

# **DESMEARING line Mod.650/01/P-50**

(Line capability 15 m2/h with Pcb's 610x350 mm. size )

#### GENERAL FEATURES OF THE LINE

Overall dimensions

Length: 8480 mm.
 Width: 2050 mm.
 Height: 1250 ± 20 mm.

Useful width: 650 mm. Height of working table: 960  $\pm$  20 mm.

Travel direction: left to right. (right to left)

• Features of material to treat

Thickness: from 0.5 to 5 mm (total thickness copper + epoxy).

Length: min. 200 mm. max.750 mm. Width: min. 200 mm. max. 610 mm.

Process parameters

Operating speed:
 Conveyor speed:
 0.5 mt/min
 adjustable from 0.3 to 1.3 mt/min.)

adjustation to its inclinity

Temperature of technological solutions: Sweller:  $85^{\circ}\text{C} \pm 5^{\circ}\text{C}$ . Permanganate:  $85^{\circ}\text{C} \pm 5^{\circ}\text{C}$ .

Remover  $35^{\circ}\text{C.} \pm 3^{\circ}\text{C.}$ Heating up time : 2 hours

Dwell time

- Sweller: 90 sec. - Permanganate: 120 sec.

Remover 60 sec.

Consumption and connections

Installed power: 60 kW.
 Control voltage: 110 VAC

Power supply:  $220/380 \text{ Volt} \pm 10\%$ , 50 Hz, 3PH + N + G.

6 ÷ 8 bar.

City water: max. 800 lt/h medium 600 lt/h.

Fume to extract: max.1000 m3/h.
Air to extract: max. 500 m3/h.
Water pressure: 4 bar (max).
Cooling water temperature: max. 10 °C.

- Compressed air (oil free) pressure:

Stand-by unit

- Economy switch-off of the equipment during not operating times



#### **CONFIGURATION of the LINE**

#### Input module

- Module mainly made of PP.
- Metallic parts made of STAINLESS STEEL.
- Conveyor motor AC kW 0.18
- Conveyor rollers.
- Photocells for Stand-by unit.

Module length: 665 mm.

# Treatment module by flooding with Forced Flow (SWELLER)

- Module mainly made of STAINLESS STEEL with outside walls of PP for insulation.
- Metallic parts made of STAINLESS STEEL.
- GLASS lid with safety interlock.
- Squeezing rollers.
- 1 vertical pump kW 0.55 to feed chemical solution from sump to process section, connected to a filter chamber including 7 cartridges of 20" filter fineness of 150 micron.
- 1 magnetic process pump kW 0.55 connected to special STAINLESS STEEL pipeline into process section, improving chemical action through the holes (Patented OCCLEPPO "PUSH-PULL" System) and two pipes on top.
- Manual ball valves to adjust flow.
- Ultrasonic unit including:
  - 1 transducer 25 kHz 400 W
  - 1 power generator
- 3 heaters kW 6 each one made of STAINLESS STEEL.
- Overheating protection unit.
- 2 safety level controls (dry-run).
- Overflow.
- Drain valve.
- Fitting on back of the module for fume extraction, put into Dripping stage...
- Active flooding length: 750 mm.

Module length: 1490 mm.

### Rinsing module

Including three cascade stages

- Module mainly made of PP.
- Metallic parts made of STAINLESS STEEL.
- GLASS lid with safety interlock.
- Squeezing rollers.
- 2 spray manifold with quick jet spraying nozzles (flat) having bayonet connection, each one with 1 tube on top and bottom.
- 2 magnetic spraying pump of kW 0.55 each one.
- 1 magnetic feeding pump kW 0.55 to keep immersion level.
- PP/STAINLESS STEEL pipeline to force water through the holes boards.
- Impurity catchers with filtering net of 500μ.
- Safety level control (dry-run).
- Flowmeter from 40 to 400 lt/h with adj. valve for fresh water input.
- Drain valves.
- Overflow.
- Fitting on back of the module for air inlet.

Module length: 1080 mm.



# Treatment module by flooding with Forced Flow (PERMANGANATE)

- Module mainly made of STAINLESS STEEL with outside walls of PP for insulation.
- Metallic parts made of STAINLESS STEEL.
- GLASS lid with safety interlock.
- Squeezing rollers.
- 1 vertical pump kW 1.1 to feed chemical solution from sump to process section.
- 1 vertical process pump kW 1.1 connected to special STAINLESS STEEL pipeline into process section, improving chemical action through the holes (Patented OCCLEPPO "PUSH-PULL" System) and two pipes on top..
- Manual ball valves to adjust flow.
- 3 heaters kW 6 each one, made of STAINLESS STEEL.
- Overheating protection unit.
- 2 safety level controls (dry-run).
- Unit for electrolytic Manganate Oxidation equipped with anodes and catodes.
- Overflow.
- Drain valve.
- Fitting on back of the module for fume extraction, put into Dripping stages.
- Active flooding length: 1000 mm.

Module length: 1760 mm.

#### Rinsing module

Including three cascade stages

- Module mainly made of PP.
- Metallic parts made of STAINLESS STEEL.
- GLASS lid with safety interlock.
- Squeezing rollers.
- 2 spray manifold with quick jet spraying nozzles (flat) having bayonet connection, each one with 1 tube on top and bottom.
- 2 magnetic spraying pumps of kW 0.55 each one.
- 1 magnetic feeding pump kW 0.55 to keep immersion level.
- PP/STAINLESS STEEL pipeline to force water through the holes boards.
- Impurity catchers with filtering net of 500μ.
- Safety level control (dry-run).
- Overflow and Drain valve.
- Fitting on back of the module for air inlet.

Module length: 1080 mm.

# Treatment module by flooding with Forced Flow (NEUTRALIZER)

- Module mainly made of PP.
- Metallic parts made of STAINLESS STEEL.
- GLASS lid with safety interlock.
- Squeezing rollers.
- 1 magnetic pump kW 0.25 to feed chemical solution from sump to process section, connected to a filter chamber including 3 cartridges of 10" filter fineness of 150 micron.
- 1 magnetic process pump kW 0.25 connected to special .PP/STAINLESS STEEL pipeline into process section, improving chemical action through the holes (Patented OCCLEPPO "PUSH-PULL" System) and one pipes on top.
- Manual ball valves to adjust flow.
- 1 heater kW 3 made of STAINLESS STEEL.
- Overheating protection unit.
- 2 safety level controls (dry run).
- Overflow and Drain valve.
- Fitting on back of the module for fume extraction.
- Active flooding length: 500 mm.

Module length: 890 mm.



#### Rinsing module

Including three cascade stages

- Module mainly made of PP.
- Metallic parts made of STAINLESS STEEL.
- GLASS lid with safety interlock.
- Squeezing rollers.
- 2 spray manifold with quick jet spraying nozzles (flat) having bayonet connection, with 1 tube on top and bottom .
- 2 magnetic spraying pump of kW 0.55 each one.
- 1 magnetic feeding pump kW 0.55 to keep immersion level.
- PP/STAINLESS STEEL pipeline to force water through the holes boards.
- Impurity catchers with filtering net of 500μ.
- 2 safety level controls (dry-run).
- Flowmeter from 40 to 400 lt/h with adj. valve for fresh water input.
- Drain valves
- Fitting on back of the module for air inlet.

Module length: 1080 mm.

#### **Output module**

- Module mainly made of PP.
- Metallic parts made of STAINLESS STEEL.
- Conveyor rollers..
- Conveyor motor A.C. kW 0.18

Module length: 435 mm.

# Main unit

Separate cabinet in coated steel version, equipped with:

- main switch
- emergency stop
- alarm-flashing indicator light-3 colors
- acoustic signal for any malfunctions
- The position of the main unit has to be defined by customer and the length of the cables will be provided accordingly.
- standard length of the cables connecting line modules to main unit is 5 meter

The position of the main unit has to be defined by customer

Any additional cable lengths, if required, EURO 160.-/meter.

- P.L.C. SIMATIC S 7 (by SIEMENS) with operator panel and display, including following functions:
  - display and regulation of technological solutions temperatures
  - display and regulation of conveyor speed
  - display of each malfunctions of the line in clear text
  - timer with weekly program for automatic heating up of technological solutions temperatures
  - timer of stand-by unit
- Relays switches (contactors), magnetic and automatic brakers (by SIEMENS)
- Inverter for driving A.C. conveyor motors (by SIEMENS)

Overall dimensions: 1600x500x2100 mm. (LxWxH)



# Pricing of DESMEARING line mod.650/01/P-50 (SEE Attached Sheet)

Installation: Included (But Hotel and full accommodation to HITELAP charge)

Shipment: To HITELAP ChargeDelivery: End of March 2002

Warranty: 1 (One) Year (Wearing parts are Not included)

- Payment terms: See Attached Sheet

### OPTIONALS INCLUDED ON THE PRICE

#### No.2 Fume condensers

- Housing and inside pipes made of PP
- Cooling coil made of STAINLESS STEEL
- Electropneumatic diaphram valve for cooling water input.
- Manual ball valve to drain condensed liquid.

#### Flowmeter limit switch

- Magnetic float for control of flow rate.
- Reed contact useable as min. contact.

### Automatic top up

- Level control as min./max contact.
- Electropneumatic diaphram valves, driven by min./max. level, for water input into process stages.

# No. 1 Current Rectifier 400A 10V. DC

### Centralized collecting pipework

The position of the connection or the direction has to be defined by customer.

- Drainage pipework for solution concentrates.
- Drainage pipeworks for waste water.
- Pipework for outlet of cooling water.
- Pipework for inlet of cooling water.
- Pipework for inlet of city water.

## Collecting tank

- Made of PP, to put under the equipment before to begin installation.

OCCLEPPO & C.snc (OCCLEPPO Francesco)