6. Extinguishing agents 7. Fire-fighting equipment 8. Signage 9. Detection and alarm systems 10. Action to be taken in case of fire 11. Practical exercises. Using extinguishers for Type A and Type B fires (use of chemical powder and carbon dioxide extinguishers) and/or water lines	X	X

FIRST AID (DURATION: 4 HOURS) THEORETICAL-PRACTICAL REFRESHER: 3 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Basic first-aid principles a. General first-aid guidelines (PAS) b. Assessment of the injured person/victim (level of consciousness, respirate, pulse) i. Checking vital signs ii. Positioning victims (safe position, recovery position) 2. Cardiorespiratory arrest a. Securing the scene b. Assessing level of consciousness and respiration c. Opening the airway using the head tilt and chin lift manoeuvre d. Applying CPR 3. Specific actions a. Wounds and bleeding (assessing types, including checking for foreign bodies) b. Burns (electrical, chemical and thermal) c. Trauma-factures (immobilisation) d. Intoxications e. Allergic reactions f. Emergency due to changes in thermoregulation g. Chocking. Heimlich manoeuvre. h. Electrocution 4. Transporting the injured 5. Practical cases: a. Practising CPR with dummy b. Practice drills assessing symptoms and deciding on action to be taken according to information received in the different phases c. Transporting the injured by a worker	X	X

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SELF-PROTECTION PLANS (DURATION: 1 HOUR) THEORETICAL REFRESHER: 4 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. General structure of the Self-Protection Plan/Emergency Plan: Emergency response organisation chart and general sequence of action in case of fire. 2. Specific missions of each designated officer: Emergency Officer, Control Centre, First Response Team and Evacuation and Alarm team 3. Fire-protection measures existing in the centre, location and functions 4. Preventive measures to avoid emergencies	Workers who are part of the intervention teams defined in our Self Protection Plans (PAU)/Internal Emergency Plans (PEI)	X

ELECTRICAL HAZARD 1 (DURATION 4 HOURS) THEORETICAL REFRESHER: 3 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. General points of the electrical hazard: a. General aspects of electrical facilities • Voltage levels at an electrical facility. Power circuits. Output circuits. Control circuits • Identifying voltage levels at an electrical facility • Passive protection systems in electricity facilities b. R.D. 614/2001: Art. 4. Work techniques and procedures • Working conditions at an electricity facility • Types of work at an electricity facility c. Types of electrical accidents • Electric arc • Contact and conductivity • Direct contact • Indirect contact d. Effect of the current on the human body e. Induction and static load f. Workers' skills training g. Types of jobs at electricity facilities: information and required qualification h. Working in non-live circuits • Measures for the live work zone • Measures for the work zone in close proximity • Measures for outside work zone in close proximity i. Work techniques and procedures used **2. Non-live work** a. Description of the procedure to be following depending on the type of facility: local and remote; and different types of facilities: overhead, underground, SF6, indoors and outdoors b. Work zone and protected zone concept c. Safety conditions to apply the five golden rules in a protected zone. • Disconnect or check opening • Prevent any possible feedback (interlock and lock) • Check there is no voltage • Earthing and short-circuit in a protected zone d. Safety conditions to apply the five golden rules in a work zone. • Check there is no voltage • Earthing and short-circuiting in a work zone • Protect against nearby live elements and post safety signage to mark off the work zone. e. Work zone and protected zone coinciding f. Taking the appropriate action when reconnecting voltage	X	X

g. Discharges
- Process and duties of the participants
  - Requester and applicant
  - Control centre
  - Communication process and logging the orders
  - Local operator
  - Discharge operator
  - Works Manager
  - Workers
- Procedures at boundary points of the facilities and at shared ownership facilities

3. Introduction to live work

a. Live work. Live work methods:
- LV and HV contact method
- Bare-hand method
- Remote method

b. Work procedures

c. Live work. Process and duties of the participants
- Requester and applicant
- Control centre
- Communication process and logging the orders
- Facility supervisor
- Works Manager
- Workers

4. Working in proximity

a. General Considerations. Preventive measures

b. Procedures to prepare for working in proximity

c. REEX or cable manual reset

d. Specific jobs near to cables
- Crossovers. Status of the crossed facilities
- Parallelism. Double circuit cables

e. Considerations for setting up felling and pruning, painting and other types of Work Zones (WZ)

f. Access to live complexes and electrical equipment casing

g. Working in the proximity area. Process and duties of the participants
- Requester and applicant
- Facility supervisor
- Works Manager
- Workers

5. Measuring, testing and checking

a. Equipment and manners of use

b. General considerations to prevent the electrical hazard

c. Conditions, rules and organisational process for manoeuvres
- Remotely controlled or remote manoeuvres
- Specific situations. Load-buster, self-generators and electricity island risk, overhead transformation centres, distance from isolators to fuses

d. Introduction to local manoeuvres
- Operating order for shutdown devices
- Instructions and signage
- Locking and interlocking

6. Working with possible presence of hazardous atmospheres

a. Area classification
- Risk of fire or explosion
- Risk of insufficient oxygen
- Risk of presence of toxic substances

b. Devices to detect, measure and control hazardous atmospheres
- Job procedures. Aspects of RD 614/2001

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ELECTRICAL HAZARD 2 LOW VOLTAGE LIVE ELECTRICAL WORK (LV LW QUALIFIED WORKER) (DURATION 6 HOURS) THEORETICAL - PRACTICAL REFRESHER: 3 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
THEORETICAL ART **1. Definition of Low Voltage Live Work (LV LW)** a. Fundamentals of low voltage live work • Contact method with insulating hand protection b. General conditions to decide whether or not to carry out low voltage live work **2. Main elements of the installations and their identification. The content must be appropriate to the type of electrical installation to be worked on, including:** a. Conductors (cables, individual branches, etc.) b. Electrical panels (CGP, Protection Panels, etc.) c. Equipment specific to the type of installation (inverters, photovoltaic panels, strings, batteries, chargers, etc.). d. Other common electrical equipment or components (circuit breakers, magneto-thermal switches, differential, switches, etc.). e. Grounding system, etc. **3. PPE and CPE for LV jobs** a. Hard hat and screen b. Mechanical protection, insulating and flame-retardant gloves c. Flame-retardant garments d. Bench and pad e. Vinyl cloth **4. Implementation procedures** **5. Most common risks in LV jobs and typical accidents** **PRACTICAL PART** It must be adapted to the type of installation and electrical equipment present, including, at least, a practical exercise on an electrical panel, in which it is contemplated: a. The creation of the tension work zone b. Isolation of the worker with respect to ground and live elements. c. Use of personal protective equipment d. Absence of electrical charge	**X** **Workers CONTRACTED by ESP CLIENTES Y EDP SOLAR (SEB2B Divisions GD MOBILITY)**	

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ELECTRICAL HAZARD 3 LOW VOLTAGE LIVE ELECTRICAL WORK (LV LW QUALIFIED WORKER) (DURATION: 25/30 HOURS) THEORETICAL - PRACTICAL REFRESHER: 3 YEARS (DURATION: 6/10 HOURS)		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. General instruction for low voltage live electrical work **UNESA-AMYS general instruction for LV live electrical work** The theoretical and practical training is described in its Section 5 - Training. The duration of the initial **THEORETICAL-PRACTICAL** training is set at no less than 20 teaching hours and between 25 and 30 hours are recommended. Section 5 also establishes that regardless of the initial training of any worker who is going to carry out LV live electrical work, theoretical-practical **REFRESHER** courses will be mandatory for those workers at least every three years, and their duration should be approximately between 6 and 10 teaching hours.	**X** **EXCEPT Workers CONTRACTED by SEB2B Divisions GD MOBILITY**	**X**

ELECTRICAL HAZARD 4 HIGH VOLTAGE LIVE ELECTRICAL WORK (HV LW QUALIFIED WORKER) (DURATION: 160 HOURS) THEORETICAL - PRACTICAL REFRESHER: 1 YEAR (DURATION: 8 HOURS)		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. General instruction for High Voltage Live Electrical Work **UNESA-AMYS general instruction for HV live electrical work** Section 4.4.2 - Training describes the training and the number of theoretical and practical hours. The **THEORETICAL-PRACTICAL** training for each of the HV electrical working should last approximately 160 teaching hours, with 25% of the total time dedicated to the theoretical part, with the rest being practical training. Section 4.4.4. – Refresher Courses establishes that regardless of the initial training of any worker who is going to carry out HV live electrical work, theoretical-practical REFRESHER courses will be mandatory for those workers at least ONCE a year, and their duration should be approximately 8 hours.	**X**	

ELECTRICAL HAZARD 5 ELECTRICLA HAZARD BT AELEC (DURATION 6 HOURS requirement to have overcome ELECTRICAL HAZARD 1) THEORETICAL - PRACTICAL REFRESHER: 3 YEARS		
FOR WORKERS AT: that performs electrical work inside, outside or near low-voltage electrical installations	**EE.CC.**	**P.P.**
• Main elements of the facilities and their identification ○ Drivers ○ Insulators ○ Supports ○ Braided nets ○ Rush ○ Splices ○ Underground networks	**X** **Workers CONTRACTED by EDP REDES**	**X**

○ CGP ○ Centralization of meters • Five golden rules in BT ○ Isolation of the intervention area ○ VAT and distances to live elements ○ Signalling ○ Delimitation • Usual EPI and EPC on BT jobs ○ Helmet and screen ○ Flame retardant, insulating and mechanical gloves ○ Flame retardant clothing ○ Banquet and rug ○ Vinyl fabric • Most common risks in LV work and type accidents • Practical exercise: Establishment of a safe work area in a protection cell and in a low voltage panel ○ The students will complete the 5 golden rules ○ The practices will be carried out in pairs with a permanent redundancy of checking the performance of the activity. One of the two will perform the functions of head of work while the other develops the tasks. In these practices it is convenient to alternate the roles The students will simulate with the instructor the call to a control center indicating the place where they are, the transformation center, the element to be maneuvered and the maneuver to be carried out, the work permit During the activity they will fill in the work permit that will serve at the end of the practice as an object of assessment for the examiner ○ Actions to be carried out: ▪ **Cell** 1. Cell opening 2. Signalling and blocking. Mechanical and electrical blocking if it has an auxiliary power supply 3. VAT. If the cell has PAT, check the absence of voltage through the indicators 4. PAT 5. Delimitation. Placement of delimitation preventing access to third parties and taking into account the three dimensions ▪ **Electrical panel** 1. Disconnection. Fuse removal 2. Blocking, interlocking, or signalling. Pulled fuses are a visible cut. Placement of the relevant signage as an isolation point 3. VAT. Use of the verifier. The zone in discharge is not yet a work zone. Check verifier before and after verification 4. PAT. Placement of the PAT equipment placing the ground connection first 5. Delimitation. Placement of delimitation preventing access to third parties and taking into account the three dimensions		

ELECTRICAL HAZARD 6 **ELECTRICLA HAZARD MT/AT AELEC** **(DURATION 6 HOURS requirement to have overcome ELECTRICAL HAZARD 1)** **THEORETICAL - PRACTICAL** **REFRESHER: 3 YEARS**		
FOR WORKERS AT: that develops electrical works or that, even though they are not electrical, are carried out inside electrical installations and spaces affected by a disclaimer. Personnel who carry out electrical work inside, outside or near electrical installations, both high and low voltage, or carry out non-electrical work in electrical installations subject to high voltage discharges or at risk of invading the danger zone with work in high voltage proximity As an example of jobs for which this training is required are: electrical maintenance, painting of a substation structure, geotechnics, step and contact measurements, facility reforms, facility expansion...	**EE.CC.**	**P.P.**

• Main elements of medium voltage installations (lines, CT) and their identification
  ○ Conductors, insulators, types of supports
  ○ Crossings, double circuit
  ○ PAT of supports
  ○ Operating elements: switches, disconnectors (load buster)
  ○ CT, CTR, CTIN
  ○ Types of cells
  ○ Transformers
• Main elements of electrical substations and their identification
  ○ Substations. Functions, configurations and elements:
  ▪ Single bar, double bar
  ▪ Indoor, outdoor
  ▪ GIS substation
  ○ Control and protection elements (panels and racks)
  ○ Control devices and instrument transformers
  ○ Grounding in substations
  ○ Capacitor banks
  ○ Auxiliary services
  ○ Communication equipment
• Five rules in installations of lines, CT's and substations
  ○ Isolation intervention zone. Opening and blocking of cutting elements
  ○ VAT and distances to live elements
  ○ Signalling
  ○ Delimitation in three dimensions
• Grounding in supports with air passage. special situation. Placement of portable land without compromising the safety distances established in RD 614/2001. Complementary preventive measures.
• Usual EPI and EPC in line works, CT´s and substations
  ○ Helmet and screen
  ○ Flame retardant, insulating and mechanical gloves
  ○ Flame retardant clothing
  ○ Pole
  ○ Banquet
  ○ ...
• Most common risks in works on lines, CT's and substations
  ○ Authorization / work permit
• Practical exercise. <u>Establishment of a safe work area on a support.</u>
  ○ The students will complete the 5 golden rules in a TM support based on the hypothesis that they are isolated at both ends
  ○ The practices will be carried out in pairs with a permanent redundancy of checking the performance of the activity. One of the two will perform the functions of head of work while the other develops the tasks. In these practices it is convenient that the roles are alternated
The students will simulate with the instructor the call to a control center indicating the place where they are, the transformation center, the element to be maneuvered and the maneuver to be carried out, the work permit
During the activity, they will fill in the work permit that will be used at the end of the practice as an object of assessment for the examiner
  ○ Actions to be carried out:
  ▪ It starts from the premise that the lines are isolated and blocked. Therefore, the activity consists of making the safe work zone:
  ▪ 3. VAT. Verifier check before use. Verification with pole
  ▪ 4. PAT. Placement of portable PAT following the premises of the document "Guiding criteria for safety against electrical risk of AELEC":
	X
	Workers CONTRACTED by EDP REDES
		X

Laying should be done in the following sequence: – *Connect the ground connection to the ground network of the installation, metal support with ground connection or portable ground electrode. In the latter case, it completely drives the ground electrode.* – *Define the area around the earth electrode and check that no person is close to it.* – *Connect the grounding clamp or clamp to the ground electrode (spike or fixed point)* – *Fully unwind the grounding and short-circuit conductor.* – *Connect the clamps of the grounding and short-circuiting equipment to each of the phases using the insulating pole, never directly with your hands, starting with the conductor closest to the worker's position and trying to ensure that all the conductors of the grounding ground are as far away from workers as possible.* *During the process of placing the grounding and short-circuiting until its complete removal, no element of the grounding and short-circuiting equipment must be touched without using the protection equipment indicated in the company's internal regulations. Grounding and short-circuiting determine the limits of the Work zone.* *At least one of the lands in the Work Zone must be visible from the point of work, except in the case of underground cables or galleries, or it will be verified that they remain in place during work, in the case of higher voltage lines. at 132kV.* ▪ 5. Delimitation. The work area will be delimited		

SWITCHING OPERATORS "AUTHORISATION OF THE CONTRACTOR WORKERS FOR SWITCHING OPERATIONS IN THE EDP ESPAÑA GRID" **(MINIMUM DURATION: 40 HOURS)** **20 THEORETICAL HOURS/20 PRACTICAL HOURS on overhead grid, transformer stations (CT) or distribution centres (CR)**		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
CONTENT OF THE "AUTHORISATION OF THE CONTRACTOR WORKERS FOR SWITCHING OPERATIONS IN THE EDP ESPAÑA GRID" TRAINING: Established in the documents to be specifically provided by EDP ESPAÑA **ACCREDITATION:** • Certificate of having passed the "AUTHORISATION OF THE CONTRACTOR WORKERS FOR SWITCHING OPERATIONS IN THE EDP ESPAÑA GRID", issued and stamped by the training entity who has run the course. • Certificate of "SUPERVISED SWITCHING OPERATIONS IN THE EDP ESPAÑA DISTRIBUTION GRID". The certificate shall be signed and stamped by the Manager of the EDP España Operations and the Maintenance Department or his/her delegate.	**X** **applicable for ELECTRICAL GRIDS**	

DISCHARGE OPERATORS, WORK MANAGERS, WORK SUPERVISORS "AUTHORISATION OF THE CONTRACTOR WORKERS FOR DISCHARGES AT EDP ESPAÑA" **(MINIMUM DURATION 24 HOURS)** **12 THEORETICAL HOURS/8 PRACTICAL HOURS in Overhead Grid + 4 PRACTICAL HOURS in CTs**		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
MINIMUM CONTENT OF THE "AUTHORISATION OF THE CONTRACTOR WORKERS FOR EDP ESPAÑA DISCHARGE OPERATIONS" TRAINING: • Interpreting EDP ESPAÑA single-wire diagrams. DCD Orthogonal Diagrams and those for any field equipment • Description of the technology of EDP SPAIN facilities and equipment in question: – For indoor and outdoor CTs – For overhead grid equipment – Switching and interrupting devices – Switching interlocks – Data plate, interpretation of the data – Protections and earthing systems	**X** **applicable for ELECTRICAL GRIDS**	

– Automatisms, command and control devices, reclosers – HV and LV fuses – LV panels • Safety measures and means applicable at the facilities • EDP SPAIN Health & Safety Manual, in particular the following chapters: – General points, electrical hazard – Working on electrical systems – Working at height • RD 614/2001 regarding electrical hazard. Golden rules • EDP ESPAÑA discharge procedure: – Communication with the DCD, identifications, vocabulary and definitions – Responsibilities – Protected area – Work zone • Response to accident and incidents during operations **ACCREDITATION:** Certificate of having passed the "AUTHORISATION OF THE CONTRACTOR WORKERS FOR EDP ESPAÑA DISCHARGE OPERATIONS", signed by the instructor or training entity. **EXPERIENCE ACCREDITATION:** 1. Proven MINIMUM experience of 2 YEARS in the work to be carried out is needed to accredit a DISCHARGE WORK SUPERVISOR. 2. Proven MINIMUM experience of 2 YEARS in the work to be carried out is needed to accredit a DISCHARGE WORK MANAGER. 3. Proven MINIMUM experience of 1 YEAR in the work to be carried out is needed to accredit a DISCHARGE OPERATOR		

INFORMED/AUTHORISED WORKER FOR "NON-ELECTRICAL" WORK CLOSE TO ELECTRICAL FACILITIES (DURATION: 3 HOURS) THEORETICAL		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1.1 General points of the electrical hazard 1.1.1 Types of electrical accidents 1.1.1.1. Electric arc 1.1.1.2. Contact and conductivity 1.1.1.2.1. Direct contact 1.1.1.2.2. Indirect contact 1.1.2 Effect of the current on the human body 1.1.2.1. Dependant factors: 1.1.2.2. Current intensity 1.1.2.3. Duration of the Electrical Contact 1.1.2.4. Resistance of the Human Body 1.1.2.5. Applied Voltage 1.1.2.6. Current Frequency 1.1.2.7. Path of the current through the body 1.1.2.8. Individual's Response Capacity **1.2 Personal Protective Equipment and Collective Protective Equipment** 1.2.1. Collective and personal protective equipment for electrical hazard **1.3. Distribution electrical facilities** 1.3.1. Description of the transformation facilities (Buildings, Outdoor Installation, cell room, control room and others) **1.4. Royal Decree 614/2001. Job classification** 1.4.1. Structure and content summarised from RD 614/2001 1.4.2. Job classification 1.4.3. Training of workers at risk of electrical hazard	**X**	

1.5. Working in proximity 1.5.1. General Considerations 1.5.2. Description of certain types of work in proximity to live facilities. 1.5.3. Preventive measures 1.5.4. Access to live complexes and electrical equipment casing		

ELECTROMAGNETIC FIELDS (DURATION: 2 HOURS) THEORETICAL		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
Enactment of Royal Decree 299/2016, of 22 July, on the measures to protect the health and safety of workers against risks related to the exposure to electromagnetic fields: 1. Electromagnetic fields and other concepts a. What are electromagnetic fields (EMF)? b. What is electromagnetic radiation? 2. Sources of electromagnetic fields 3. Impact of electromagnetic fields on health and their safety risks a. Direct effects b. Indirect effects c. Effects of long-term exposure d. Workers with specific risks 4. Risk assessment a. Legal requirements b. Exposure limit values (ELV) and action levels (AL) c. Risk assessment and establishing exposure 5. Preventive measures	**X**	**X**

WORKING AT HEIGHT 1. GENERAL MODULE (DURATION: 8 HOURS) THEORETICAL-PRACTICAL REFRESHER: 3 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
Royal Decree 2177/2004 regarding the minimum health and safety provisions for workers to use equipment when working temporarily at a height. 1. Defining working at height 2. Identifying standard working at height scenarios: stepladders, vertical structures, scaffolding and passable roofing. 3. Basic concepts a. Anchoring points b. Safety distance c. Fall factor d. Impact force 4. Protection systems a. Collective protections b. Temporary and permanent vertical & horizontal lifelines c. PPE: harness, lanyards, energy absorber, sliding fall arrest systems, retractable fall arrest, adjustable securing element, helmet d. Characteristics of the PPE for working at height e. Correct use of the PPE f. Suspension trauma g. Access and positioning techniques at heights h. Suspension trauma and use of stirrups 5. Practical exercises (adaptable as per requirements of the business) a. Review of anti-fall personal protective equipment at user level	**X**	**X**

b. Use of personal protective equipment for working at height. c. Installing and dismantling horizontal, vertical and temporary lifelines d. Ascent and descent basic techniques and for moving horizontally: track, cable and rope anti-fall system, double-hook technique, use of retractables, use of telescopic poles, etc. e. Basic techniques for holding work and positioning f. Prevention of suspension trauma. Use of stirrups g. Knots h. Safe use of stepladders i. Safe use of scaffolding		

WORKING AT HEIGHT 2 - FOR ELECTRICAL DISTRIBUTION FACILITIES. ADDITIONAL MODULE (DURATION: 8 HOURS) THEORETICAL-PRACTICAL REFRESHER: 3 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Work on supports, poles and pylons 2. Checking the supports and structures beforehand 3. Standard collective and personal protective equipment of the electricity sector 4. Access and progression in: a. Timber supports and structures b. Concrete supports and structures c. Metal supports and structures: lattice frame and tubular pylons 5. Positioning and suspended work on: a. Timber supports and structures b. Concrete supports and structures c. Metal supports and structures: lattice frame and tubular pylons 6. Evacuation and rescue a. Knowing how to use the evacuation and rescue equipment: automatic and manual lowering devices, evacuation and rescue kit b. Evacuation techniques c. Rescue techniques 7. Practical exercises: a. Lifting and lowering techniques and progression in timber, concrete and metal supports and poles. b. Suspended work and positioning techniques for supports and electricity poles c. Evacuation techniques; with manual and automatic lifting systems from metal, concrete and timber supports and structures d. Rescue of people suspended from their anti-fall system on metal, concrete and timber supports and structures ***N.B. Workers must hold the certificate of having completed the General Module of Working at Height 1 to be able to start this module***	**X**	**X**

WORKING AT HEIGHT 3 FOR WORKING ON ROOF COVERINGS, ROOFING AND ROOFTOPS (DURATION: 8 HOURS) THEORETICAL-PRACTICAL REFRESHER: 3 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Theoretical training: a. Applicable legislation. OH&S Act 31/1995, RD 2177/2004, Applicable UNE standards b. Physics applicable to falls: Fall factor, shock force, pendulum effect, harness syndrome, frictions, abrasions, etc. c. Main risks associated to working on roof coverings, roofing and rooftops	**X**	**X**

d. Safety standards and measures for working on roof coverings, roofing and rooftops: according to types of roofs, jobs, resistance areas, weather conditions, signage and demarcating jobs, handling loads, etc. e. Collective protective equipment: nets, etc, f. Personal protective equipment and anti-fall systems (choice, use, progression, fitting, installation, upkeep and checking): harness, connecting elements, retractables, ropes, knots, anchoring system, shock absorbers, temporary and permanent, rigid and flexible life lines, etc. g. Auxiliary equipment: Load distributors, ladders, lifting devices, pulleys, etc. h. Accident response procedure. Rescuing from a height: Equipment needed, guidelines and procedure on roofing, roof coverings and roof tops 2. Practical training: a. Fitting and use of the personal protective equipment. b. Fitting, securing and use of temporary anti-fall systems: flexible life lines, etc. c. Progression techniques. Tying knots, etc. d. Use of auxiliary items. Ladders, etc. e. Rescuing from a height ***NOTE 1: Workers must complete this course in order to be able to access roofing, roof coverings and roof tops with no direct access and safe landing or not passable or without parapet wall or with a parapet wall under 90 cm, and without correctly installed collective protective equipment to eliminate the risk of falling.*** ***NOTE 2: Workers only need Working at Height 1 for the other roofing, roof coverings and roof tops.***		

WORKING AT HEIGHT 4 TO INSTALL TEMPORARY LIFE LINES AND FASTENINGS (DURATION: 8 HOURS) PRACTICAL REFRESHER: 3 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Minimum content for information purposes and as guidelines: a. Description and types of fastenings b. Installing chemical fastenings c. Installing mechanical fastenings d. Installing construction fastenings e. UNE 795 standards and authorisations f. Basic materials g. Applicable fields h. Inspection, measurement and testing i. Description and installation of vertical and horizontal temporary life lines j. Tensing life lines k. Compatible accessories for life lines ***NOTE 1: Workers must hold the certificate of having previously completed Working at Height 3 to be able to start this module.*** ***NOTE 2: Required for at least one of the members of the team, in other words, the one tasked with installing and supervising the state and use of the anti-fall equipment fitted in those jobs when accessing roofing, roof coverings and roof tops with no direct access and safe landing or not passable or without parapet wall or with a parapet wall under 90 cm, and without correctly installed collective protective equipment to eliminate the risk of falling.***	**X**	

CBA TRAINING REQUIREMENTS: CONTENT Ed.6

HANDLING CHEMICAL PRODUCTS (DURATION: 3 HOURS) THEORETICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Risks and measures to be adopted 2. Classification of the chemical products used 3. Types of handling of chemical products: • Unloading tanks: – With air – By gravity – Pumping – ADR requirements when unloading tanks. Check-list review • Handling IBC • Handling 25L canisters • Handling bags • Collective protective equipment 4. PPE: Personal Protective Equipment	X	X

HANDLING FIXED ELECTRIC SWITCHES CONTAINING FLUORINATED GREENHOUSE GASES (SF6) (DURATION: 18 HOURS) THEORETICAL-PRACTICAL		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Basic knowledge of environmental issues (climate change, Kyoto Protocol, global warming potential, etc.), and of Regulation (EU) 517/2014 of the European Parliament and of the Council, of 16 April 2014, on fluorinated greenhouses gases and of the applicable regulations 2. Environmental, chemical and physical properties of sulphur hexafluoride (SF6) 3. Health effects of the decomposition products of SF6 4. Uses of SF6 in electrical equipment (insulation, cooling of the electric arc, etc.) and including the design of electrical equipment 5. Quality, quality control and sampling SF6 as per industrial standards 6. Storage and transport of SF6 7. Use of equipment to extract and recover SF6 and operate sealed drilling systems 8. Recovery, Mixing, Purification and Reuse of SF6 and different types of reuse 9. Working in open compartments with SF6, SF6 detectors 10. Neutralizing SF6 byproducts 11. End-of-life of equipment with SF6 atmosphere 12. Monitoring the SF6 and obligations to record the relevant data pursuant to community or national law or international agreements 13. Minimising and controlling leaks 14. Alternative technologies to replace or reduce the use of fluorinated greenhouse gases and the way to safely handle them 15. Safety conditions when using these technologies	X	

EXPLOSIVE ATMOSPHERES (DURATION: 2 HOURS) THEORETICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Application legislative: RD 681/2003 2. ATEX facilities 3. Flammability limits 4. Ignition sources 5. Zone classification 6. DOPEX document	X	X

7. Prevention and protection against explosive atmospheres 8. Rating of electrical appliances for ATEX atmospheres		

CONFINED SPACES (DURATION: 8 HOURS) THEORETICAL/PRACTICAL REFRESHER: 3 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Defining and type of confined spaces a. Defining a confined space • General legislation • Specific legislation • Work permits in confined spaces b. Type of confined spaces • Service tunnels • Tanks and chambers • Underground transformation centres • Boilers • Chemical product storage and/or processing tanks • Other facilities 2. PPE, CPE and safety equipment a. Minimum protective equipment for working in confined areas 3. Risk of working in confined areas a. General risks of the accesses to confined areas b. Specific risks of confined areas • Asphyxiating atmospheres • Toxic atmospheres • Flammable atmospheres 4. Preventive measures when working in confined spaces 5. Documents needed • Work permit • Work procedure 6. Appointment and duties of the Safety Officer 7. General preventive measures 8. Specific preventive measures • Assessing the inside atmosphere • Preventive measures in hazardous atmospheres • Ventilation • Breathing apparatus • External communication 9. What to do in case of an emergency a. Procedure in case of an emergency • Rescue from outside • Access in case of emergency to inside the confined space b. Evacuation and rescue equipment c. Use of breath apparatus and rescue equipment 10. Practical exercises a. Applying ventilation and techniques to check effectiveness b. Metering inside atmospheres with multiple gas detectors c. Access to confined premises using horizontal and vertical manholes d. Action in case of emergency; rescuing an injured worker e. Use of self-contained breathing apparatus f. Evacuation and extinguishing fires in premises without visibility g. Action in confined premises that are ATEX areas	X	X

CBA TRAINING REQUIREMENTS: CONTENT Ed.6

WORK WITH ASBESTOS HAZARD (DURATION: 2 HOURS) THEORETICAL		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
RD 396/2006 establishing the minimum health and safety provisions applicable to work with risk of exposure to asbestos 1. Properties of asbestos and its impact on health, including the synergic effect of tobacco use 2. Types of products or materials that may contain asbestos 3. Operations that may imply exposure to asbestos and the importance of prevention measures to minimise exposure 4. Safe professional practices, checks and protective equipment 5. Function, election, selection, appropriate use and limitations of breathing apparatus; as appropriate, according to the type of equipment used, the ways and methods to check the operating of the breathing apparatus 6. Emergency procedures 7. Decontamination procedures 8. Waste elimination 9. Health monitoring	**X**	**X**

MANUAL HANDLING OF LOADS (DURATION: 2 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Definitions. Accident rate. Basic legislative framework 2. Musculoskeletal risks linked to the job. Awkward positions. Repetitive movements 3. Specific preventive measures: lifting manhole covers and underground CT plates 4. Handling loads	**X**	**X**

OPERATING FORKLIFT TRUCKS AND LIFTING LOADS THEORETICAL/PRACTICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
In line with UNE 58451 STANDARD content **6. TRAINING CONTENT** **6.1 GENERAL TRAINING** **6.1.1 CONTENT OF THE THEORETICAL TRAINING** a. Information on the forklift truck to be used b. General mindset regarding risks, accidents, workplace safety, etc. c. Standard basic concepts d. Basic legislation (insurance and liabilities), including knowledge of the standard e. Symbols and pictograms f. General description of the parts of the machine and the equipment used, terminology. Essential differences with respect to the automobile g. Controls usually existing in the machine h. Implications due to the work environment (emissions, sound level, electro-magnetic compatibility, hazardous atmospheres, etc.), state of paving and flooring, consolidated soils, doors, lifts, ramps and slopes, electric cables, loading docks. Workplace conditions according to RD 486/97 i. Fuelling operations (diesel, petrol, gas), charging batteries j. Typical operations in the daily use of the machine k. Rated load, permissible load, load centre, lifting height, boom range, load graphics l. Overall stability. Aspects affecting stability, types of wheels and tyres, speed, types of steering. Use on ramps	**X**	**X**

m. Driving empty and loaded, travelling speed, types of steering, turn radius, braking
n. Lifting operations, load limitations due to lifting height, due to use of accessories. Visibility
o. Use of special accessories for certain load unities. Aspects affecting permissible load capacity
p. Swivelling loads, or with variable centre of gravity
q. Lifting people. Limits and conditioning factors as per their exceptional or standard use
r. Shelving types, storage systems
s. Manoeuvring aisles, traffic mixed with pedestrians
t. Use on public and common use thoroughfares
u. Daily start-up control, functional and visual checks: brakes, horn, etc.
v. Typical preventive maintenance, wheels, levels
w. Operator manuals provided by the equipment manufacturer
x. Personal protective equipment, according to work zone or type
y. Parking the machine in car park
z. Procedures to be followed in case of risk situation, operator restraint system, seatbelt, etc.

6.1.1 CONTENT OF THE PRACTICAL TRAINING

a. Knowledge of the parts of the machine, visual check of characteristics, maintenance, controls, plates, manuals
b. Check of start-up, steering, brakes, horn etc.
c. Manoeuvring without load, travelling in both directions, speeds, turning, braking, use on ramps
d. Similar manoeuvres with load
e. Loading and unloading lorries, placing and removing loads on and from shelving, stacking and removing loads on and from free surface
f. Load graphic, checking impact of the load dimensions
g. With accessories, clamps, containers, jibs, etc.
h. Extraordinary manoeuvres, e.g., load with out-of-the-ordinary dimensions or characteristics due to its length, form, handling a load simultaneously using two forklifts, etc.

6.2 SPECIFIC TRAINING AS PER HANDLING FORKLIFT

TYPE 1

- Pallet trucks and other similar vehicles, with lifting operations under 0.5 m
- Transporter forklifts and tractors, where there are no lifting operations
- Stackers

TYPE 2

- Mast forklift with cantilevered load
- Forklift with telescopic boom
- Retracting mast forklift
- High elevation storage forklift, including those when the operator is raised along with the load. It collects orders at high levels
- Truck mounted on forklifts
- Other types and working conditions to be specified

7. DURATION OF THE ATTENDANCE-BASED TRAINING

The duration of the initial training period must be at least as set out in the table:

	THEORETICAL TRAINING		PRACTICAL TRAINING
	COMMON	SPECIFIC/TYPE	
TYPE 1	2 HOURS	2 HOURS	MINIMUM 2 HOURS RATIO 0.5 H/PARTICIPANT
TYPE 2		4 HOURS	MINIMUM 4 HOURS RATIO 1 H/PARTICIPANT

Updating **(REFRESHER)** must be carried out every five years.

The duration of the updating (**REFRESHER**) period must be at least as set out in the table:

	THEORETICAL TRAINING		PRACTICAL TRAINING
	COMMON	SPECIFIC/TYPE	
TYPE 1	1 HOUR	1 HOUR	MINIMUM 1 HOUR RATIO 0.25 H/PARTICIPANT
TYPE 2		2 HOURS	MINIMUM 2 HOURS RATIO 0.5 H/PARTICIPANT

9 SKILL ACCREDITATION The work equipment operator who has received sufficient training to use it must be certified as having successfully passed the test. The certificate must include: − Name of the training company and/or people who ran the course − Type of handling forklifts and places for which this training is considered valid − Any limitation deemed appropriate to be included, whether due to special circumstances of the assessed operator or due to other circumstances considered to be of special interest - Content of the training received, its duration and place and dates where and on which it was given - Expiry date		

HANDLING LIFTING PLATFORM THEORETICAL/PRACTICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
In line with the UNE 58923 STANDARD content **5 TRAINING PROGRAMME** **5.1 BASIC CONTENT OF THE THEORETICAL TRAINING** a) Legislation and regulations referring to the use of that work equipment b) Classification and types of MEWP c) Characteristics and descriptions of the MEWP d) Applications e) Safety checks before starting up the equipment − Inspections before beginning the work − Site − Levelling, stability − Checking equipment f) Control posts − Access to the control posts − Control types g) Work environment − Work zone − Signalling the manoeuvre − Areas close to power lines h) Levelling − With/without stabilizers i) Main hazards and risk factors − Stabilizer positioning − Ground failure − Exceeding maximum load − Effect of the wind − People falling due to equipment, hydraulic, mechanical failures, etc. − People falling due to improper use − Collision against objects − Limbs being trapped − Incorrect electrical contacts − MEWP translational movement j) Prevention and protection measures − Equipment safety systems − Indicators − Limiters − Emergency stop	**X**	**X**

− Familiarisation k) Safety standards due to other risks − Burns − Noise − Gas inhalation l) Start-up − Envisaged uses − Safety and recovery systems m) Specific operating safety standards n) Safety standards on completion of the works − Securing the MEWP against incorrect uses − Transport o) Personal protective equipment p) Maintenance q) Servicing **5.2 BASIC CONTENT OF THE PRACTICAL TRAINING** The operator will have to perform real manoeuvres with the type of MEWP for which s/he wants to be certified with the following minimum content: − Introduction to the machine − Reconnaissance of the area and signalling the work zone − Visual perimeter check of the machine − Main components: identification and function − Pre-use checks and inspection, according to the manufacturer's instruction manual − Starting up and stopping the machine − Correct operating procedures of each of the safety functions − Manoeuvrability of the machine in practice circuit (see Annexes B, C and D) − Recovery and emergency lowering procedures − Appropriate procedure to park the machine in its transport position **6 TYPES OF CERTIFICATES** Once the operator has successfully completed the **practical and theoretical assessment** which will be conducted as per the requirements of Chapter 5 of this standard, **A CERTIFICATE WILL BE ISSUED**, by the training institute authorised according to this standard, of the skill of the operator as per the MEWP types in which the practical part was completed. **7.2 DURATION OF THE COURSE** The minimum duration of the training will be structured as follows in all cases: − **THEORETICAL TRAINING**: It can be run attendance-based or remotely with a minimum duration of four hours, and with an attendance-based exam for both training methods. − **PRACTICAL TRAINING**: There will be two parts for each type of certificate: **1- EXPLANATION AND PRACTICAL DEMONSTRATION IN GROUP OF THE HANDLING THE EQUIPMENT, OF, AT LEAST 15 MINUTES PER CATEGORY** **2- PRACTICAL SESSION PER STUDENT OF, AT LEAST, TWENTY MINUTES** **RENEWING THE CERTIFICATE** **8.1 OF THE OPERATOR** The personal mobile elevating work platform operator certificates will be **VALID FOR FIVE YEARS** from their issue date and can be **RENEWED FOR FURTHER FIVE-YEAR PERIODS**. The renewal course will be taught by a certified entity. The **DURATION OF THE RENEWAL TRAINING** will be structured as follows in all cases: **− THEORETICAL TRAINING:** It can be run attendance-based or remotely and last at least two hours, including the attendance-based theoretical assessment. **- PRACTICAL ASSESSMENT:** It will be conducted per students and for each type of certificate.		

CBA TRAINING REQUIREMENTS: CONTENT Ed.6

GANTRY CRANE OPERATING (DURATION: 5 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
In line with the UNE 58140-94 STANDARD content **5. IMPLEMENTATION OF THE TRAINING** The duration and content of the training must be sufficient to achieve the objectives. The training must basically be aimed at the practical operating aspect (at least of **75%** of the training time). **In line with NTP 737 content** **TRAINING** **TRAINING OF THE OPERATOR** **TRAINING CONTENT** The training must include a theoretical programme and a practical programme The following topics must be included in the ***THEORETICAL PART***: • The operator • Attitudes and responsibilities • His/her role within the load handling team • The technology of the lifting appliances: terminology and characteristics. The mechanisms, operating principles, appropriate handling, etc. The control electrical equipment, button panel, safety features, controls and equipment. Slings: types, materials, safety, use, conservation and replacement. Safety devices; operating principles and controls. Specific lifting accessories: types, uses, maintenance and replacement • Using of the lifting appliances and the security standards: start-up and shutdown procedures: starting and ending the working day. Banned or hazardous manoeuvres. Manoeuvre signalling codes. Limit for using the lifting appliances. Specific instructions for using the appliance and/or the place where it is used. Daily checks • Handling materials: Load grasping means and devices. Practical instructions. Load manual guidance. Loads: balance, centre of gravity, balanced, influence of the wind. More usual handling operations. Handling loads with different appliances • Checks, maintenance and breakdowns: Maintenance concepts and breakdown detection. Regular checks and daily checks. Reports on operating defects. Action to be taken in case of breakdown or power cut • Instruction manual for the equipment to be used, technical data, rated capacity, safety devices, etc. • Expertise and use of communication radio equipment (as applicable) • Operating manual covering three stages: before starting-up the crane, when operating the crane and handling its loads and completion of the works. The ***PRACTICAL PROGRAMME*** will use a crane as similar as possible to the one that the operator is going in use and if it is not identical, the differences will clearly be explained. Visual knowledge of the components, equipment and accessories included in the theoretical programme must be covered and include: – Operating exercises: • Use of the commands, handling aids and control devices • Carrying out manoeuvres (empty and loaded) • Handling loads with specific accessories • Load control and suspension exercises • Manoeuvre combination (empty and loaded) • Control and reducing the load swing • Command signalling exercises (gestures and by radio, as applicable) • Coordination with the "signalperson" as necessary **DURATION OF THE TRAINING COURSES** The length of the initial courses will depend on the type of crane, the complexity of the loads to be handed and of the initial experience of each participant. The above criteria will also apply to the practical courses.	**X**	**X**

In addition to the aforementioned initial training, refresher courses must be scheduled to check that the operator's acquired expertise is current. Those courses are always required when the operator has been absent from his/her post after a long period of time. Refresher courses should also be run when changes occur to the working conditions. **TRAINING ASSESSMENT** The acquired expertise will be assessed by means of a proficiency test. That assessment will consist of a theoretical part, by means of a series of multiple-choice questions and practical load lifting, transfer and placement exercises to reflect the type of work that the operator will normally carry out in the company.		

HANDLING HOISTS (DURATION: 5 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Hoists. Definition, classification and types. Main technical characteristics. Applications. Capacities and constraints. 2. Maintenance of the hoists, their implements and accessories: a. Implements: slings, straps, shackles, hooks and others. Applications and limitations b. Types of load. Weights and volumes. Calculating the estimated weight of the load c. Load stability 3. Main risks when moving loads. Main preventive measures: Personal Protective Equipment 4. Standardised symbols and signals on the cranes and hoists in the work zone.	X	X

OPERATING HYDRAULIC KNUCKLE-BOOM CRANES MOUNTED ON TRUCKS (DURATION: 5 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
In line with NTP 868/869 content **6. OPERATOR** Operating the crane requires skill, expertise and experience. The operating of the crane must only be entrusted to people who meet the following requirements: • Physically and mentally suitable (rested, not having consumed any alcohol or under the influence of drugs or medication) • Capable of operating the crane responsibly • Have the necessary expertise, sufficient and appropriate training and information on the use of the crane and lifting strap (as applicable) • Capable of showing that they have received the information needed to handle the crane and that they know the content of the manual to use the crane and any possible accessories Crane manoeuvres involve great responsibility and must therefore only be entrusted to appropriate individuals, free from physical contraindications (visual and hearing constraints, tendency to vertigo, other types of physical impediments, etc.), endowed with quick response and decision-making skills and who have the necessary technical expertise. In any event, there should be written proof of the specific training received and the written authorisation of the company, if that is the case, to operate the relevant work equipment. Therefore, a proposed practical/theoretical content could be: 1. Introduction 2. Types of hydraulic knuckle-boom cranes 3. Operating principles 4. Risks and risk factors 5. Safety standards for operators 6. Application of rules prior to start-up 7. Manoeuvres with an empty crane 8. Handling loads	X	X

9. Signalperson - crane operator Final practical assessment		

SLING MANOEUVRES (DURATION: 3 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Way of using and knowledge of slings and MWL according to: a. Its build b. The number of strands and pull angle c. Sling form d. Sling/material size ratio e. Geometry of the material f. Knowing when they should be decommissioned 2. Knowledge of the accessories and how to use them: a. Shackles b. Eyebolts c. Rocker arms/frames/gantries d. Links e. Butts	**X**	**X**

OPERATING TOWER CRANE THEORETICAL/PRACTICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
In line with RD 836/2003, of 27 June, approving a new complementary technical instruction (ITC) "MIE-AEM-2" of the Regulation for handling and lifting equipment, referring to tower cranes for works or other applications. ***Crane operator or tower crane operator licence*** ***1. Purpose and Scope of Application.*** This Annex seeks to regulate the requirements and procedure to obtain the tower crane operator licence (crane operator). ***2. Crane operator or tower crane operator licence.*** A tower crane operator's licence is required to operate the tower cranes envisaged in this ITC. The procedure to obtain it is as per established in this Annex. ***3. Requirements to obtain the licence***. Proof of meeting the following requirements is necessary to obtain the licence: **1.** Be 18 years old or over **2.** Have the necessary expertise to operate the tower crane **3.** Pass a medical examination to test visual acuity, sense of direction, balance and hearing acuity and psychological aptitude The knowledge required in Section 2 above can be accredited by any of the following channels: **a)** Meeting the following requirements: i Hold the Compulsory Secondary Education Certificate, or an equivalent qualification for work purposes. ii Successfully complete a theoretical-practical course taught by an entity accredited by the competent authority of the autonomous community iii Pass an exam set by the competent authority of the autonomous community	**X**	

b) Have a vocational training qualification or a professional certificate included in the National Catalogue of Professional Qualifications, whose area of proficiency includes the areas covered by the Handling and Lifting Equipment Regulations, approved by Royal Decree 2291/1985, of 8 November, and of this Complementary Technical Instruction.

c) Hold a certificate granted by an entity accredited to certify individuals by ENAC or any other National Accreditation Authority authorised as per Regulation (EC) No. 765/2008 of the European Parliament and of the Council, of 9 July 2008, of the European Parliament and of the Council, of 9 July 2008, setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No. 339/93, pursuant to UNE-EN ISO 17024 standard.

All the entities accredited to certify individuals who wish to award such certifications shall include in their certification scheme an assessment system that includes the minimum content indicated in Section 4 herein.

d) Have a recognised professional qualification of tower crane operator that has been acquired in one or another of the Member States of the European Union, pursuant to Royal Decree 581/2017, of 9 June, which incorporates into the Spanish legal system Directive 2013/55/EU of the European Parliament and of the Council, of 20 November 2013, amending Directive 2005/36/EC on the recognition of professional qualifications and Regulation (EU) No. 1024/2012 on administrative cooperation through the Internal Market Information System (the IMI Regulation).

4. Practical-theoretical course

4.1 The practical-theoretical course referred in the above section will have, **at least, a total duration of 200 hours, divided into a theoretical module of 50 hours and a practical module of 150 hours**, with the following programme:

a) Theoretical training:

- Description of the tower crane and components (profiles, cables, ballast, etc.)
- Definition of a dismountable tower crane. Classification. Structural composition. Boom
- Stability ballast. Balancing counterweights. Conditions to be met. Mass
- Steel cables. Handling. Lubrication. Inspections Replacement
- Crane location. Uneven base. Road. Closeness to buildings and overhead cables. Facilities with several cranes. Safety area. Earthing
- Crane safety features. Limiters. Torque safety. Maximum load safety. Weathervaning
- Stability conditions when operating and not in service.
- Rigid struts. Elastic struts
- Operating and handling. Obligations and bans. Expertise and characteristics. Load diagram. Diagram calculation
- Repair and maintenance of the tower guide
- Regulation and start-up
- Basic legislation: UNE rules and regulations

b) Practical training:

- Operating rules (banned and allowed manoeuvres)
- Workplace safety standards
- Performing daily and weekly safety and maintenance checks
- Operating a tower crane
- Operating a self-expandable tower crane

4.2 Any individual with professional experience in operating tower cranes within a one-year period shall be exempt from completing the standard practical module of the course provided that s/he provides proof accrediting that experience from the company where it has been acquired. The professional experience will be justified by means of accreditation by the company and, in that case, the workers will also complete a 15-hour practical module. It will not be necessary to justify Section 3.b) of this annex.

5. Organisations authorised to run courses.

The entities that meet the following requirements may be authorised to run the tower crane operator theoretical-practical course:

a) Have the necessary minimum human and material means and resources (skilled workers, premises, crane components, motors, cables, bearings, profiles, maintenance and installation manuals, mechanical and electrical metering equipment and torque wrenches).

b) Have self-expandable and dismountable tower cranes, owned or leased, for a minimum period equivalent to the duration of the course to be run, operating correctly and for the exclusive use of the accredited entity. ***6. Issuing and validity of the licence*** **6.1 The crane operator or tower crane operator licence will be issued by the competent authority of the autonomous community, once the applicant has provided proof that the requirements in Section 3 of this annex have been met.** **6.2** The licence will be **valid for five years, after which it may be renewed for equal periods of time after accrediting the requirement established in Section** 3.c) of this annex.		

OPERATING SELF-PROPELLED MOBILE CRANE THEORETICAL/PRACTICAL REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
In line with RD 837/2003, of 27 June, approving a new complementary instruction "MIE-AEM-4" of the Regulation for handling and lifting equipment, referring to self-propelled mobile crane. ***Self-propelled mobile crane operator licence*** ***1. Purpose and scope of application*** This Annex seeks to regulate the requirements and procedure to obtain the self-propelled mobile crane operator licence. ***2. Self-propelled mobile crane operator licence*** …for, at least, an equal or superior category to the one of its rated load, obtained as indicated in this annex, will be required to handle and operate self-propelled mobile cranes envisaged in this ITC. The licence is divided into the following categories: Category A: authorises its holder to mount and operate self-propelled mobile cranes with a rate load of up to 130 t, inclusive. Category B: authorises its holder to handle and operate self-propelled mobile cranes with a rate load of over 130 t. The procedure to obtain it is as per established in this Annex. ***3. Requirements to obtain the licence.*** Proof of meeting the following requirements is necessary to obtain the licence: **1.** Be 18 years old or over **2.** Have the necessary expertise to operate the tower crane **3.** Pass a medical examination to test visual acuity, sense of direction, balance and hearing acuity and psychological aptitude The knowledge required in Section 2 above can be accredited by any of the following channels: **a)** Meeting the following requirements: i Hold the Compulsory Secondary Education Certificate, or an equivalent qualification for work purposes. ii Successfully complete a theoretical-practical course taught by an entity accredited by the competent authority of the autonomous community iii Pass an exam set by the competent authority of the autonomous community **b)** Have a vocational training qualification or a professional certificate included in the National Catalogue of Professional Qualifications, whose area of proficiency includes the areas covered by the Handling and Lifting Equipment Regulations, approved by Royal Decree 2291/1985, of 8 November, and of this Complementary Technical Instruction. **c)** Hold a certificate granted by an entity accredited to certify individuals by ENAC or any other National Accreditation Authority authorised as per Regulation (EC) No. 765/2008 of the European Parliament and of the Council, of 9 July 2008, of the European Parliament and of the Council, of 9 July 2008, setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No. 339/93, pursuant to UNE-EN ISO 17024 standard. All the entities accredited to certify individuals who wish to award such certifications shall include in their certification scheme an assessment system that includes the minimum content indicated in Section 4 herein.	**X**	

d) Have a recognised professional qualification of tower crane operator that has been acquired in one or another of the Member States of the European Union, pursuant to Royal Decree 581/2017, of 9 June, which incorporates into the Spanish legal system Directive 2013/55/EU of the European Parliament and of the Council, of 20 November 2013, amending Directive 2005/36/EC on the recognition of professional qualifications and Regulation (EU) No. 1024/2012 on administrative cooperation through the Internal Market Information System (the IMI Regulation).

4. Practical-theoretical course

The course referred to in Paragraph ii of the above Section will consist of a theoretical training module and a practical training module, with the following duration and content, depending on the category:

***a)* Duration:**

Category	Theoretical training (hours)	Practical training (hours)	Total training (hours)
A	75	225	300
B	150	300	450

Therefore, when applying for a Category B licence, the time that holders of a Category A self-propelled mobile crane operator licence have spent on the theoretical and practical training for the Category A will be taken into account and they will have to complete the remaining period of training with self-propelled mobile cranes with a rated load included in Category B.

b) Theoretical training:

- Applicable regulations (Handling and lifting equipment regulation, "MIE-AEM-4" ITC and UNE standards)
- Description of the self-propelled mobile crane and components (boom, jib, stabilisers, cabin and accesses, hooks, cables, etc.). General operating
- Types of self-propelled mobile crane. Classification. Differences between telescopic and lattice cranes
- Notions of material resistance (forces, moments, stability). Centre of gravity. Overturning point. Weight calculation. Welding. Profiles (angular, square, round)
- Notions of electricity (effects, protections)
- Maintenance notions. Oil and water levels. Tyre pressure. Injection and pump equipment. Hydraulic, electrical and mechanical operating systems. Cooling, lubrication and brake systems
- Self-propelled safety features (load indicator and limiter, radius indicator, movement limiters, etc.). Safety coefficients
- Mounting and dismounting self-propelled mobile cranes. Boom extension mechanisms. Special mounting procedures (lattice, jib cranes, etc.)
- Location of the crane in the work zone (overview of the setting, slopes, electrical liens, underground piping, ground resistance, etc.)
- Hook implements: choice of the most appropriate method, repair and maintenance (steel straps, chains, polyester slings, shackles). Servicing and marking. Ways of attaching the load. Special implements (rocker arms)
- Normal operations with the crane (slinging, levelling, interpretation of load diagrams, signals, etc.). Banned manoeuvres
- Special operations with the crane (steering, lifting a load with more than one crane, travelling with the crane fully mounted and deployed, lifting a load without stabilisers, wrecking and demolition with a ball). Precautions indoor
- Crane operations with nearby hazards (slopes, overhead electrical cables, airports, railway, roads, industrial processing plants, etc.)
- Half-yearly, weekly and daily checks. Repair and maintenance of the self-propelled mobile crane (lifting system and vehicle). Inspections of the steel cables and replacement. Checking the hydraulic system and non-return valves
- Duties and responsibilities of the self-propelled mobile crane operator, of the rigger or hitcher and the head of the manoeuvre.
- Occupational health and safety: safety when operating. Safety with wind. Signalling: Travelling with load. Safety checks. Work equipment

c) Practical training:

○ First contact with the crane. Explain start-up to operate from the structure. Movements from the gyratory structure when empty and loaded ○ Operating rules (banned and allowed manoeuvres). Signals ○ Performing daily and weekly safety checks ○ Operations with the safety systems. Use of the crane's electronic control system ("onboard computer") ○ Crane maintenance: different lubrication points, checking oil levels, cleaning, etc. ○ Exercises to stabilise the crane on different types of land. Crane travelling when deployed with load and empty ○ Mounting jib and its use ○ Training in operating with load: tower crane mounting simulation, overturning or lifting a cement silo, pouring concrete, unloading pallets with bricks, etc. ○ Slinging practices: recognising the different types of straps, slings, shackles, chains, hooks and their correct use ○ Driving on roads: mountain passes, slopes and long ramps, etc. ○ Driving "off road": using reducers and blocks ○ Recognition of different types of terrain ○ Workplace safety standards ***6.*** **Issuing and validity of the licence** ***6.1*** **The self-propelled mobile crane operator licence will be issued by the competent authority of the autonomous community, once the applicant has provided proof that the requirements in Section 3 of this annex have been met.** ***6.2*** The licence will be **valid for five years, after which it may be renewed for five-year periods of time after accrediting the requirement established in Section 3.1.e)** of this annex.		

CHAINSAW OPERATING (DURATION: 4 HOURS) REFRESHER: 5 YEARS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
1. Safety devices and components 2. General recommendations 3. PPE, analysis of the appropriate level of protection for the specific team. 4. Transporting the chainsaw 5. Getting ready to work 6. Starting up 7. Basic precautions when working (grip, posture, place, use) 8. Risks and preventive measures 9. Practical sessions on the correct use of the machine	X	X

CBA TRAINING REQUIREMENTS: CONTENT Ed.6

WORKERS IN CONSTRUCTION SECTOR

FOR WORKERS AT	PARTNER COMPANIES	P.P.

GENERAL AGREEMENT FOR THE CONSTRUCTION SECTOR (CCGSC)

Mandatory for all activities inherent to the construction sector.
Mandatory and generally binding for all companies, entities and workers of the activities inherent to the construction sector.
Applicable throughout the territory of the Spanish State.
Applicable to workers contracted in Spain employed by Spanish companies of the construction sector abroad.

X

COMPANIES, ENTITIES AND WORKERS OF THE ACTIVITIES INHERENT TO THE CONSTRUCTION SECTOR	Nº TRAINING HOURS	INSTRUCTION METHOD
CONTENT OF THE FIRST TRAINING CYCLE: INITIAL TRAINING **1.** Workers employed by companies coming under the sphere of application of this Agreement and who carry out construction work, shall have, at least, completed the initial training		
ALL	8	**ATTENDANCE-BASED**
TRAINING CONTENT BY JOB POST OR TRADE. SECOND, TRAINING CYCLE **1.** It includes what is inherent to the first cycle or initial training **2.** Workers that carry out activities corresponding to any of the job posts or trades must complete the relevant training according to the job post or the trade or trades that they implement **3.** The second training cycle by trade contains a common part and a specific one **to be taught to the workers who carry out multipurpose and multifunction activities** **4.** Specific training actions with 6 hours instruction per trade may be run for those workers who have previously completed a full training action with 20 hours instruction for any of the trades, have done the basic prevention training for construction or the training **has been validated** according to what is stated **5.** Those workers who carried out tasks corresponding to the job posts or trades **not specified in this Agreement** will have to complete training according to those risks and preventive measures associated to those tasks, pursuant to Article 19 of the OH&S Act 31/1995		
ALL		**ATTENDANCE-BASED**
Company management	10	**EXEMPTION**: 1. MIXED ATTENDANCE BASED-REMOTE LEARNING • Attendance base: minimum 25% training hours 2. Exceptionally: REMOTE LEARNING
Work managers and implementation technicians	20	
Middle Management	20	
Prevention Officers	70	**EXEMPTION**:

		1. MIXED ATTENDANCE BASED-REMOTE LEARNING • Attendance based: minimum 20 training hours	
Office staff	20	**EXEMPTION**: 1. MIXED ATTENDANCE BASED-REMOTE LEARNING • Attendance base: minimum 25% training hours	
Training by job post or trade. • Masonry • Demolition and refurbishment work • Formwork • Steel framework • Plastering • Electricity, assembly and maintenance work of HV and LV electrical facilities • Plumbing and climate control facilities • Exterior cladding • Paint • Welding and tiling • Lifting equipment operators • Vehicle operators and of earth movement machinery • Manual equipment operators • Waterproofing and insulation work • Erecting tubular structures • Operators of temporary work and auxiliary facilities: asphalt-mixing, concrete, and aggregate crushing and sorting plants • Stabilising concourses and paving • Applying surfacing materials • Road maintenance and operations • Tunnelling and shoring up underground excavations and embankments • Special foundations, drilling and boring • Railway construction and maintenance • Maritime work • Work on sewage, sanitation and supply network • Work to assemble concrete prefabs on site • Material workshop operator: industrial stones, processing or transformation of materials, quarrying and similar • Welding work • Plastering, fitting laminated plaster boards and similar • Machinery and vehicle maintenance	20 **Common Part**: 14 training hours **Specific part**: 6 training hours each of the specific parts	.	
Basic prevention level in construction	60 (since 06/09/2007, the date on which the IV CCGSC was signed, the	**EXEMPTION**: 1. ATTENDANCE-BASED	

	length of basic training in this sector has been 60 training hours)	2. MIXED ATTENDANCE BASED-REMOTE LEARNING • Attendance based: minimum 20 training hours

AUTHORISATION OF TRAINING ENTITIES

1. The FLC may run the first and second cycle, along with the basic training, either directly or through the entities or companies that have been authorised to provide occupational health and safety training activities, as per the requirements set out in the relevant procedure in Annex IV of this Agreement.
2. Entities established as external prevention services accredited by the labour authority or companies coming under the scope of application of this Agreement with their own preventive organisation may seek authorisation to provide preventive training.
3. Entities seeking to be authorised by the Construction Labour Foundation to provide occupational health and safety training, pursuant to Chapter III of Heading III of Book III of this agreement shall meet the requirements established therein.
4. Authorisation procedure as per Article 159 and Annex XIV

PROFESSIONAL CONSTRUCTION CARD

1. Document issued by the Construction Labour Foundation that **is a means of way of accrediting**, among other aspects, the sector's specific occupational health and safety received from the sector by the worker
2. It accredits that its holder has at least received basic occupational health and safety training
3. It expires after 5 years

VALIDATION OF OCCUPATIONAL HEALTH AND SAFETY TRAINING

VALIDATION OF OCCUPATIONAL HEALTH AND SAFETY TRAINING	
Training set out in the Prevention Services Regulation (amended by RD 337/2010), and 1161/2001, along with the training indicated in the "Technical Guide" of RD 1627/1997	**Recognition of the preventive training specified in the VI CCGSC**
Higher level training or university Master's Degree in OH&S	– Initial Training – Company management – Work managers and implementation technicians – Middle Management – Prevention Officers – Office staff – Trades common part
Intermediate level training or VT as Higher Technician in Occupational Health and Safety (The official qualification of "Higher Technician in Occupational Health and Safety" regulated by Royal Decree 1161/2001 has the same validity for the purpose of recognising qualifications)	– Initial Training – Company management – Work managers and implementation technicians – Middle Management – Prevention Officers – Office staff – Trades common part
Basic training in the construction sector	– Initial Training – Work managers and implementation technicians

	– Middle Management – Office staff – Trades common part
Construction health and safety coordinator	– Initial Training – Work managers and implementation technicians – Middle Management – Office staff – Trades common part

TRAINING ENVISAGED IN THE STATE AGREEMENT FOR THE METAL SECTOR

Recognition of the training received by the workers coming under the State Agreement for the Metal Sector, provided that it has been run by Construction Labour Foundation or by an entity whose training has been authorised by the FMF or FLC, pursuant to the requirements established in their respective agreements, is set out in the following table:

Preventive training set out in Annex IV of the State Agreement for the Metal Sector	**Recognition of occupational health and safety training specified in CGSC VI**
First training cycle: Initial level	Initial Training
Senior management of the company	Company management
Managers overseeing and technicians implementing the activity	Work managers and implementation technicians
Middle Management	Middle Management
Office staff	Office staff
Steel framework	Steel framework
Electricity, relating to the fitting and maintenance work of HV and LV electrical facilities	Electricity, assembly and maintenance work of HV and LV electrical facilities
Plumbing and climate control facilities	Plumbing and climate control facilities
Lifting equipment operators	Lifting equipment operators
Manual equipment operators	Manual equipment operators
Waterproofing and insulation	Waterproofing and insulation
Erecting tubular structures	Erecting tubular structures
Railway construction and maintenance	Railway construction and maintenance
Basic prevention level of the metal activities in construction	Basic prevention level in construction

TRAINING SET OUT IN THE STATE COLLECTIVE AGREEMENT FOR THE TIMBER INDUSTRY

Recognition of the training received by the workers coming under the State Agreement for the Timber Sector, provided that it has been run by Construction Labour Foundation or by an entity whose training has been authorised by the FLC, is set out in the following table:

FLMM Agreement training content	**General Agreement for the Construction Sector training content**
Initial training (8 hours)	Lifelong Learning Centre or initial level (8 hours)
Basic training (50 hours. RD 39/1997)	Basic training (60 hours. From September 2007
Senior Management (10 hours)	Senior management of companies (10 hours)
Managers overseeing and technicians implementing the activity (20 hours)	Work managers and implementation technicians (20 hours)
Middle management (20 hours)	Middle management (20 hours)

In addition to the above, there are other types of training recognitions set out expressly in different tables in the Collective Agreement, which will have to be consulted as necessary. These include, but are not limited to: **1.** Training as part of the courses for vocational training qualifications and for certificates of professional competence • Table 1: Recognition summary table • Table 2: Recognition of former vocational training qualifications (LOGSE and earlier) in the educational system covering building and civil works • Table 3: Recognition of former vocational training qualifications (LOE in the educational system covering building and civil works • Table 4: Recognition of certificates of professional competence covering building and civil works • Table 5: Recognition of certificates of professional competence covering other professional groups. • Table 6: Recognition of former vocational training qualifications (LOE in the educational system covering other professional groups • Table 7: Recognition of new vocational training qualifications (IOE in the educational system covering other professional groups • Table 8: Recognition if former certificates of professional competence and of specialisation of the public employment service **2.** Training set out in the General Regulations of Basic Mine Safety Standards Recognition of the training set out in ITC 02.1.02, provided that it has been run by the Construction Labour Foundation or by an entity with the training authorised by the former, is summarised in the following table: • Training recognition		

METAL SECTOR WORKERS		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
STATE COLLECTIVE AGREEMENT OF THE INDUSTRY, TECHNOLOGY AND SERVICES OF THE METAL SECTOR (CEM) All the companies and workers involved in the manufacturing, preparation and transformation processes, and in the assembly, repair, upkeep, maintenance, storage or commissioning of industrial equipment and facilities, which are related to the Metal Sector. • Thus, **the following activities and products** are included in the scope of application of this Agreement: metallurgy, steelmaking; automotive and its components; shipbuilding and its auxiliary industry; aerospace industry and its components, along with railway equipment, renewable energy components; robotics, automation, automatisms and their programming, computers and their peripherals or auxiliary devices; integrated and printed circuits and similar articles; technological infrastructures; information and telecommunication technologies and equipment; and any type of electronic, electrical or mechanical equipment, products and devices, including maintenance and manufacturing of unmanned systems, whether autonomous or controlled (drones). • **That scope also includes** companies engaged in engineering, engineering technical services, analysis, inspection and testing, manufacturing, assembly and/or maintenance, which are implemented in the industry and at electricity generation, oil, gas and water treatment plans; along with companies that lay power lines, telephone cables and networks, IT, satellites, signalling and electrifying of railways, electrical, instrumentation, air conditioning and industrial cold storage, plumbing and heating facilities; manufacturing, installation and assembly of security systems (theft and fire) and other complementary and auxiliary activities of the Sector. • Furthermore, **the following activities are included:** welding and joining technologies, lagging, tower cranes, solar panels, and jewellery, watchmaking or costume jewellery; cutlery and kitchenware; lock smithery; weapons; medical devices; precision mechanical and optical industry; lamps and electrical appliances; upkeep, disconnecting and reconnecting meters; recovery and recycling of metallic secondary raw materials, along with any other complementary and/or specific activities of the Sector. • Furthermore, **the following activities are included:** manufacturing, installation, maintenance or assembly of industrial equipment, metallic carpentry, boilermaking, machining and automation, the lifting, escalators, conveyors and mechanical walkways sub-sectors included in the Sector or in any other that requires such services, along with cleaning industrial machinery. • **The following activities are likewise included within the Sector:** repairing electronic, electrical or mechanical devices; vehicle maintenance and repair; MOT and auxiliary, complementary or similar activities, directly related to the Sector. • Metallurgy and producing metal containers and cans will also be applicable to the industry, when sheet thicker than 0.5 mm is used in their manufacturing. • Manufacturing, fitting, maintenance and repairing electricity generation and/or distribution facilities, elements or components are likewise included within the sector. • **The Collective Agreement will not include** companies selling articles that are exclusively part of a marketing process. • **All those companies will also be affected that, by virtue of any type of contract, have several main activities, any of which are included in the functional sphere of this Collective Agreement, which is applicable to the workers carrying out those activities**. • Companies that pursuant to any type of contract carry out activities of the Sector **regularly (not occasionally or on an ancillary basis)**, will also be affected by the functional sphere of this Collective Agreement, even though none of those activities are main or prevailing. • The aforementioned activities in the field of application of this State Collective Agreement are included in **Annex I**. The **NACEs included in that Annex** are by way of example and are not exhaustive, and may be expanded, reduced or complemented by the negotiating commission according to any changes to the National Classification of Economic Activities.	**X**	

- At those work centres relating to vehicle maintenance and repair which is carried out in parallel to sales, the CEM will apply to the workers carrying out the maintenance and/or repair work.
- Applicable throughout Spanish territory.
- It will also affect workers contracted in Spain and working Spanish companies abroad.

A distinction is made between:

A. Minimum occupational health and safety training content for the workers of the metal sector whose activity is **NOT** carried out at construction sites

B. Minimum occupational health and safety training content for the workers of the metal sector whose activity IS carried out in construction work

C. Recognition of the training received by the workers about the workplace being considered as a construction site, and carry out their activity at a different workplace, and vice versa.

A. MINIMUM OCCUPATIONAL HEALTH AND SAFETY TRAINING CONTENT FOR THE WORKERS OF THE METAL SECTOR WHOSE ACTIVITY IS NOT CARRIED OUT AT CONSTRUCTION SITES

WORKERS FROM METAL SECTOR COMPANIES WHO DO NOT WORK ON CONSTRUCTION	Nº TRAINING HOURS	*INSTRUCTION METHOD*
Senior Management	*6*	*Attendance-based or remote learning*
Workers who carry out their tasks in offices	*6*	*Attendance-based or remote learning*
Workers providing production and/or maintenance trades Trades training	*20 (12 core + 8 post specific)*	*Attendance-based*
Workers with basic preventive functions Prevention Officers and Members of the CSS)	*50*	*Attendance-based (content relating to the activity of the production and/or maintenance workers lasting 20 hours)* *The other hours, up to 50, can be remote learning*
Refresher training (Every 4 years)	*4*	*Attendance-based* *(Management and Office Staff may be by remote learning)*

Production trades:

- C.1) CNAE 24 activities: including manufacture, production and transformation of iron, steel and ferro-alloy, and first transformation (manufacture of steel, casting of metals, manufacture of moulds, manufacture of pipes and similar)
- C.2) CNAE 30.1 and 33.15 activities: ship building, repair and maintenance at shipyards and docks
- C.3) For forging operators
- C.4) For welding and flame cutting operators
- C.5) For operators of chip removal machining machines
- C.6) For operators of abrasion machining machines
- C.7) For operators of metal cutting and deformation machining machines
- C.8) For operators carrying out surface treatments of metal workpieces: degreasing, cleaning, pickling, coating, painting
- C.9) For operators carrying out pre-fitting, fitting, change of format and assembly in factories

- C.10) For metallic carpentry work
- C.3) For jewellery workers
- C.12) For mechanical work, machine maintenance and repairs, industrial equipment and/or electro-mechanical equipment (aerospace industry, etc.)
- C.13) For work in vehicle repair workshop
- C.14) For installing, maintenance and repairing IT equipment, automatisms and their programming, computers and their peripherals or auxiliary devices; information and telecommunications technologies and equipment, information and data networks (ICTs)
- C.15) For installers and repairs of power lines and equipment
- C.16) For plumbing work, air-conditioning-heating installations, domestic hot water installations and thermal solar facilities
- C.17) For lift installation, maintenance and repair work
- C.18) For waterproofing and insulation work
- C.19) For tubular structure erection work
- C.20) For railway construction and maintenance work
- C.21) For telecommunication infrastructure installation, maintenance and repair work (ICT and digitalisation)
- C.22) For work on gas pipelines and combustible gas distribution networks
- C.23) For work on other type of facilities such as photovoltaic solar facilities or wind power facilities
- C.24) For work to recover and recycle metallic secondary raw materials
- C.25) For quality control, verification and inspection work of semi-finished materials and finished products of the sector
- C.26) For drivers/hauliers
- C.27) For forklift-truck drivers
- C.28) For gantry-crane operators
- C.29) For lifting-platform operators
- C.30) For warehouse, logistics and supply operators in the manufacturing processes (including packaging, preparing products, reprocessing, whether or not with the help of mechanical elements and other tasks to provide and supply materials and components).
- C.31) For drivers of self-propelled mobile cranes.
- C.32) For activities that are not expressly regulated in this collective agreement

NOTES:

1. Should the **main activity of the worker be made up of several activities linked to different trades**, the training module will be used that brings together the largest percentage or time of what is required. The training contents of the different activities that make up the general remit of the job post **must be completed within 4 years.**
2. **C.32) Training content for activities that are not expressly regulated in this collective agreement:**
   - 2.1. The preventive training for activities that are not expressly regulated in this Collective Agreement will focus, among other aspects, on the risks of the activity and their relevant preventive measures. In any event, the content set for the core part and the specific part regulated in Section C. 1 and C. 2. will be considered when designing and providing the preventive training.
   - 2.2. The minimum training content for activities not expressly regulated in this Collective Agreement will include the core part established in Section c) 3.1., with a duration of 12 hours, and a specific part of eight hours as per Section c) 3.2 depending on the non-regulated activity, and will be attendance based.
3. Should the main activity of the worker consist of several activities linked to different trades, the emphasis will be on ensuring that the training considers all the associated risks and preventive measures **in the general outline of the refresher module**.

CLARIFICATION:
Given that the required training regulation sets MINIMUM training contents in the specific cases of the trades *C.27) For forklift drivers / C.28) For gantry-crane operators / C.29) For lifting platform operators / C.31) For self-propelled mobile crane drivers,* , the training here has to be considered, as it is worth pointing out again, as MINIMUM, and it must be complemented, in each case, with the specific training envisaged in the relevant model of this CBA TRAINING REQUIREMENTS VALIDATION CRITERIA: CONTENT:

- Operating forklift trucks and lifting loads
- Operating gantry crane

- Operating lifting platform
- Operating self-propelled mobile crane

B. MINIMUM OCCUPATIONAL HEALTH AND SAFETY TRAINING CONTENT FOR THE WORKERS OF THE METAL SECTOR WHOSE MAIN ACTIVITY IS CARRIED OUT ON CONSTRUCTION SITES

WORKERS FROM THE METAL SECTOR WHO DO WORK ON CONSTRUCTION SITES	Nº TRAINING HOURS	INSTRUCTION METHOD
CONTENT OF THE FIRST TRAINING CYCLE: INITIAL LEVEL		
All	8	Attendance-based (Annex V)
TRAINING CONTENT ACCORDING TO THE POST. SECOND, TRAINING CYCLE		
All		
Senior Management	10	ANNEX V 1. Attendance-based 2. Mixed • Attendance-based: 2.5 hours • Remote learning: 7.5 hours 3. Exceptionally: remote learning
Managers overseeing and technicians implementing the activity	20	Attendance-based
Middle Management	20	Attendance-based
Prevention Officers	50	NOT SPECIFIED
Office staff	20	ANNEX V 1. Attendance-based 2. Mixed • Attendance-based: 5 hours • Remote learning: 15 hours
Training by job post or trade. Activities of the Metal Sector in construction works: • Steel framework • Electricity, relating to the installation and maintenance of high and low voltage electrical facilities • Plumbing and climate control facilities • Installing lifts • Lifting equipment operators • Manual equipment operators • Installations, repairs, fitting, locksmith metallic structures and metallic carpentry • Waterproofing and insulation work	20 The 20-hour training includes 8 hours at the lifelong learning centre	ANNEX V Attendance-based The **6-hour specific training by trades** will be attendance based

• Tubular structure erection work • Railway construction and maintenance work • Vehicle and machinery maintenance work at construction sites • Work at telecommunication facilities • Work on gas pipelines and combustible gas distribution networks		
Basic prevention level of the Metal activities in construction	60	ANNEX V 1. Attendance-based 2. Mixed • Attendance-based: 20 hours (Comparable to the First Cycle (8 hours) and to 14 hours of the Second Cycle. In this case, the worker will have to receive 6 additional training hours in person in order for the recognition of the specific training relating to a job post or trade of this Second cycle) • Remote learning
Refresher training (Every 4 years)	4	ANNEX IV COMPULSORY for: • Technicians • Office staff • Middle Management • Operators by trades 1. Attendance-based 2. (remote learning option for office staff)

NOTES

1. Should the main activity of the worker consist of several activities linked to different trades, the emphasis will be on ensuring that the training considers all the associated risks and preventive measures, **in the general outline of the refresher module**.

In order **to avoid overlaps in the training** of workers, those who have completed training regarding the consideration of the workplace as construction site, and work in a different place or, conversely, that training received will be recognised as established in the following table.

C. RECOGNITION OF THE TRAINING RECEIVED BY THE WORKERS ON THE WORKPLACE BEING CONSIDERED AS A CONSTRUCTION SITE, AND THEIR CARRYING OUT THEIR ACTIVITY AT A DIFFERENT WORKPLACE, AND VICE VERSA.

TRAINING AT SOURCE	ACCESS TO:	PRIOR REQUIREMENTS
Metal basic level course (50 hours)	Construction basic level course (60 hours)	14-hour model on trade core part defined as standard. (Annex VI Section B agreement)
Metal basic level course (50 hours)	Construction trade course (20 hours)	Trade specific part module (6 hours)
Construction basic level course (60 hours)	Metal basic level course (50 hours)	Automatic recognition
Construction basic level course (60 hours)	Metal trade course (20 hours)	Trade specific part module (8 hours)
Construction trade course (20 hours)	Metal trade course (20 hours)	Trade specific part module (8 hours)
Metal trade course (20 hours)	Construction trade course (20 hours)	Trade specific part module (6 hours)

PROFESSIONAL CARD AND AUTHORISATION OF TRAINING ENTITIES

METAL SECTOR PROFESSIONAL CARD	CONSTRUCTION PROFESSIONAL CARD FOR THE METAL SECTOR
Have completed, at least, **one of the training** modules established in Annex II	Have received, at least the **minimum initial** training established in Annex IV
Expires at 5 years	Expires at 5 years

AUTHORISATION OF TRAINING ENTITIES. REQUIREMENTS	AUTHORISATION OF TRAINING ENTITIES. REQUIREMENTS
Entities established as external prevention services (SPA) accredited by the labour authority or companies in the activity sectors established in this Agreement with their own preventive organisation may seek authorisation from FMF to provide preventive training	Entities established as external prevention services (SPA) accredited by the labour authority or companies in the activity sectors established in Article 95.1 of this Agreement with their own preventive organisation may seek authorisation from FMF to authorise and recognise the preventive training.

CRITERIA RELATING TO THE OCCUPATIONAL HEALTH AND SAFETY TRAINING OF METAL SECTOR WORKERS ON CONSTRUCTION SITES: RECOGNITIONS

1. RECOGNITION OF THE TRAINING OF METAL SECTOR WORKERS REGARDING INCLUDING PREVENTION SERVICES REGULATION, AS WELL AS THAT RECEIVED FROM THE HEALTH AND SAFETY COORDINATORS.

RECOGNITION OF PREVENTIVE TRAINING FOR THE METAL SECTOR	
Intermediate level training	– **Initial Training** – **Senior management** – **Work managers and implementation technicians** – **Middle Management**

	– **Prevention Officers** – **Office staff** – **Trade common core (14 hours)** – **Basic course**
Higher level training	– **Initial Training** – **Senior management** – **Work managers and implementation technicians** – **Middle Management** – **Prevention Officers** – **Office staff** – **Trade common core (14 hours)** – **Basic course**
50-hour basic training and run from 1 January 1998 to 31 December 2009 **60-hour basic training**	– **Initial Training** – **Work managers and implementation technicians** – **Middle Management** – **Office staff** **Trade common core (14 hours)**
Health & Safety Coordinator	– **Initial Training** – **Work managers and implementation technicians** – **Middle Management** – **Prevention Officers** – **Office staff** – **Trade common core (14 hours)**

2. RECOGNITION OF SECOND CYCLE TRAINING SPECIFIED IN THE STATE COLLECTIVE AGREEMENT OF THE METAL SECTOR

In the second cycle trade training, there is a **common or core part, lasting 14 hours** and a **specific part** that **lasts 6 hours**.

The **6-hour specific training by trades** will be attendance **based**.

The **specific part** establishes training content for the following posts or trades:

- Steel framework
- Plumbing and climate control facilities
- Lifting equipment operators
- Manual equipment operators
- Installations, repairs, fitting, locksmith metallic structures and metallic carpentry
- Waterproofing and insulation work
- Tubular structure erection work
- Railway construction and maintenance work
- Vehicle and machinery maintenance work at construction sites
- Work at telecommunication facilities
- Work on gas pipelines and combustible gas distribution networks

3. EXEMPTIONS FOR THE TRAINING ON HV AND LV ELECTRICITY, FITTING AND MAINTENANCE CONTENT FOR INSTALLING LIFTS

Should a worker **have received the basic training** in metal activities in construction, the Second Cycle specific training will be recognised of the electricity module: installing and maintenance of HV and LV facilities or that of the lift installation module **with an additional six-hour attendance-based training** per module, as per the specific content defined in this Section C of Annex VI.

• **Except for the** electricians or installation and maintenance operators of HV and LV facilities and for lift or service lift installers, **specific 6-hour training sessions can be run** for those job posts or trades and for those workers **who, previously, have completed a full 20-hour training action**. • As the training action content for manual equipment operators are mainly included in the different trades lists, they do not need to be repeated. • **In any event, the 20-hour training actions remain for workers who only wish to carry out one of the trades**		

OPERATING DRONES		
FOR WORKERS AT	**PARTNER COMPANIES**	**P.P.**
New community legislation framework to govern the use of unmanned aircraft systems (UAS), commonly known as "drones", and the main changes that will occur with respect to Royal Decree 1036/2017. **EUROPEAN LEGISLATION** • **Consolidated Commission Implementation Regulation (EU) 2019/947** which includes the amendments of Implementation Regulation (EU) 2020/639 and Implementation Regulation (EU) 2020/746 • **Consolidated Commission Delegated Regulation (EU) 2019/945** which includes the amendments of Delegated Regulation (EU) 2020/1058 **NATIONAL LEGISLATION** • **Royal Decree 1036/2017, of 15 December**, regulating the civil use of aircraft piloted by remote control, and amending Royal Decree 552/2014, of 27 June, enacting the Air Regulation and common operational provisions for air navigation services and procedures and Royal Decree 57/2002, of 18 January, approving the Air Traffic Regulation. Those legislative provisions in Royal Decree 1036/2017, regulating the civil use of aircraft piloted by remote control, which are contrary to previous European regulations will automatically lapse on 31 December 2020. However, those aspects not envisaged in the European framework, such as public security provisions or restrictions on UAS flights according to the operation site envisaged in Royal Decree 1036/2017, along with the air rules applicable to the RPAS of Royal Decree 1180/2018 enacting the Air Regulation, will continue to be applicable to UAS operations. **KEY ASPECTS** **1.** Commission Implementation Regulation (EU) 2019/947 **will be applicable as of 31 December 2020** with the following transitional period. **2.** The European legislation **applies to any unmanned aircraft regardless of its size and use**, whether professional or recreational purposes (including model aircraft). Furthermore, it envisages **autonomous operations** (without pilot being able to intervene) and, depending on the operational category, **air transport** with UAS and **swarms are allowed.** **3.** UAS operations shall be informed based on three operational categories according to the risk of the operation: **'open'**, **'specific'** and **'certified'**. **4.** **UAS operators must be registered with** AESA (Spanish Aviation Safety Agency) and indicate their registration number on the unmanned aircraft, thus creating an interoperable register of operators at community level. **5.** **A new pilot training scheme is established** based on the risk of the operation and the UAS actions. An advanced or basic RPAS pilot certificate is not necessary. Pilots must pass the AESA online exam for open category operations. Pilots certified pursuant to Royal Decree 1036/2017 must take refresher courses to adapt their knowledge to European requirements.	**X**	

6. In general, **medical certificates are not required** for remote pilots in the 'open' and 'specific' categories. Therefore, and except in a few cases, operators will not need to pass a LAPL, Class 1, Class 2 or Class 3 aircraft medical exam.

7. Different procedures and requirements are defined for **operator clearance** and to **authorise operations**. UAS operators do not need operational authorisation for those in 'open' category or in the 'specific' category if the operation is considered a standard scenario.

8. Member States may define **national standard scenarios** and accept declarations from UAS operators based on those standard scenarios. Any declaration shall be no longer valid from 2 December 2023.

9. **The specialised air operation and experimental flight concept disappears**.

10. The operational scenarios for which AESA currently requires authorisation have changed; **the vast majority of operations that require authorisation under Royal Decree 1036/2017 will not need it with European legislation**.

11. Remote **pilot certificates** and their UAS operator **authorisations or declarations** issued on the basis of Royal Decree 1036/2017 **will be adapted prior to 1 January 2022** pursuant to the terms and conditions established.

12. **UAS geographical zones** will be defined in which UAS operations or access to them with certain aircraft will be allowed, forbidden or restricted. Information on those zones will be digitally facilitated in a common format for all European Union countries.

13. Requirements are established for the remote identification of drones. In other words, the majority of unmanned aircraft must have an **electronic remote identification system installed on the aircraft**.

14. The provisions regarding the **product requirements** are established. The UAS must comply with predefined standards and **class identification** and a transition period established after which **the operations of the UAS that do not comply with the class identification will be limited**.

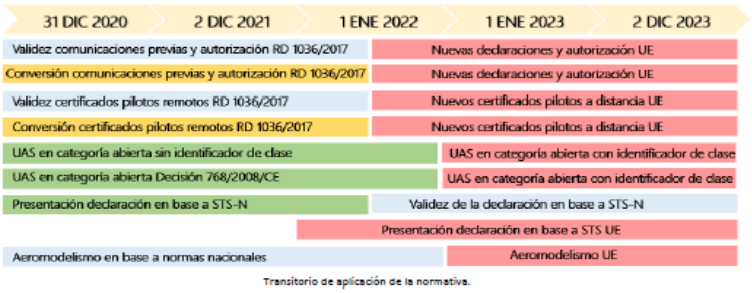
15. Depending on the operational characteristics, **model aircraft clubs or associations** must ask AESA to **issue an authorisation** to operate UAS from 1 January 2023.

APPLICATION OF THE IMPLEMENTATION REGULATION (EU) 2019/947

Commission Implementation Regulation (EU) 2019/947 will be applicable as of 31 December 2020 with the following transitional period:

- **Operational authorisations** granted to UAS operators and the **operational declarations** submitted by them, issued pursuant to **Royal Decree 1036/2017**, will continue to be valid until **1 January 2022.**
- The remote pilot **proficiency certificates** issued pursuant to Royal Decree 1036/2017 will continue to be valid **until 1 January 2022**.
- Remote **pilot certificates** and their UAS operator **authorisations or declarations** issued on the basis of Royal Decree 1036/2017 **will be adapted prior to 1 January 2022** pursuant to the terms and conditions established.
- The UAS that are going to be operated in open category and do not belong to one of the C0, C1, C2, C3 or C4 classes established in Delegated Regulation (EU) 2019/945 may continue to be used **until 1 January 2023** under certain conditions.
- **The UAS** that are not privately manufactured and comply with the product marketing directive currently applicable in the EU (Decision 768/2008/EC), but do not belong to one of the C0, C1, C2, C3 or C4 classes established in Delegated Regulation (EU) 2019/945, **may continue to be introduced on the European Union market before 1 January 2023** under certain conditions.
- **From 31 December 2020 to 2 December 2021**, UAS operators may file operational declarations based on **national standard scenarios ('STS-N')** **published by AESA** to operate in **'specific' category**. These operational declarations based on national standard scenarios ('STS-N') **will be valid until 2 December 2023**.
- **From 2 December 2021** UAS operators may file new operational declarations based on **European standard scenarios ('STS') published by EASA** to operate in **'specific' category with UAS belonging to the C5 class for the standard scenario 1 ('STS-01'), and to the C6 class for the standard scenario 2 ('STS-02').**

- UAS operations as part of **model aircraft** clubs and associations may continue based on the relevant national standards and **without authorisation until 1 January 2023.**



Transitorio de aplicación de la normativa.

OPERATIONAL CATEGORIES

Commission Implementation Regulation (EU) 2019/947 establishes the rules and procedures applicable to the use of unmanned aircraft.

Based on the risk level of the operations, three operational categories are established: **'open' category**, **'specific' category** and **'certified' category**.

'OPEN' CATEGORY

The **'open' category** covers those **low risk** UAS operations. Operations in the 'open' category do not require an operational authorisation by AESA or a UAS operator declaration prior to the start of the operation.

The **'open' category** is divided, in turn, into **three subcategories: A1, A2 and A3**.

1. **Operations in the A1 subcategory** will be conducted in such a way that the UAS will not fly over concentrations of people and try not to fly over any person not taking part in the operation.

The operations in the A1 subcategory will be conducted with UAS that comply with any of the following requirements:

- Privately built whose maximum take-off mass (MTOM) is under 250 g and its maximum speed is under 19 m/s
- Who maximum take-off mass (MTOM) is under 250 g, with no class identification label and they have been introduced on the market before 1 July 2022
- They have Class C0 identification label
- They have Class C1 identification label

2. The **A2 subcategory operations** will be conducted keeping a safety distance of at least 30 m from people not taking part in the operation.

Operations in the A2 subcategory will only be conducted with UAS with the Class C2 identification label.

3. **Operations in the A3 subcategory** will be conducted in areas where there is no danger to any non-participant and at a minimum horizontal distance of 150 m from recreational, industrial, commercial or residential areas.

Operations in the A3 subcategory will be conducted with UAS that meet any of the following requirements:

- Privately built whose maximum take-off mass (MTOM) is under 25 kg
- They have Class C2 identification
- They have Class C3 identification
- They have Class C4 identification

All the operations in the 'open' category will be conducted at an **above ground level of 120 m**.

'SPECIFIC' CATEGORY

The **'specific' category** includes those UAS operations with a **medium risk**. The operations in the 'specific' category require an authorisation by AESA prior to carrying out the operation in question. Mitigating actions identified in an operational risk assessment are to be applied, except when the operation is conducted in a standard scenario ('STS'), in which case a declaration (sworn) by the UAS operator will be sufficient, or when the UAS operator has a light UAS operator certification ('LUC') with the appropriate privilege.

The operations under one of the two standard scenarios published will be conducted with UAS that comply with the following requirements:

- **Standard scenario 1 ('STS-01')**: VLOS operations over a controlled urban land area with UAS that have class C5 identification;
- **Standard scenario 2 ('STS-02')**: VLOS operations over a controlled barely populated land area with UAS that have class C6 identification;

'CERTIFIED' CATEGORY

The **'certified' category** includes those UAS operations with a **high risk**, using UAS typically over 3 m or more, used over concentrations of people; designed and used to transport passengers; to transport hazard goods that could put third parties at risk in case of accident or UAS operations where AESA, based on the risk assessment, considers that the risk cannot be adequately mitigated without certification of the UAS and of the UAS operator and, as applicable, without the remote pilot obtaining a licence.

Operations in the 'certified' category require the UAS to be certified, the remote pilot, as applicable, to have a licence, and that the UAS operator has an "AOC" air operator certificate issued by AESA, to guarantee an appropriate safety level.

The future legislative package that will regulate the certified category **is currently being developed** by European institutions.

Diagrama de las categorías operacionales de UAS.

REMOTE PILOT PROFICIENCY

Commission Implementation Regulation (EU) 2019/947 establishes a new remote pilot training scheme for **operations in 'open' and 'specific' categories**. This new scheme can be broken down into the following training levels based on the proportionality between the operation risk and the performance of the unmanned aircraft:

LEVEL 0. Remote pilots who fly in:

- **'OPEN' category, A1 subcategory**, with an UAS whose maximum take-off mass (MTOM) is **under 250 g** and whose maximum speed is under 19 m/s, only need to be **familiarised with the manufacturer's user manual**, when they fly:
  - ✓ UAS with class C0 marking; or
  - ✓ Privately constructed UAS; or
  - ✓ UAS that comply with the product marketing directive that is currently applicable in the EU (Decision 768/2008/EC) ("Toy Directive") until 1 January 2023.

LEVEL 1. Remote pilots who fly in:

- **'OPEN' category, A1 subcategory** with a Class C1 UAS, or in
- **'OPEN' category, A3 subcategory** with a Class C3 or C4 UAS,

apart from being **familiarised with the manufacturer's user manual**, they must complete a **training course and an online theoretical exam**.

The exam will be based on 9 subjects and will consist of 40 multiple-choice questions. Once the online exam is passed, pilots will be sent proof or evidence of successfully completing the training course and online theoretical exam.

LEVEL 2. Remote pilots who fly in:

'OPEN' category, A2 subcategory with a Class C2 UAS, will have to have **passed the LEVEL 1 training course and online theoretical exam**, will be **familiarised with the manufacturer's user manual**, will complete **self-practical training** under the operating conditions established in subcategory A3, and **will take an additional theoretical exam** based on 3 subjects consisting of 30 multiple-choice questions.

It will be **prerequisite that the remote pilot files a declaration** that they have successfully completed the self-practice training in order to take the additional attendance-based theoretical exam.

Once that exam has been passed, they will be awarded a remote pilot **proficiency certificate**.

LEVEL 3: Remote pilots operating in:

- **'SPECIFIC CATEGORY'** under an **operational declaration** based on a **standard scenario ('STS')**, will take an **additional theoretical exam for standard scenario operations** and **practical training for the relevant standard scenario** ('STS').

Based on the prior training, there are the following alternatives:

a) Remote pilots who hold proof of having successfully completed the training and passed the online theoretical exam for **LEVEL 1** for the **'OPEN'** category, **subcategories A1 and A3**, will take an additional theoretical exam for standard scenario operations ('STS'). The exam will in person and based on 8 subjects and consist of 40 multiple-choice questions.

b) Remote pilots who hold the remote pilot proficiency certificate for **LEVEL 2** for the **'OPEN'** category, **subcategory A2**, will take an additional theoretical exam for standard scenario operations ('STS'). The exam will in person and based on 5 subjects and consist of 30 multiple-choice questions.

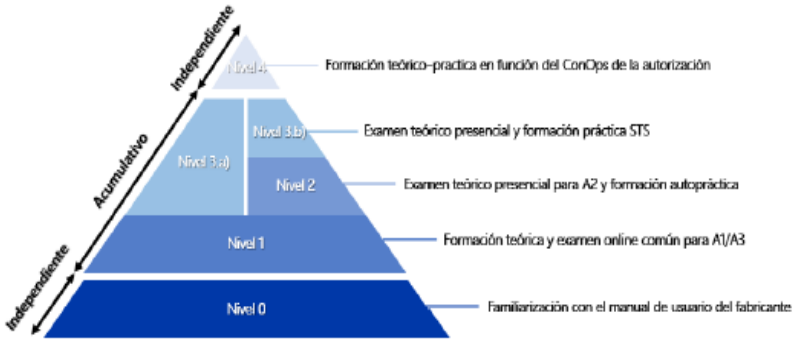
Once the attendance-based theoretical exam for standard scenario operations ('STS') has passed, pilots will be awarded a remote pilot theoretical **certificate** to carry out standard scenario operations.

After obtaining the remote pilot theoretical certificate, remote pilots **will complete the relevant practical skills training for the standard scenario ('STS')** .

After completing this training, the remote pilot will be awarded **accreditation of complete practical skills training for the relevant STS ('STS-01' or 'STS-02')**.

LEVEL 4: Remote pilots operating in:

- **The 'SPECIFIC' category** under an **operational authorisation** application, will complete **theoretical training and practical training** based on the requested operation concept (ConOps).



Niveles de formación de pilotos a distancia

Esquema de los niveles de formación.