

REPAIR OF SMALL GOUGES IN BEARING HOUSING USING BELZONA 1511

ID: 9806



PROBLEM

The customer needed to repair small gouges across the full width of a bearing housing after the removal of a nodular iron bearing. The housing operates at temperatures up to 180°C (350°F), and while abrasion resistance was not required, the repair material needed to offer strong adhesion, withstand elevated temperatures, and be suitable for filling fine voids without a coarse aggregate interfering with the surface finish.

APPLICATION SITUATION

Due to the elevated service temperature of up to 180°C (350°F), a repair material with high thermal resistance was critical. Belzona 1511 (Super HT-Metal) was selected for its ability to withstand elevated temperatures under mechanical load. The damage consisted of small gouges running the full width of the bearing location, requiring a material that could be accurately rebuilt and later machined to restore precise tolerances essential for the bearing installation.

APPLICATION METHOD

The bearing housing was first prepared by mechanically roughening the surface to remove any contamination and create a strong mechanical profile. The surface was then cleaned to eliminate dust, grease, and debris. Belzona 1511 was thoroughly mixed and applied to the gouged areas, ensuring complete filling of the voids. The material was built up beyond the final required dimensions to allow for machining. After full cure, the rebuilt areas were precision-machined to restore the original profile of the bearing housing.

BELZONA FACTS

By choosing Belzona 1511, the customer benefited from significant time and cost savings. The product was ordered and delivered via rush carrier, allowing them to receive full support — from material selection to product delivery — within one day. This rapid turnaround enabled them to complete the application the following day, minimizing downtime. Additionally, by avoiding welding, they eliminated the risks, additional costs, and extended lead times typically associated with hot work repairs, making Belzona the ideal solution for both performance and efficiency.

INDUSTRY

Mining & Quarrying

LOCATION

Sudbury

APPLICATION DATE

April 2025

PRODUCTS

Belzona 1511 (Super HT-Metal)

Belzona 9111 (Cleaner Degreaser)

SUBSTRATE

Carbon steel

PHOTOS

1. View and dimensions of some of the damaged sections
2. Different area showing gouges that needed repair
3. Larger gouges repaired and sanded
4. Thinner gouges filled and sanded

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Belzona products are manufactured under an ISO 9001 Registered Quality Management System.

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