

## Building and Construction

# Solid Stainless Steel Rebar

Solid stainless steel reinforcement bar (known as rebar) exhibits significant corrosion resistance and strength. This type of rebar is often used in bridge decks and other critical applications where exposure to salt is an issue. Salt exposure can occur in coastal environments and in climates where surfaces are treated with de-icing salts during winter. The stainless rebar can be incorporated during new bridge construction or during repair work.



**Location/environment** | NORTH AMERICA, EUROPE AND ASIA/OUTDOOR

**Product** | SOLID STAINLESS STEEL REBAR

**Fabrication process** | HOT ROLLED AND ACID CLEANED

**Grade/surface** | ENDURAMET® 2205, ENDURAMET® 316LN, ENDURAMET® 32, EN4362

**Material thickness/diameter** | DIAMETERS RANGE FROM 0.95 MM TO 6.03 MM

**Weight** | 180 TONS (10 TONS PER BRIDGE)

**Competing material** | CARBON STEEL REBAR AND EPOXY-COATED REBAR

**Date of completion** | JULY 2006

**Manufacturer** | CARPENTER TECHNOLOGY CORPORATION

**Material supplier** | CARPENTER TECHNOLOGY CORPORATION

**Source of information** | CARPENTER TECHNOLOGY CORPORATION

**Remarks** | SOLID STAINLESS STEEL REBAR HAS BEEN SHOWN TO EXTEND THE LIFE OF A BRIDGE TO MORE THAN 125 YEARS COMPARED TO 20 YEARS IF CARBON STEEL OR EPOXY COATED REBAR ARE USED. THE SUPERIOR CORROSION RESISTANCE OF STAINLESS ENABLES A THINNER CONCRETE COVER. THE STRENGTH OF STAINLESS REBAR COUPLED WITH ITS DUCTILITY MAKES IT AN IDEAL REINFORCEMENT SOLUTION IN AREAS PRONE TO SEISMIC ACTIVITY.

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