

**Product Name :**  
Surface Treatment Plant

**Product Code :**  
EEH0010



**Description :**

Surface Treatment Plant

**Technical Specification :**

Surface Treatment Plant Manufacturer

Teaching objectives

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This system covers a wide range of themes which can be developed.

Management of the intense currents.

Temperature control.

Electrochemistry.

Handling of pieces.

Automatic.

Study of a system with different technologies.

Goods and people security.

Maintenance of an automated system.

Technical specifications

A) Operative part:

It is composed of a mobile frame, including:

Chemical oil cleaning station.

Rinsing station.

Acid dipping station.

Acid zinc plating station.

Horizontal translation motor.

Vertical translation motor.

Jib crane.

Retention tank.

Filtering block.

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Electrical cabinet.

Transparent safety guard of the working area.

Ventilation hood

The handling of the jib cranes in the 2 axes Y and Z (horizontal and vertical) is made with a speed of displacement of about 0,2 m/s.

Temperature control of the chemical oil cleaning bath by waves-train and static relays.

The feeding of the electrolytic zinc plating bath is made by a current generator of 0-10 A with controlled direct current.

Supply of the current generator from the single phase network.

Display of tension and current.

## B) Operative part:

An electrical cabinet integrating:

A compact PLC with analogical inputs/outputs and TOR, PID regulation, 2 interfaces of communication.

A interactive exploitation dialog terminal with 2 display lines. 20 characters. communication with the PLC on the serial line, UNI-TELWAY protocol, 12 keys function keyboard.

10 service keys and 12 numerical keys.

Programming made on several application pages and alarms pages.

The power supply and people protection devices : differential circuit-breaker, contactors. fuses, transformer.

Current generator for the electrolytic zinc plating bath.

Technical Functions :

The PLC assures the following functions:

Management of 5 positions on the Y axis in order to ensure the operations of chemical oil cleaning, rinsing, acid dipping, rinsing and zinc coating.

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Management of 2 positions on axis (high and low).

Temperature control of the chemical oil cleaning bath.

Manual run.

#### Protection Of People And Environment :

Aspiration of steams above all the tanks.

No waste to the sewage, the wasted baths will be reconditioned in delivery cans of and sent to approved centres for the treatment.

The sounding environment is distinctly lower to 70db.

People security by the transparent surrounding wall locked wit a key.

Auto-control of the door sensor by a security box.

#### Essential requirements

Electric power supply : 3 x 380V + N + E. 16A.

Sanitary water supply.

Outside joining for draining of the noxiousness steams by 3m flexible hose.

Inside Diameter 150 mm.

#### Dimensions and weight

Length 2,4m width 0,69 m.

Height without the hood 1,7 m.

Height with the hood 2,25 m.

Weight 326 kg.

Resonant level < 70 dB(A).

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