



Vocational Family: Maintenance and ancillary production services

Educational Level: Intermediate

**Workplace practice: 350 hours**

Installation and electromechanical maintenance of machinery and production lines

Professional and work areas

- Mining.
- Metalworking and the manufacture of metal products.
- Machine construction and mechanical equipment industries.
- Building and assembly vehicles.
- Textiles.
- Printing and publishing.
- Food and beverages.
- Amusement parks.

#### **Job profile**

- Maintain and repair machinery and industrial equipment, to the appropriate standards of quality and safety and within required deadlines.
- Produce on automated production lines items of the necessary quality and quantity and within the required deadlines, co-ordinating human resources and maintaining equipment and systems of production at the required levels of reliability and availability.
- Assemble and install machinery and industrial equipment on the shop floor, carrying out after-sales service in appropriate conditions of quality and safety, within required deadlines.

## **Activity plan** (Once agreed, it must be entered in the student's practice book.)

Formative activities

### **1 Interpreting technical documentation.**

- Interpreting standard work sheets and processes.

### **2 Establishing the different stages of the work and the operation at each step.**

- Choosing the appropriate tools and resources for the different mechanical and electrical tasks.
- Preparing the materials to be used.
- Checking the foundations, constructions and work surfaces.

### **3 Siting, anchoring and adjusting machines.**

- Connecting machines to compressed air and hydraulic supply lines.

### **4 Assembling piping, equipment and auxiliary components for the production line.**

- Connecting equipment and automatic electronic devices in accordance with diagrams.

### **5 Carrying out standard procedures for commissioning the production line.**

- Checking the system functions by carrying out a series of trials and making any necessary adjustments.

### **6 Interpreting the technical documentation for the production process.**

- Relating the production process to the features and equipment on the line.



**7 Assembling the necessary tools and devices according to the production process.**

**8 Installing and/or preparing control programmes.**

- Adjusting the devices for operating and controlling machinery.
- Adjusting the parameters of the control programmes.
- Checking the production line functions properly by carrying out a series of trials and making any necessary adjustments.

**9 Assembling protective features for the safety of personnel and machines.**

**10 Interpreting technical documentation for the preventive maintenance programme.**

- Interpreting standard work sheets and processes.

**11 Preparing material to be used.**

- Carrying out checking procedures.

**12 Dismantling, component substitution and re-assembly procedures.**

- Checking the installation works properly after corrective measures by means of trials and adjustments.

**13 Carrying out dummy runs to check symptoms.**

- Measuring electrical and mechanical parameters with the appropriate instruments.
- Interpreting instrument readings.
- Establishing a procedure.

**14 Determining the causes of any breakdown, following standard procedures.**

- Substituting faulty parts.
- Checking the installation works properly after corrective measures by means of trials and adjustments.

**15 Identifying the system and the established company quality regulations for the manufacturing process.**

- Identifying the characteristics and parameters to be monitored.
- Preparing and making ready parts and test procedures.
- Measuring and testing in accordance with established operational procedures.
- Identifying quality defects in the product.
- Tracing quality defects to the stages in the manufacturing process.
- Compiling quality control reports.
- Drawing up quality control graphs.