

New Product News

FOR IMMEDIATE RELEASE FROM J :

Cut Costs – Continuous Hydrogen Peroxide Measurement

JUMO CORROTRODE



COATESVILLE, PA – JUMO Process Control, Inc. recently introduced the patented JUMO CORROTRODE for measuring the hydrogen peroxide concentration.

The PCB manufacturing industry employs etching baths based on sulfuric acid for various production processes, such as the manufacture

of through-hole plating for multilayer PCBs (black-hole method), the "microclean" stage and pre-treatment (pre-etching) during track formation.

In most cases, the etching baths consist of an approximately 8.5 % sulfuric acid (H_2SO_4) solution, with a hydrogen peroxide (H_2O_2) component of about 25 gm/liter. The concentration of hydrogen peroxide, in particular, is decisive for the quality of the product, and should be kept as nearly constant as possible. Depending on the number of boards being processed, the hydrogen peroxide concentration in the etching bath diminishes as a result of dispersal and decomposition.

Situation up to now

Several times a day, depending on the throughput and the operational life of the plant, technical staff perform laboratory tests (titration of a sample with a potassium permanganate solution) to determine the hydrogen peroxide concentration. Additional manual dosing restores the etching properties of the medium.

Disadvantage

Isolated manual dosing causes overdosing of hydrogen peroxide at some times, and insufficient dosing at other times.

Solution

In order to achieve a consistent rate of etching, and with it a consistent PCB quality, the hydrogen peroxide concentration should be kept constant by continuous automatic dosing.

The new, patented JUMO CORROTRODE, fulfills the task of measuring the hydrogen peroxide concentration. Evaluation and control are performed by a transmitter with integrated control contacts, while an attached dosing pump supplies hydrogen peroxide from a reservoir.

Advantages of the JUMO CORROTRODE measurement system:

- reduced consumption of the dosing agents
- avoids incorrect dosing
- ongoing check of the media condition can be made through displayed value
- continuous automatic dosing (controlled)
- prevents underdose / overdose
- reduces man-hours spent on laboratory measurements
- alarm is generated if measurements drift
- alarm is generated if there is no dosing agent (dosing time monitoring)
- CIP processes alarm monitored

The JUMO CORROTRODE is a potentiometric sensor (CPPS = Corrosion Potential-based Potentiometric Sensor) with an output signal covering a voltage range of several hundred mV.

Other areas of application are conceivable, such as semiconductor manufacture.

For complete information and technical specifications about the JUMO CORROTRODE, contact JUMO Process Control, Inc., 885 Fox Chase, Coatesville, PA 19320. Toll Free: 1-800-554-JUMO(5866); Telephone: (610) 380-8002; FAX: (610) 380-8009; Website: www.JumoUSA.com; Email: info@JumoUSA.com.