

RAMFILL-B+RE

FULL ENCIRCLEMENT BOILER TYPE AND WELDED TO THE PIPELINE

RAMFILL-B+RE steel reinforcement sleeves are designed per API/ANSI/ASME standards and are easy and quick to install on pipelines in operation. These repair systems are boiler type – pressure containing – steel reinforcement sleeves pressure-filled with incompressible RAM-100 Epoxy resin, specially designed to transfer stress from the pipeline to the sleeve, with longitudinal weld with each halve and axial weld to the pipeline.

RAMFILL-B+RE repair systems are excellent for the repair and reinforcement of active pipelines presenting the following flaws or other deficiencies found after an integrity inspection:

- Overall external and/or internal corrosion
- Localized external and/or internal corrosion
- Illegal taps on pipelines
- Bends, Dents, Tees, Reductions
- Welded, bolted, or temporary sleeves
- Accessories with leaks
- Instrumentations,
- Monoblock joints
- Deficiencies representing potential risk in High Consequence Areas



RAMFILL-B+RE repair systems are excellent reinforcements for aerial, underground, and subsea pipeline systems. The installation of subsea steel reinforcement sleeves is performed with the use of a dry habitat.

The design for each **RAMFILL-B+RE** repair sleeves is at its simplest form when the section of pipeline to be repaired is straight. The repair sleeve is formed by two rolled steel halves of greater diameter than the pipeline, with integrated concentric reductions at each end of the steel halves to match the diameter of the pipeline being repaired and reinforced. Specific and accurate measurements as well as specifications of the pipeline section to be repaired are required prior to manufacturing.



For special conditions, a custom design, field verified, is prepared with specific measurements for length, diameter, thickness and specifications, to fit the sleeve to the condition of the pipeline section that needs to be reinforced. The design is verified with the contractor, client, and project engineers before proceeding to the manufacturing of the repair system, ensuring a perfect fit and solution to the pipeline system.

RAMFILL-B+RE steel reinforcement sleeves allow for complete traceability as they are delivered marked with the serial and production order numbers engraved in the outer face of each half of the repair sleeve.

When requested by the client, a certification of the materials and production process can be issued by a world class and recognized certifying body, member of the IACS (International Association of Classification Society).



RAM-100 complies with the following International Standards for the manufacture of **RAMFILL-B+RE** steel reinforcement sleeve repair systems:

- *ANSI/ASME BPV – Code for Boiler and Pressure Vessel*
- *ANSI/AWS D1.1/D1.1M:2010 – Structural Welding Code – Steel – Edition 2010 (sections: 5.24-Weld profiles, 6.9-Visual inspection, and table 6.1-Welding of pipelines and related facilities, Nineteenth Edition, September 1999, Errata 2001 (section 9.7, table 4))*
- *ASME PCC-2-2011 – Repair of Pressure Equipment and Piping*

RAMFILL® steel reinforcement sleeves are considered a permanent and definite repair system for pipelines according to the following **PEMEX** standards:

- *NRF-030-PEMEX-2009 – Standards for Design, Construction, Inspection and Maintenance of Pipelines for the Recollection and Transmission of Hydrocarbons.*
- *NOM-027-SESH-2010 – Management of Pipeline Integrity for Pipelines for the Collection and Transportation of Hydrocarbons.*

Contact us to obtain a quote, for additional details, or specific questions regarding **RAMFILL®** steel reinforcement sleeves

Phone: 07 3161 6600 | Mobile: 0411 385 373 | Fax: 07 3910 1120

Email: geoff@pipeserv.com

Web: www.pipeserv.com