

Rehabilitation of corroded pipelines and pipes with FibaRoll

FIBAROLL

Available exclusively from FTi Ltd

- Adheres to steel**
- High tensile strength**
- High flexural strength**
- Corrosion protection**
- Cost effective**
- Simple application**
- Manufactured pre-preg**



FibaRoll being applied

Extend asset life

Rehabilitation of corroded pipelines and pipes with FibaRoll

FIBAROLL

Heavily Corroded lines require replacement or rehabilitation to maintain safe operating standards and prevent environmental damage. Replacement is often difficult and any shutdown expensive.

A common corrosion protection system used in the past has been bitumen tapes. A cause of failure has been the inability of these systems to cope with soil stress. FibaRoll has excellent flexural strength to combat this problem allied with bond strength to steel which exceeds 10MPa.

There are a number of available repair methods such as welding sleeves, “Clockspring” and hand lay reinforced polymers.

FibaRoll is an advanced solution which is easy to apply and cost effective.

1. FibaRoll is a manufactured pre-preg with a precise combination of resin and glass reinforcement giving consistent tensile strength not possible with hand-lay systems. It is delivered as a tacky, mouldable solid which is wrapped onto the corroded areas and sets rapidly with UV light.
2. Allied with fillers to repair the surface damage and liquid primers to ensure adhesion between the pipe and the FibaRoll the system provides a means to rehabilitate the steel and prevent any further corrosion.
3. Similar to other composite repairs FibaRoll is applied without shutdown but can be cured at a wide range of temperatures (-15 to +70°C).
4. FibaRoll can be applied on complex pipework and on bends effectively unlike “Clockspring” type systems.
5. FibaRoll does not require a blasted surface - ST3 is sufficient.

FibaRoll application to rehabilitate corroded lines - a step by step guide

Step 1



Surface preparation consists of power tool cleaning to ST3 followed by a solvent wash to remove dirt and dust.



Step 2

Apply filler to all pits greater than 1mm – in this case there were several areas which had pits of 8mm in a 9mm pipe.



Step 3



Apply FibaGel liquid primer filling minor corrosion damage and wetting the surface and apply FibaRoll “wet in wet”.



Step 4

Cure with natural daylight and in areas of low light (this application was carried out in Scotland during November) with a UV lamp.



FibaRoll application to rehabilitate corroded lines - a step by step guide

FIBAROLL

Step 5 Topcoat with FibaGel to provide extra weathering barrier above the reinforcement.

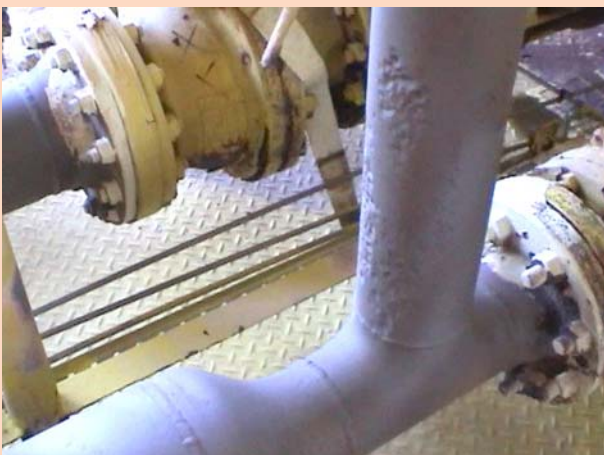


In each application detailed Hoop Stress calculations are undertaken to calculate the thickness of FibaRoll required. Normally 6mm with a safety factor of 2 times is sufficient for most situations.

FibaRoll application to rehabilitate corroded piping damaged by corrosion under insulation



Corroded pipes



Prepared surface

FibaRoll has been used offshore to rehabilitate pipework with more demanding geometrics than a straight pipeline as some of these pictures from Malaysia illustrate:

FibaRoll application to rehabilitate corroded piping damaged by corrosion under insulation

FIBAROLL



FibaRoll/FibaGel applied

This damage is as a result of Corrosion under Insulation (CUI). Until a thorough inspection can be made CUI is difficult/impossible to detect leading to extensive corrosion damage. FibaRoll helps to prevent CUI by forming a watertight, strong cladding system over all types of insulation.

FTi Ltd

Wilmott's Business Park
Waterlip
Somerset
BA4 4RN
UK

Tel: +44 (0) 1749 881920
Fax: +44 (0) 1749 880483
email: ns@fibaroll.co.uk

Distributors for FibaRoll in Europe,
Scandinavia, Middle East, South East
Asia, China, USA and Australia.



Certified ISO 9001 by

