

# 3X ENGINEERING

## REINFORCEKIT® BEAM



FINITE  
ELEMENT  
ANALYSIS  
(F.E.A)  
DESIGN

### COMPOSITE REPAIR SOLUTION FOR STRUCTURE REINFORCEMENT



**STRUCTURAL**

HL □□□□○ Any structure designs



Any structure sizes



Any weather conditions



Any environments



Any industries



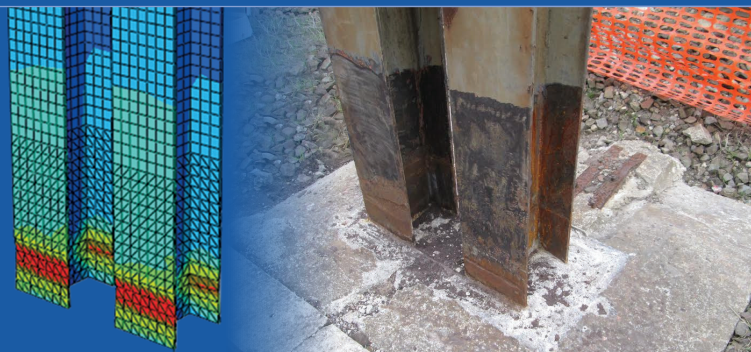
**REINFORCEKiT® BEAM** is a high-performance repair system to renovate any kinds of corroded structures and restore original integrity, making it even stronger than original.

It is suitable for any structure designs (poles, beams, deck structures and platings ...) without size limitation. This technology is a combination of metal inserts and composite wrapping made of Kevlar® tape and bi-component epoxy resin.

**REINFORCEKiT® BEAM** is a patented concept co-developed in partnership with SNCF (French National Railway Company) initially designed to reinforce catenary supports in Railway industry.

## REINFORCEKiT® BEAM CONCEPT

BEFORE



AFTER



Over three thousand of catenary supports already repaired with success since 2010.

## REINFORCEKiT® BEAM MAIN FEATURES & BENEFITS

- › Repair solution for corroded structures
- › Anti-UV and impact protection
- › Any structure designs and sizes
- › Tailor-made product for your structure design (Finite Element Analysis)
- › Long-term repair (20 years minimum)
- › High-quality product certified (many decohesion and mechanical tests performed)
- › Cost-effective (structure replacement avoided)
- › Installation by trained and certified applicators

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## REINFORCEKiT® BEAM IMPLEMENTATION



1  
Surface preparation  
Sa2½ / St3 & roughness  
Rz > 60 µm (2.4 mil)

2  
Metal inserts  
preparation

3  
Metal inserts  
application

4  
Kevlar® and epoxy  
resin wrapping

5  
Impact &  
UV protection



9, avenue Albert II - 98 000 MONACO  
+ 377 92 05 79 81  
info@3xeng.com  
www.3xeng.com

