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STEP 6

- Dress the product with suitable plastic tool
- Ensure the repair is smooth on the top and sides of the rail



STEP 7

- Curing time for the filler is about 4hours at 10°C and 2hours at 20°C. It is tack free in around 20-30mins
- If required allow 2-3mins before allowing a train to pass over the joint.



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In-situ Repair Process for Insulated Rail Joints



- Introduction
- Products
- Procedure

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Introduction

Henkel Loctite Adhesives Ltd., in co-operation with **Network Rail**, has developed an in-situ repair for damaged end posts in insulated rail joints (IRJ's) which overcomes the need to replace the complete joint. The process involves cutting through the original insulated gap using a rotary cutting tool and filling the gap with a fast curing adhesive resin which hardens to provide electrical insulation. The resin bonds to the rail so that it provides a robust repair.



Products

Teromix-6700 is a polyurethane-based two-component adhesive which cures at room temperature. Curing can be accelerated by increasing the temperature (e.g. IR radiator). The product is supplied in a convenient twin cartridge and is rapid-curing.

Loctite 7063 is a non-CFC solvent based formulation for cleaning and degreasing of surfaces to be bonded with Loctite adhesives. The product can also be used for cleaning and degreasing machine components during maintenance operations.

Procedure

STEP 1

- Remove lipping with an Angle Grinder fitted with a Cutting Wheel for steel.
- Ensure all lipping is removed and the cut is parallel with the end of each rail.
- A minimum cut depth of 4mm and a maximum cut depth of 10mm is recommended.
- Remove the damaged part of the end post with the cutting wheel to allowing good adhesion of the resin.
- **Only qualified persons must operate the Angle Grinder**



STEP 3

- Remove swarf and any other contaminants from the de-lipped area with an Air Duster.
- It is important to pay particular attention to this step so that there is no electrical path between the two rails prior to filling with resin.



STEP 2

- Clean the area with Loctite 7063 to ensure all contaminants are removed



STEP 4

- Prepare the Two Part Polyurethane
- Remove the twin cartridge from the polythene bag
- Fit the cartridge to the gun with the plunger fully withdrawn
- Prior to fitting the mixer nozzle, remove the blanking cap
- Apply pressure to the tube via the trigger to equalize parts A and B
- Wipe up spillage.
- Fit nozzle, push and twist fitting.

STEP 5

- Slowly apply the resin using the pistol (Applicator Gun), in several layers, moving the Applicator Gun backwards and forwards across the rail, ensuring no air pockets are created.
- Smooth off excess resin and check the gap has been fully sealed. The resin should be flush with the rail head.
- Wipe clean surplus resin from the rail head.
- Ensure protective gloves are worn when applying the resin.

