

General Product Description

Duroxite® 400 is a specially formulated hardfacing overlay pin engineered and designed to withstand severe heat and metal-to-metal wear applications. Its exceptional quality comes from the precise control and selection of raw materials as well as proprietary processing. The maximum working temperature for the product is 480 °C (900 °F). The work-hardening hardness of the Duroxite® overlay pin can reach up to 58 HRC in service. The Duroxite® 400 overlay pin matches with 12% Manganese Bushings. This Bearing System is expected to last longer than traditional hardened surfaces used such as induction heated and quenched 4140 pins.

Key Benefits

- Provides superior wear resistance in overlay and a tough inner core
- Performs well when torquing and surface compression are involved
- Designed to outlast original equipment and manganese pins

Typical Applications

Duroxite® 400 was originally developed for dragline bucket components, but has gained wide acceptance in other applications as well. It is also used for heavy mining or industrial equipment, such as dragline shovels, clam shell buckets, sheave pins, backhoe pins, and crusher shafts.

Overlay pins can be machined to meet the requirements of any specific application. For more information on applications see the Duroxite® Product brochure.

Standard Dimensions

Standard diameters	Standard pin length
Metric unit	Metric unit
For 127	Up to 1.22 m
For 152 - 280	Up to 2.74 m

Other plate sizes and custom thicknesses can be produced upon request.

Mechanical Properties

Number of overlay passes	Typical as-welded surface hardness ¹⁾ (HRC)	Typical as-welded surface hardness ¹⁾ (HV)	Work hardening hardness (HRC)	Work hardening hardness (HV)
Multiple passes	52 - 54	540 - 570	Up to 58	Up to 650

¹⁾ Surface hardness is measured on machined flat surface just below overlay surface.

Tolerances

Dimensions

Diameter of Duroxite® 400 can be guaranteed within the typical tolerances of ± 0.127 mm (± 0.005 ").

Roundness

Roundness tolerance can be guaranteed within ± 0.254 mm (± 0.010 ").

Safety precautions

When welding or cutting Duroxite® products, smoke is produced containing harmful fumes and gases that are chemically highly complex and difficult to easily classify. The major toxic component in the fumes and gases produced in the process is hexavalent chromium. The proper exhaust ventilation equipment and fume-extraction torches are recommended, as well as suitable protective clothing and respiratory protection for operators.