

RAMFILL-MC®

FULL ENCIRCLEMENT WITH/WITHOUT WELD TO THE PIPELINE

RAMFILL-MC steel reinforcement sleeves are designed per API/ANSI/ASME standards and are easy and quick to install on pipelines in operation, with or without welding to the pipeline.

RAMFILL-MC type 'A' is installed with longitudinal weld joining the two halves without touching the pipeline; these systems are excellent for the repair and reinforcement of pipelines presenting the following flaws or other deficiencies found after an integrity inspection:

- Flat dents
- Dents with concentration of stress points
- Scratches
- Corrosion with loss of thickness up to 80%

RAMFILL-MC type 'B' is installed with longitudinal AND circumferential weld, joining the two halves of the sleeve system and the pipe; these systems are accepted for repairing and reinforcing pipelines presenting the following flaws or other deficiencies found after an integrity inspection:

- Dents
- Openings
- Cracks
- Damage by heat
- Weld imperfections:
 - Incomplete penetration
 - Incomplete fusion
 - Burnt areas with slag inclusion
 - Porosity
 - Gas bubbles
 - Scours
- Widespread external/internal corrosion
- Localized external/internal corrosion

RAMFILL-MC 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.

As 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).





RAMFILL-MC repair sleeves are made of two rolled steel halves, manufactured per international standards: **ANSI/ASME B31.4 and B31.8**, from carbon-steel pipe or carbon-steel plates, in any specification, diameter and thickness as requested by the client.

The typical production of **RAMFILL-MC** steel reinforcement sleeves is of 1.0 m long, in all API standard diameters, starting from ASTM steel plate, with elasticity yield equal to or above to the pipe to be repaired and reinforced.

Per client request or project needs, **RAMFILL-MC** steel reinforcement sleeves can be fabricated up to 3.0 m long.

RAM-100 complies with the following International Standards for the manufacture of **RAMFILL-MC** 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



Our **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