



VALIDATION CRITERIA
CBA TRAINING REQUIREMENTS: CONTENT Ed. 4

- Certificate of "SUPERVISED SWITCHING OPERATIONS IN THE E-REDES DISTRIBUTION GRID". That certificate shall be signed and sealed by the Manager of the E-REDES Operations and Maintenance Department or his/her delegate.

APPLICABLE FOR ELECTRICAL GRIDS

DISCHARGE OPERATORS, WORK MANAGERS, WORK SUPERVISORS
"AUTHORISATION OF CONTRACTOR WORKERS IN E-REDES DISCHARGE
OPERATIONS" (MINIMUM DURATION: 24 HOURS)

12 THEORETICAL HOURS/8 PRACTICAL HOURS in Overhead Grid + 4 PRACTICAL HOUSE in CTs

MINIMUM CONTENT OF THE "AUTHORISATION OF THE CONTRACTOR WORKERS FOR E-REDES DISCHARGE OPERATIONS" TRAINING:

- Interpreting E-REDES single-wire diagrams. DCD Orthogonal Diagrams and those for any field equipment.
- Description of the technology of E-REDES 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
 - automatism, command and control devices, reclosers
 - HV and LV fuses
 - LV panels
- Safety measures and means applicable at the facilities.
- E-REDES Health & Safety Manual, in particular the following chapters:
 - General points, electrical hazard
 - Work on electrical facilities
 - Working at heights
- RD 614/2001 regarding electrical hazard. Golden rules
- E-REDES Discharge procedure:
 - Communication with the DCD, identifications, vocabulary and definitions
 - Responsibilities
 - Protected area
 - Work area
- Response to accident and incidents during switching operations

ACCREDITATION:

Certificate of having passed the "AUTHORISATION OF THE CONTRACTOR WORKERS FOR E-REDES 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.



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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 WORK OPERATOR.

APPLICABLE FOR ELECTRICAL GRIDS

INFORMED/AUTHORISED WORKER FOR "NON-ELECTRICAL" WORK CLOSE TO ELECTRICAL FACILITIES
(DURATION: 3 HOURS)
THEORETICAL

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. Personal Protective Equipment for electrical hazard

1.2.2. Collective 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. Classification of the work

1.4.1. Structure and summarised content of RD 614/2001

1.4.2. Classification of the work

1.4.3. Training of workers at risk of electrical hazard

1.5. Working in proximity

1.5.1. General Considerations

1.5.2. Description of some types of work in proximity to live facilities.

1.5.3. Preventive Measures

1.5.4. Access to live complexes and electrical equipment casing



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WORKING AT HEIGHT
(DURATION: 6 HOURS)
THEORETICAL-PRACTICAL
REFRESHER: 5 YEARS

THEORETICAL STAGE:

1. Introduction to working at heights. Risks. Applicable legislation
2. Phases of a fall
3. Personal Protective Equipment (PPEs). Provisions and standards. Rules for use
4. Anti-fall vertical equipment
5. Preventive measures and safety standards for working at height.
6. Other training according to the contracted activity: working on roofs, on piles, on towers, on pylons, with gondolas, etc.

PRACTICAL STAGE:

1. Correct fitting of and checking harnesses and work devices
2. Use of fixed anchorage points
3. Use of fixed lifelines
4. Use of retractable cable

HANDLING CHEMICAL PRODUCTS
(DURATION: 3 HOURS)
THEORETICAL
REFRESHER: 5 YEARS

1. Risks and measures to be adopted
2. Classification of the chemical products used
3. Types of handling 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. PPEs: Personal Protective Equipment

EXPLOSIVE ATMOSPHERES
(DURATION: 2 HOURS)
THEORETICAL
REFRESHER: 5 YEARS

1. Application legislative: RD 681/2003
2. ATEX facilities
3. Flammability limits
4. Ignition sources
5. Zone classification



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| <ol style="list-style-type: none">6. DOPEX document7. Prevention and protection against explosive atmospheres8. Rating of electrical appliances for ATEX atmospheres |
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CONFINED PREMISES (DURATION: 4 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS

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| <ol style="list-style-type: none">1. Types of confined spaces2. Main risks in confined spaces. Asphyxiation, fire and/or explosion, intoxication.3. Preventive measures to control work in confined spaces:<ul style="list-style-type: none">• cleaning and ventilation• measuring and assessment of the inside atmosphere• PPEs• External surveillance• Relief and rescue |
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RISK OF EXPOSURE TO ASBESTOS (DURATION: 2 HOURS) THEORETICAL

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| <p>ART. 13 RD 396/2006</p> <ol style="list-style-type: none">1. Properties of asbestos and its impact on health, including the synergic effect of tobacco use2. Types of products or materials that can contain asbestos3. Operations that can imply exposure to asbestos and the importance of prevention measures to minimise exposure4. Safe professional practices checks and protective equipment5. Function, election, selection, appropriate use and limitations of breathing equipment; as appropriate, according to the type of equipment use, the ways and methods to check the operating of the breathing equipment6. Emergency procedures7. Decontamination procedures8. Waste elimination9. Health monitoring |
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MANUAL HANDLING OF LOADS (DURATION: 2 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS
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| <ol style="list-style-type: none">1. Definitions. Accident rate. Basic legislative framework2. Musculoskeletal risks linked to the job. Awkward positions. Repetitive movements3. Specific preventive measures: lifting manhole covers and underground CT plates4. Handling loads |
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OPERATING FORKLIFT TRUCKS AND LIFTING LOADS
THEORETICAL/PRACTICAL
REFRESHER: 5 YEARS

In line with UNE 58451 STANDARD content

6. TRAINING CONTENT

6.1 GENERAL TRAINING

6.1.1 THEORETICAL TRAINING CONTENT

- 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 this 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 to be found 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 Royal Decree 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. Using on ramps
- 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 in 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.

6.1.2 CONTENT OF THE PRACTICAL TRAINING



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- a) Knowledge of the parts of the machine, visual check of characteristics, maintenance, controls, plates, manuals
- b) Check at 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 non-standard dimensions or characteristics due to its length, form, handling a load simultaneously using two forklifts, etc.

SPECIFIC TRAINING AS PER TYPE OF LOAD 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 from heights
- 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 follows:

	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	

Updating (**REFRESHER**) must be 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	

9 SKILLS ACCREDITATIONS

The operator of work equipment who has received sufficient training to use it must be certified as having successfully passed the test.



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The certificate must include:

- name of the training company and/or people who ran the course
- type of load 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

OPERATING LIFTING PLATFORM
THEORETICAL/PRACTICAL
REFRESHER: 5 YEARS

In line with UNE 58923 5 TRAINING

PROGRAMME STANDARD

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 the equipment
- f) control posts
 - access to the control posts
 - control types
- g) work environment
 - work area
 - signalling the manoeuvre
 - areas close to power lines
- h) levelling
 - with stabilizers
 - 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



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- MEWP translational movement
- j) prevention and protection measures
 - equipment safety systems
 - indicators
 - limiters
 - emergency stops
 - familiarisation
- k) safety standards due to other risks
 - burns
 - noise
 - gas inhalation
- l) commissioning
 - 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 area
- visual perimeter checks 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 Chapter 5 of this standard, **A CERTIFICATE WILL BE ISSUED**, by the duly authorised training institute, regarding 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:** Common to all certificates, it can be taught on site with a **MINIMUM FOUR-HOUR DURATION PER GROUP OF STUDENTS OR BY REMOTE LEARNING WITH A MINIMUM DURATION OF TWELVE HOURS PER STUDENT;**
- **PRACTICAL TRAINING:** There will be two parts for each type of certificate (see Chapter 6):
 - 1- **EXPLANATION AND PRACTICAL DEMONSTRATION OF HANDLING THE EQUIPMENT**
 - 2- **PRACTICAL SESSION PER STUDENT OF, AT LEAST, TWENTY MINUTES**

8. RENEWING THE CERTIFICATE



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8.1 OF THE OPERATORS

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:** Common to all the certificate, it can be taught on site with a **MINIMUM TWO-HOUR DURATION PER GROUP OR BY REMOTE LEARNING WITH A MINIMUM DURATION OF SIX HOURS PER STUDENT**;

– **PRACTICAL TRAINING:** There will be two parts for each type of certificate:

- 1- **EXPLANATION AND PRACTICAL DEMONSTRATION OF THE EQUIPMENT AND ITS TECHNICAL INNOVATIONS**
- 2- **PRACTICAL SESSION PER STUDENT OF, AT LEAST, TWENTY MINUTES**

GANTRY CRANE OPERATING
(DURATION: 5 HOURS)
THEORETICAL/PRACTICAL
REFRESHER: 5 YEARS

In line with UNE 58140-94 TRAINING

DEVELOPMENT STANDARD

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 themes must be included in the **THEORETICAL PART**:

- The operator
- Attitudes and responsibilities
- His/her role regarding the load handling equipment
- The technology of the lifting appliances: terminology and characteristics. 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



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- 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 to use and if it is not identical, the differences will clearly be explained. Visual knowledge of the components, equipment and accessories 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 for the practical courses

In addition of 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.

HOIST OPERATING (DURATION: 5 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS

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



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| <p>3. Main risks when moving loads. Main preventive measures: Personal Protective Equipment</p> <p>4. Standardised symbols and signals on the cranes and hoists in the work zone.</p> |
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OPERATING HYDRAULIC KNUCKLE-BOOM CRANES MOUNTED ON TRUCKS (DURATION: 5 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS

In line with NTP 868/869 content

6. OPERATOR

Operating the crane requires skill, expertise and experience. Trust the operating of the crane only to people who meet the following requirements:

- Physically and mentally suitable (rested, not having consumed 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 and which 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
9. Signalperson - crane operator
10. Final practical assessment



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SLINGING MANOEUVRES (DURATION: 3 HOURS) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS
<ol style="list-style-type: none">1. Way of using and knowledge of slings and MWL according to:<ol style="list-style-type: none">a. its buildb. the number of strands and its angle of pullc. the sling formsd. the sling/material size ratioe. the geometry of the materialf. knowing when they should be decommissioned2. Knowledge of the accessories and how to use them:<ol style="list-style-type: none">a. shacklesb. eyeboltsc. rocker arms/frames/gantriesd. linkse. butts

TOWER CRANE OPERATING THEORETICAL/PRACTICAL REFRESHER: 5 YEARS
<p style="text-align: center;">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.</p> <p><i>Crane operator or tower crane operator licence</i></p> <p><i>1. Purpose and Scope of Application.</i> This Annex seeks to regulate the requirements and procedure to obtain the tower crane operator licence (crane operator).</p> <p><i>2. Crane operator or tower crane operator licence.</i> A tower crane operator's licence is required to operate the tower cranes envisaged in this ITC, obtained in accordance as established in this Annex.</p> <p><i>3. Requirements to obtain the licence.</i> The licence can be obtained by two channels. On the one hand, the following requirements must all be met:</p> <ol style="list-style-type: none">a) Be 18 years old or overb) Hold the Compulsory Secondary Education Certificatec) Pass a medical examination to test visual acuity, sense of direction, balance and hearing acuity and psychological aptituded) Successfully complete a practical-theoretical course taught by an entity accredited by the competent authority of the autonomous community where the course is rune) Pass an exam set by the competent authority of the autonomous community where the aforementioned course has been run <p>On the other hand, workers can directly obtain the crane operator or tower crane operator licence when they have a vocational training qualification, or a professional certificate included in the National Catalogue of Professional Qualifications, whose area of proficiency coincides with the subjects covered by the Handling and Lifting Equipment Regulations, approved by Royal Decree</p>



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2291/1985, of 8 November, and by this Complementary Technical Instruction. In this case, they will also need to pass a medical examination to test visual acuity, sense of direction, balance and hearing acuity and psychological aptitude.

4. Practical-theoretical course

4.1 The practical-theoretical course referred in in Paragraph d) of the above section will **last, at least, a total 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 dismantlable 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, within a one-year period, professional experience in operating tower cranes 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 dismantlable 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.



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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 in Section 3.c) of this annex.**

OPERATING SELF-PROPELLED MOBILE CRANE
THEORETICAL/PRACTICAL
REFRESHER: 5 YEARS

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

Holding the self-propelled mobile crane operator licence for, at least, an equal or superior category to the one of its rated loads, 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 handle and operate self-propelled mobile cranes with a rated load of up to 130 t, inclusive.

Category B: authorises its holder to handle and operate self-propelled mobile cranes with a rated load of over 130 t.

3. Requirements to obtain the licence.

The licence can be obtained by two channels. On the one hand, the following requirements must all be met:

- a) Hold the Compulsory Secondary Education Certificate, **or School Leaving Certificate, or an equivalent qualification for work purposes**
- b) Be 18 at the time of applying for the course envisaged in the section
- c) Successfully complete a practical-theoretical course taught by an entity accredited by the competent authority of the autonomous community
- d) Pass a theoretical-practical exam set by the competent authority of the autonomous community where the aforementioned course has been run.
- e) Pass a specific physical, psycho-technical and medical exam for this type of activity, including testing visual acuity, sense of direction, balance and hearing acuity.

On the other hand, workers can directly obtain the self-propelled mobile crane operator licence when they have a vocational training qualification of a professional certificate included in the National Catalogue of Professional Qualifications, whose sphere of competence coincides with the subjects covered by the Handling and Lifting Equipment Regulations, approved by Royal Decree 2291/1985, of 8 November, and by this Complementary Technical Instruction. In this case, they will also have to pass a specific physical, psycho-technical and medical exam for this type of activity, including testing visual acuity, sense of direction, balance and hearing acuity.



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4. Practical-theoretical course

The course referred to in Paragraph c) of the above Section will consist of a theoretical training module and a practical training module, with the following duration and content, according to 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 Category A theoretical and practical training will be taken into account. 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)
- Notions of maintenance. 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 area (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). Indoor precautions
- Crane operations with hazards nearby (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 of the mobile crane operator, of the slinger and of the manoeuvre supervisor



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- Occupational health and safety: safety when operating. Safety when windy. Signalling: Travelling with loads. 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.
- Slings 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) THEORETICAL/PRACTICAL REFRESHER: 5 YEARS

1. Safety devices and components
2. General recommendations
3. PPEs, 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



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WORKERS IN CONSTRUCTION SECTOR		
GENERAL COLLECTIVE AGREEMENT FOR THE CONSTRUCTION SECTOR		
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.		
COMPANIES, ENTITIES AND WORKERS OF THE ACTIVITIES INHERENT TO THE CONSTRUCTION SECTOR	Nº TRAINING HOURS	INSTRUCTION METHOD
TRAINING 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 aspects 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 recognised as 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 Occupational Health and Safety Act 31/1995		
ALL		ATTENDANCE-BASED
Company management	10	<p style="text-align: center;">EXEMPTION:</p> <p>1. MIXED ATTENDANCE BASED-REMOTE LEARNING</p> <ul style="list-style-type: none"> • Attendance based: minimum 25% training hours <p>2. Exceptionally: REMOTE LEARNING</p>
Work managers and implementation technicians	20	
Middle Management	20	
Prevention Officers	70	<p style="text-align: center;">EXEMPTION:</p> <p>1. MIXED ATTENDANCE BASED-REMOTE LEARNING</p> <ul style="list-style-type: none"> • Attendance based: minimum 20 training hours
Office staff	20	<p style="text-align: center;">EXEMPTION:</p> <p>1. MIXED ATTENDANCE BASED-REMOTE LEARNING</p> <ul style="list-style-type: none"> • Attendance base: minimum 25% training hours



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<p>Training by job post or trade.</p> <ul style="list-style-type: none"> • Masonry • Demolition and refurbishment work • Formwork • Steel framework • Plastering • Electricity, fitting and maintenance of HV and LV electrical facilities • Plumbing and climate control facilities • Exterior cladding • Paint • Welding and tiling • Lifting equipment operators • Earth movement machinery and vehicle operators • 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 	<p>20</p> <p>Common Part: 14 training hours</p> <p>Specific part: 6 training hours each of the specific parts</p>	
<p>Basic prevention level in construction</p>	<p>60</p> <p>(from 06/09/ 2007, date on which the IV was signed CCGSC, the training of basic level in this sector went to having a duration of 60 training hours)</p>	<p style="text-align: center;">EXEMPTION:</p> <ol style="list-style-type: none"> 1. ATTENDANCE-BASED 2. MIXED ATTENDANCE BASED-REMOTE LEARNING <ul style="list-style-type: none"> • Attendance based: minimum 20 training hours



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CBA TRAINING REQUIREMENTS: CONTENT Ed. 4

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 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. The 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 to accredit**, among other aspect, the sector's specific occupational health and safety received 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

RECOGNITION OF OCCUPATIONAL HEALTH AND SAFETY TRAINING

RECOGNITION 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	<ul style="list-style-type: none"> – 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)	<ul style="list-style-type: none"> – Initial Training – Company management – Work managers and implementation technicians – Middle Management – Prevention Officers – Office staff – Trades common part
Basic training in the construction sector	<ul style="list-style-type: none"> – Initial Training – Work managers and implementation technicians



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	<ul style="list-style-type: none"> – Middle Management – Office staff – Trades common part
Construction Health and Safety Coordinator	<ul style="list-style-type: none"> – 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 the 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, fitting 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 the 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)



VALIDATION CRITERIA CBA TRAINING REQUIREMENTS: CONTENT Ed. 4

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 proficiency
 - 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 proficiency covering building and civil works
 - Table 5: Recognition of certificates of professional proficiency 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 of the former certificates of professional proficiency 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



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METAL SECTOR WORKERS

**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 fitting, repairing, 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, fitting and/or maintenance, which are implemented in the industry and at electricity generation, oil, gas and water treatment plants; 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; locksmithery; 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.

- Moreover, **the following activities are included:** manufacturing, installation, maintenance or fitting 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.



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- 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 scope 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 scope of this Collective Agreement, even though none of those activities were main or predominant.
 - The aforementioned activities in the field of application of this State Collective Agreement are included in **Annex I**. The **CNAEs included in that Annex** are by way of example and are not exhaustive, and may be expanded, reduced or complemented by the negotiating committee according to any changes to the National Classification of Economic Activities (CNAE).
 - 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 at construction sites
- 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.



VALIDATION CRITERIA
CBA TRAINING REQUIREMENTS: CONTENT Ed. 4

A. <u>MINIMUM OCCUPATIONAL HEALTH AND SAFETY TRAINING CONTENT FOR METAL SECTOR WORKERS WHOSE ACTIVITY IS <u>NOT</u> CARRIED OUT AT CONSTRUCTION SITES</u>		
METAL SECTOR WORKERS WHO DO <u>NOT</u> WORK AT SITES OF THE SECTOR	Nº TRAINING HOURS	INSTRUCTION METHOD
Senior Management	6	Attendance-based or remote learning
Employees who are working 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 (each 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



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- 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 the service provided. 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 establishes MINIMUM training content, in the specific trades of the trades C.27) *For forklift truck operators* / 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 the 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



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CBA TRAINING REQUIREMENTS: CONTENT Ed. 4

B. MINIMUM OCCUPATIONAL HEALTH AND SAFETY TRAINING CONTENT FOR THE WORKERS OF THE METAL SECTOR WHOSE MAIN ACTIVITY IS CARRIED OUT AT CONSTRUCTION SITES		
WORKERS OF METAL SECTOR COMPANIES THAT DO WORK AT CONSTRUCTION SITES	Nº TRAINING HOURS	INSTRUCTION METHOD
TRAINING 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 <ul style="list-style-type: none"> • Attendance-based: 2 and a half hours • Remote learning: 7 and a half 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 <ul style="list-style-type: none"> • Attendance-based: 5 hours • Remote learning: 15 hours
Training by job post or trade. Activities of the Metal Sector in construction work: <ul style="list-style-type: none"> • 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 • tubular structure erection work • railway construction and maintenance 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



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CBA TRAINING REQUIREMENTS: CONTENT Ed. 4

<ul style="list-style-type: none"> • 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	<p style="text-align: center;">ANNEX V</p> <ol style="list-style-type: none"> 1. Attendance-based 2. Mixed <ul style="list-style-type: none"> • Attendance-based: 20 hours (will be 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 (each 4 years)	4	<p style="text-align: center;">ANNEX IV</p> <p>MANDATORY for:</p> <ul style="list-style-type: none"> • Technicians • Office staff • Middle Management • Operators by trades <ol style="list-style-type: none"> 1. Attendance-based 2. (remote learning allowed 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 that have received it regarding the consideration of the workplace as a construction site, and work in a different place or, conversely, that training received will be recognised as established in the following table.



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CBA TRAINING REQUIREMENTS: CONTENT Ed. 4

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		
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 completed, at least, the minimum initial training established in Annex IV

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 provide preventive training



**VALIDATION CRITERIA
CBA TRAINING REQUIREMENTS: CONTENT Ed. 4**

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 BY HEALTH AND SAFETY COORDINATORS

RECOGNITION OF PREVENTIVE TRAINING FOR THE METAL SECTOR	
Intermediate level training	<ul style="list-style-type: none"> – 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	<ul style="list-style-type: none"> – 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	<ul style="list-style-type: none"> – Initial Training – Work managers and implementation technicians – Middle Management – Office staff – Trade common core (14 hours)
Health & Safety Coordinator	<ul style="list-style-type: none"> – 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 hour** and a **specific part** lasting **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:



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- 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 HV AND LV ELECTRICITY, FITTING AND MAINTENANCE CONTENT FOR INSTALLING LIFTS

If a worker **has 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 electricians** or installation and maintenance operators for HV and LV facilities and from 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 trade 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**



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OPERATING DRONES

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** establishing a transition period.
2. The European legislation applies **to any unmanned aircraft regardless of its mass and use**, whether for professional or recreational purposes (including model aircraft). Furthermore, it envisages **autonomous operations** (without the 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 operation risk: **'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.
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.



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7. Different procedures and requirements are defined for **operator clearance** and to **authorise operations**. UAS operators do not need operational authorisation for those in the '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.



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- **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**.



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



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- 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.

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



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



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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 practical skills training for the relevant 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 request operation concept (ConOps).



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