



# REINFORCEKIT® 4D

## COMPOSITE REPAIR FOR PIPE REINFORCEMENT

According to ISO/TS 24.817 & ASME PCC-2



All diameters



-50° to +150°



Oil



Gas



Water



Onshore & Offshore



Pipe repair & reinforcement



Composite wrap



Onshore - Offshore - Subsea



COMPOSITE REPAIR SPECIALIST



REINFORCEKIT® 4D (R4D) is a wet lay-up system, wrapped helicoidally around the pipe in order to bring the mechanical resistance to the damaged pipe section suffering from corrosion. This advanced permanent composite technology is made of Kevlar® tape and specific bi-component epoxy resin. R4D is THE SOLUTION for a lasting pipe reinforcement.

3X ENGINEERING has developed its own software called R.E.A (Reinforcekit Engineering Analysis) to design the composite repair and define the material requirements in accordance with ASME PCC-2 & ISO/TS 24.817.

## REINFORCEKIT® 4D RANGE



### TRAINING

### Individual certificate provided by 3X ENGINEERING

To guarantee the quality and the sustainability of the R4D repair, the product must be properly installed by certified applicators.

#### USES

- Reinforce damaged pipe: internal & external corrosion, abrasion.
- Prevent from further corrosion / deterioration
- Repair pipe with leakage, dent, weld defect ...
- Sabotage: make illegal valve unusable

#### APPLICATIONS

- Onshore, Offshore and Subsea
- All pipe geometries (tee, elbow, oval pipe ...)
- All pipe diameters (no limitation)
- Pipe operating from ambient up to high temperature
- High pipe pressure

#### BENEFITS

- Online repair (no shutdown required except if leakage)
- No heating or post-curing needed
- No pressure limitation
- No overload on corroded pipes
- Fiber not hazardous for users

## REINFORCEKIT® 4D IMPLEMENTATION STEPS

