



ISO 9002 REGISTERED

CLEVELAND BLACK OXIDE

Case History – “Black Onyx” High-luster black oxide finish.

Because heat treating and hot rolling of steel cause surface scaling and pitting, conventional black oxide conversion coating can only impart a matte black finish (along with improved corrosion resistance to heat treated and hot rolled steel parts.

The new Black Onyx™ process from Cleveland Black Oxide overcomes these surface conditions and produces a high-luster finish with the look of “black chrome.” In addition, the “tighter” surface provides fewer opportunities for corrosion to begin, resulting in improved corrosion resistance.

Tests conducted on various heat treated and hot rolled parts show that conventional black oxide conversion coating provides corrosion resistance equivalent to 24 to 48 hours of salt spray exposure. Black Onyx provides 48 to 96 hours of corrosion resistance to the same parts.

A minimum need for pickling reduces the chances of hydrogen embrittlement, a condition commonly experienced when parts are acid etched prior to painting or other plating processes.

Also, because the Black Onyx process adds no more than 5-10 millionths of an inch to part dimensions, it is an ideal treatment for size-critical and threaded parts.

This unique process is a practical, economical surface finishing treatment for critical visible surfaces and for mating parts where minimal friction is required.

Send in a product sample to us for an evaluation at no obligation.

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 – up to 17 ft. long for steel parts – 8 ft. tanks for Stainless Steel – and 4 ft. tanks for Copper, Brass & Bronze, and Die Cast Zinc. We offer rack processing 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 APPS