

BOLSTER SIDE BEARER MOUNTING FACE REPAIR WITH BELZONA 1111

ID: 8404



PROBLEM

The greatest area of concern is the vehicle bolster structure as this exhibits the most damage and acts as the interface between the side bearers and the vehicle. Exfoliation corrosion has occurred between the body shims and the side bearer top plate mounting on the vehicle bolster structure. This has led to a particularly deep uneven surface caused by the wasting of the original plate thickness on the vehicle bolster. Given this area supports the side bearer, any flexing allowed in the side bearer assembly may have a detrimental effect to the ride quality of the vehicle and the wheel loading's.

APPLICATION SITUATION

A rail operator have discovered serious corrosion between the side bearer top plates, vehicle body shims and the vehicle bolster structure. The options for repair was to carry out a weld repair and subsequent machining operation to re-instate the bolster surface. However, this was not a preferred option due to time and complexity.

APPLICATION METHOD

1. Brushed away loose contamination and degreased using Belzona 9111. 2. All surfaces were prepped using Grit Blasting to give a surface finish of Swedish Standard Sa2½, ensuring a minimum surface profile of 3 mils (75 Microns). 3. Two coats of Belzona 9411 were applied to any areas of the vehicle bolster immediately surrounding the intended repair area for a distance of 25mm (1") to which the Belzona was not required to adhere. 4. Base and Solidifier of 1111 were mixed together thoroughly, until combined with no streaks. 5. Belzona 1111 was applied directly onto the prepared Bolster Side Bearer mounting face surface with a short bristle brush. 6. An excessive quantity of Belzona 1111 was applied to the top surface of the Belzona Application plate face in the shape of an elongated pyramid, with the highest section running longitudinally along the centre of the Belzona Application plate. 7. The Application plate was then pushed onto the guide pin of the bolster surface sufficiently to enable the guide pin nuts to be wound up the guide pins. 8. Once cured the application plate was removed.

BELZONA FACTS

There are a number of these different bolster applications on various vehicles, to replace all of them would cost much more than a belzona repair! Belzona saved the rail operator a lot of money and lots of time!

INDUSTRY

Transport

LOCATION

South Yorkshire, UK

APPLICATION DATE

August 2020

PRODUCTS

Belzona 9111 (Cleaner

Degreaser)

Belzona 9411 (Release

Agent)

Belzona 1111 (Super Metal)

SUBSTRATE

Steel

PHOTOS

Photo 1: The damage on the bolster. Photo 2: The application plates that will be attached to surface using belzona 1111. Photo 3: Belzona 1111 on the application plate in a pyramid form. Photo 4: Finished application.

For more examples of Belzona Know-How in Action, please visit khia.belzona.com

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

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