

Abstract

A highly durable repair-coating method is provided, which permits the simple, fast, efficient and effective removal of thick rust and fixed rust generated on a steel structure having a large area such as a bridge and an intermediate iron product, under storage, which can ensure high working properties and high safety while reducing the processing cost, and which can likewise ensure high quality repairing and the subsequent improved duration of the repaired and coated articles.

The method is for highly durable repair-coating of a coated or coating-free steel structure which comprises the steps of conditioning the ground of the coated or coating-free steel structure such that the rate of exposed surface area of the ground is not less than 60%; and then applying an aqueous solution of sodium carbonate having a concentration of not less than 5 g/L and not more than 500 g/L, as a prior processing solution; and further optionally applying a highly corrosion-resistant zinc powder-containing composition which comprises 100 parts by mass of a binder resin (the solid content by mass); 200 to 800 parts by mass of zinc powder; 1 to 95 parts by mass of a corrosive ion-fixing agent; and 200 to 1,000 parts by mass of a solvent.