



CONTROLLED POWER COMPANY

1955 STEPHENSON HIGHWAY, TROY, MICHIGAN 48063 1-248-528-3700 FAX 1-248-528-0411

Presenting....

AACD Automatic Average Current Density

For E-coat users with continuous conveyor and batch systems.

"A hands-free approach to Automatic Voltage Control"

**Save Paint !
Increase ability to meet film target !**



- Automatic voltage adjustment for various loading.
- Narrows paint film variation on different size parts !
- Saves paint !
- Easy programming with help screens for simplicity.
- You specify the PLC and Operator Interface Terminal.
- Bolts to the side of your rectifier.
- Installation assisted by CPC at your site.

**ATTACHES TO THE
SIDE OF ANY RECTIFIER.**
SHOWN WITH MINI ENCLOSURE



Bonus Features:
-Under-Voltage Alarm
-Bath Chemistry Adjust



AACD Automatic Average Current Density

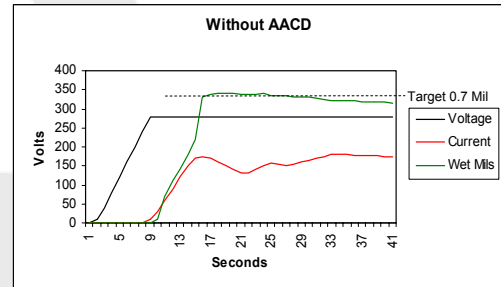
CPC Rectifier option # 11913

For Electro-Coating or Electro-Plating, it is desirable to increase the power when larger parts enter the tank. Since more load (Square Feet) is available, the current density increases. An increase of power is required to maintain the paint or chemical deposit (at the same rate of time) as the smaller part. It's this particular idea that requires a method to automatically adjust the output power of a rectifier -without Human intervention.

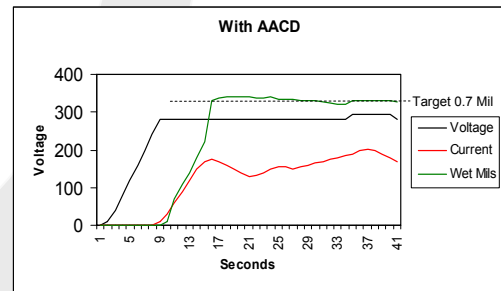
Since Electrocoating processes use DC voltage regulation, it would be desirable to adjust the rectifier voltage to the required levels if the parts differ significantly in size. Larger parts normally require a higher voltage to maintain the same paint film thickness as the smaller parts.

There are two main types of E-Coat systems, Monorail (Continuous) and Hoist (Batch) lines. Those with continuous lines, and who paint many different size parts may find their paint film thickness inconsistent. This is of course, those who do not have an automated system that can index parts, discipline employees to hang parts correctly, and/or use a PLC to automatically adjust the Rectifier voltage.

Hoist system users experience the same problem, but they may have better ability to control the Rectifier voltage with each individual load, or extend their coating time (but at the expense of production efficiency).



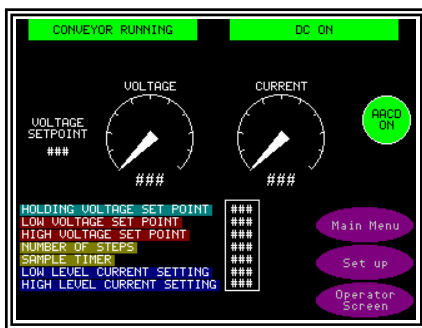
The line charts illustrate a typical conveyor line with various loading. (Part size "location points" not shown).



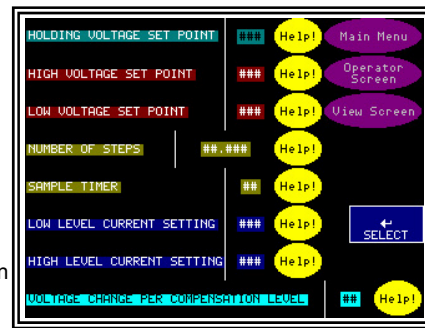
The AACD Device may be integrated into the front door of a new rectifier, or a "mini" enclosure is available for mounting in any location.

Most installations require on-site CPC technical assistance. User is responsible for installation.

- The AACD device will not provide uniform paint deposits on an irregular shaped part.
- The AACD device will not provide 100% on-target film thickness for specific parts.
- The AACD device is designed only to narrow the paint film deviation on different size parts.



Viewing screen



Set-point Screen

Allen-Bradley Panel-View 600 Color (touch screen) shown. Actual screen will vary with HMI model.

The AACD controller maintains an average current density by continuously monitoring the Rectifier current. A decision to adjust the voltage is determined on the operators current trigger set-points. Voltage compensating levels are also programmed by the user, to best meet the appropriate film layer.



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