

Product Evaluation

RE: Review of NX-SCR (Stainless Clad Rebar) Corrosion Resistant Rebar

PRODUCT

NX-SCR Corrosion Resistant Rebar is manufactured in the UK and distributed by NX Infrastructure.

VENDOR CLAIMS AND INFORMATION

CLAIMS

NX-SCR stainless clad rebar is manufactured through a patented green process which results in a metallurgical bond during hot rolling between a durable outer stainless steel cladding and a carbon steel core. NX-SCR is tailor made to combine the very high corrosion resistance of stainless steel with the yield strength and elastic modulus characteristics of low alloy carbon steel. Website for this product: <http://www.nxinfrastructure.com/>

DESCRIPTION

NX-SCR is a corrosion resistant steel reinforcement bar produced exclusively for use in reinforced concrete. NX-SCR provides a 316L stainless steel outer cladding that is metallurgical bonded to a carbon steel core.

POTENTIAL USAGE

NX-SCR can be used in a variety of civil engineering applications that require extended corrosion resistance, such as bridges, roads, canals, dams, ports, airports, water and waste treatment plants and buildings. NX-SCR is the optimal choice when building in chloride rich environments as it provides a 75 – 100 year design life as required by the FHWA Requirement for Bridge Projects.

REFERENCE STANDARDS

AASHTO MP13M/MP13-04 (2006), Standard Specification for Stainless Clad Deformed and Plain Round Steel Bars for Concrete Reinforcement

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE

Alberta Transportation has used this product on one project to date BF00436 (construction in 2000) for deck and curb reinforcing. Material delivered to site was late and had several defects. Improvements in manufacturing and quality control procedures have been implemented by the new ownership - NX Infrastructure.

APPLICABLE STANDARDS

Alberta Transportation does not have guidelines or specifications pertaining to the use of stainless steel reinforcing bars.

RECOMMENDATIONS

This product should be listed as a Trial Product under the reinforcing steel category, and could be considered for special applications such as major river crossings, and bridge components with very high AADT and exposure to de-icing chemicals. Final acceptance as a Proven Product will be based on field performance.

TRIAL PROJECTS

Joe Filice

cc New Product Evaluation Standing Committee – Roger Skirrow
Dave Besuyen