



Title	Repair Procedure for Metallic Zinc Coated Ductile Iron Fittings
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Materials and procedures utilized for repair of metallic zinc coatings on ductile iron fittings are recommended to be in accordance with International Standards Organization ISO 8179-Part 1 (Ductile Iron Fittings – External Zinc-Based Coating). Section 4.3 of this standard states the following regarding damaged areas of zinc coating: “Damaged areas of the zinc coating caused by handling are acceptable, provided the area of damage is less than 5 cm<sup>2</sup> per square meter and that the minor dimension of the damaged area does not exceed 5mm.” Greater areas of damage shall be repaired in accordance with 4.5 (Repairs to the Zinc Coating).

Section 4.5 (Repairs to the Zinc Coating) allows repairs utilizing one of the following types of materials:

- a) Metallic zinc spray complying with this specification
- b) Application of zinc-rich paint containing more than 85% zinc, by mass, in the dried film.

One recommended liquid zinc rich paint repair material which meets this requirement is Tnemec-Zinc 90-98 manufactured by the Tnemec Company in Kansas City, Missouri. There are also several manufacturers of zinc paint in spray cans which meet the zinc content requirement. Recommended repair procedures are as follows:

Areas where topcoat missing but zinc still present:

- The area to be repaired must be clean and dry.
- Remove any grease or oil contamination by solvent cleaning.
- Remove any dirt, dust, rust, or loose areas of topcoat at and around the damaged area by wire brush cleaning.
- Apply a finishing layer of asphaltic paint finishing topcoat compatible with zinc. Application of the finishing layer may be done by spray, brush, or roller in accordance with recommendations of the manufacturer.

Areas where both zinc coating and topcoat missing (i.e. bare DI metal exposed):

- The area to be repaired must be clean and dry.
- Remove any grease or oil contamination by solvent cleaning.
- Remove any dirt, dust, rust, or loose areas of zinc coating/topcoat at and around the damaged area by wire brush cleaning.
- Apply ISO 8179 compliant metallic zinc or zinc-rich paint to bare areas of fittings in accordance with the material manufacturer’s application recommendations.





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- After application of the repair zinc coating, the fittings shall be given a finishing layer of asphaltic paint topcoat compatible with zinc. Application of the finishing layer may be done by spray, brush, or roller in accordance with recommendations of the manufacturer. If repairs were made using metallized zinc spray, the repaired area may be top coated immediately. If a two-part zinc-rich paint, or spray zinc paint is utilized, a suitable “tack” or dry time may be required prior to top coating with the asphaltic topcoat. Paint manufacturers recommendations shall be followed regarding dry/recoat time of repair paints.



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