



I S O 9 0 0 1 R E G I S T E R E D

C L E V E L A N D B L A C K O X I D E

## Case History – Selective Black Oxide

### Features:

- Selective black oxide on non conductive areas

### Advantages:

- Surface protected from corrosion
- Meets MIL DTL F495
- Meets REACH standards

### Benefits:

- Corrosion resistance
- Conductivity is maintained
- Cost effective

The Black Oxide of brazed components and dissimilar metal assemblies provides a uniform finish with corrosion resistance and dimensional integrity at an economical cost.

While black oxide conversion coating can effectively be applied to diverse metals including carbon, alloy and stainless steels, copper, brass, bronze, die cast zinc and cast iron; getting satisfactory results on brazed or multiple metal parts has always been difficult.

Cleveland Black Oxide has perfected the Bi-Met process which produces a uniform color for these applications.

In addition to added aesthetic appeal, the Bi-Met process adds the same corrosion resistance and performance benefits achievable with standard black oxide. The resulting surface won't chip or crack, holes and threads don't fill with coating material, no dimensional changes occur, and there is no need to protect internal cavities while treating.



## Why Cleveland Black Oxide

We have over 50 years of black oxide conversion coating experience. We process over 8-million pounds of carbon, alloy and stainless steels; brass, bronze, copper; cast zinc and cast iron each year. And we have the experience, technologies and services to solve your coating problems.

### Tank Capacity, Part Handling & Processing

We have the largest tanks in the industry – 17' long for steel parts, and can go beyond that size on a case-by-case basis. For stainless steel we have 12' tanks, and for Copper, Brass & Bronze, and Die Cast Zinc - 4' tanks. We offer rack process for parts not suitable for barrel or basket processing. We also design custom fixtures and process menus to meet all your special needs.

### QC/Lot Control

A processing menu is created for each order and carefully followed – paying strict attention to times, temperatures, concentrations of solutions, and all other process parameters. These parameters and job history are stored in our computers, making a permanent record of your jobs. Records of all solution concentrations are maintained for periodic report and analysis. Tracking procedures are in place for lot segregation when required.

## Exclusive Processes

Cleveland Black Oxide has developed a number of unique black oxide coatings including Black Onyx™ which produces a high luster finish on heat treated and hot rolled parts, and our Bi-Met™ process which is a conversion coating for brazed parts and dissimilar metal assemblies.

### Service, Research & Technical Assistance

Send us your prototypes and we'll test and recommend a black oxide coating system that meets your protection, appearance and performance needs.

### Quotations & Rush Orders

Quotes are promptly submitted upon receipt of sample parts or prints. Approximately 80% of all orders are ready within 48 hours. Our plant is in operation 18 hours a day and emergency service is available.

## Cleveland Black Oxide

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UNIQUE APPLS