



WATER BATH FORMATION SYSTEM

- » Fully automated installation in a compact design
- » Centralized control system for managing a complete battery formation plant



Automatic Battery loading & unloading system



AUTOMATIC BATTERY LOADING SYSTEM

The loading system carries out the preparation of the battery row, coming from the acid filling unit and the number per row varies according to the battery size.

Once the row is completed, the system transfers it to the tank loading conveyor, consisting of a motorized belt that transfers the batteries up to the loading position of the tank.

The conveyor is provided with stainless steel supporting frame and guide, on which the loading shuttle can slide up to a proper position in front of each tank. The shuttle carries out the loading of the battery rows into the formation tank.

AUTOMATIC BATTERY UNLOADING SYSTEM

The unloading shuttle carries out the separation of the battery row in the tank and, once the row is completed, the system transfers it to the unloading conveyor, consisting of a motorized belt that receives the batteries from the tank. The conveyor is provided with stainless steel supporting frame and guide, on which the shuttle slides up to a proper position in front of the tank.

The exit conveyor, positioned at the end of the unloading belt, is equipped with a pusher, which arranges the transfer of the batteries one by one to the finishing line.

Water bath formation



STANDARD SOLUTION

Supply of 10 x 1.2 m (L x W) stainless steel tank with a capacity of 216 batteries (standard size L2 battery type).

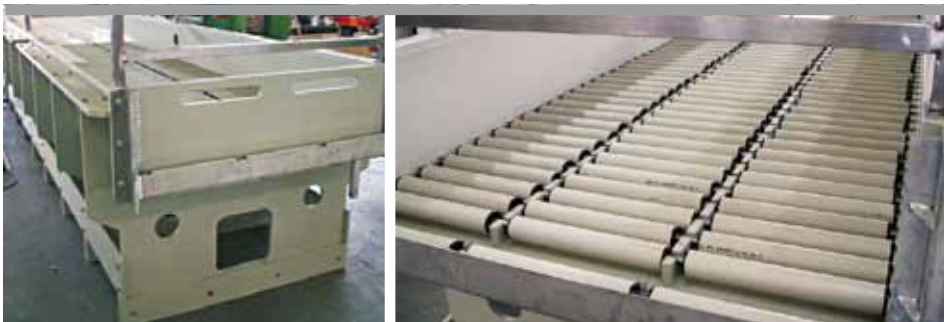
Each tank has a front side of 1.2 m, which can be automatically opened and closed at each charging cycle. Battery move inside the tank is assured by a motorized belt, covering the whole tank surface.

A suction hood for removing gases generated during the charging cycle, is made of polypropylene sheet, anchored to the tank by means of a stainless steel frame. The control panel for the system, equipped with a PLC, manages the entire operation cycle automatically, including battery handling and continuous water temperature control. It's interfaced with the plant managing PC by intranet, enabling the synchronization with the rectifier operation.

ALSO AVAILABLE



built-in devices for the automatic loading & unloading operations



polypropylene belt and idle rollers for manual loading and unloading operations



WATER COOLING & AIR FILTERING SYSTEM

Disposal tower in polypropylene, providing the necessary filtering capacity, based on the installation requirements.

The upper part of the filter includes a structure which acts as a drop separator. An electric centrifugal suction fan is built in the tower, with a polypropylene impeller, directly coupled to the electric motor.

The central part houses the filling units, comprising the balls that treat the polluted material by back-flow water circulation.

The lower part houses a re-circulation water collection tank: the water is returned to the upper section by means of a re-circulation pump.

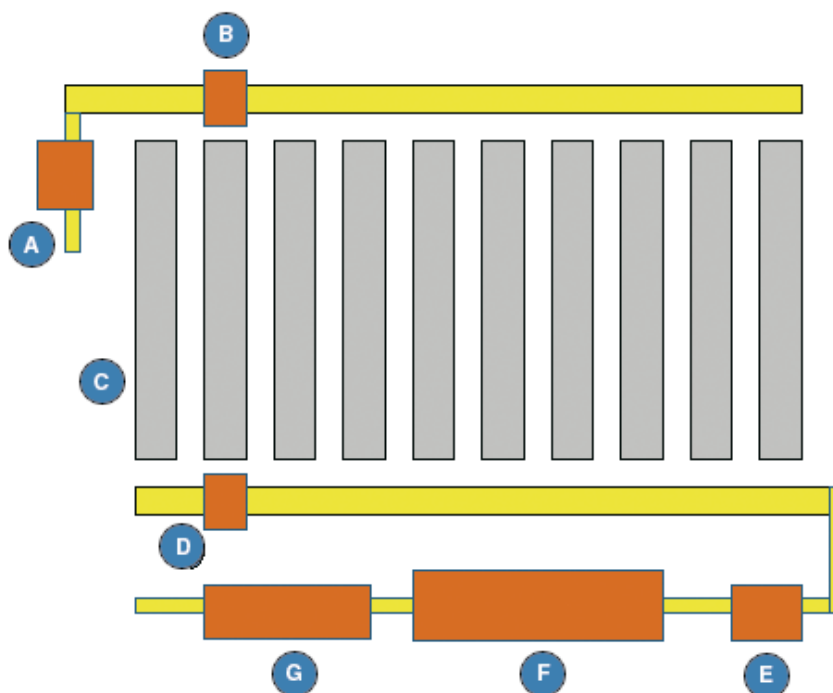
The water re-circulation provides cooling for the water bath.

The wet filter is supplied complete with the electric control panel.

The connection between wet filter and formation tank (at Customer's charge).

A neutralization system of the acid contained in the re-circulation water is provided to keep the pH level within the set range.

The system includes the pH and the sulphate detectors, soda milk is fed automatically, according to the pH level detected in the water tank.



* The line composition varies according to the customer's needs.

- A - Acid Filling Machine
- B - Automatic Loading Shuttle
- C - Water Bath Formation Tank
- D - Automatic Unloading Shuttle
- E - Acid Filling/Levelling Machine
- F - Battery Washing Tunnel
- G - Battery finishing line*,
composed of:
 - High Rate Discharge Testing Unit
 - Dielectric Testing Unit
 - Post Brushing Unit
 - Post Greasing Unit
 - Battery Marking Unit