## RAMFILL STEELS

(FULL CIRCUMFERENCE

**TYPES 'A' & 'B')** 

FOR
IN-SERVICE
PIPELINES







#### WE SPECIALIZE ON THE FOLLOWING SOLUTIONS:



## COATINGS FOR MECHANIC AND CORROSION PROTECTION OF STEEL PIPELINES

COMPOSITE- AND STEEL-SLEEVES FOR REPAIR OF HYDROCARBON PIPELINES

SPECIAL DESIGN SLEEVES FOR LEAKING OR NON-LEAKING, TEMPORARY ACCESORIES, ILLEGAL TAPS, AND OTHER INTEGRITY DEFICIENCIES





## LIQUID EPOXY COATING (100% SOLIDS):

- RAM-100
- RAM-100 PLUS SP + DQP-100

## COMPOSITE AND STEEL REPAIR SLEEVES:

- RAMFILL PLUS NM
- RAMFILL MC
- RAMFILL RS
- RAMFILL B+RE



#### RAM-100 COATING



MANUAL
APPLICATION
FOR IN-SERVICE
PIPELINES OF
ALL SIZES

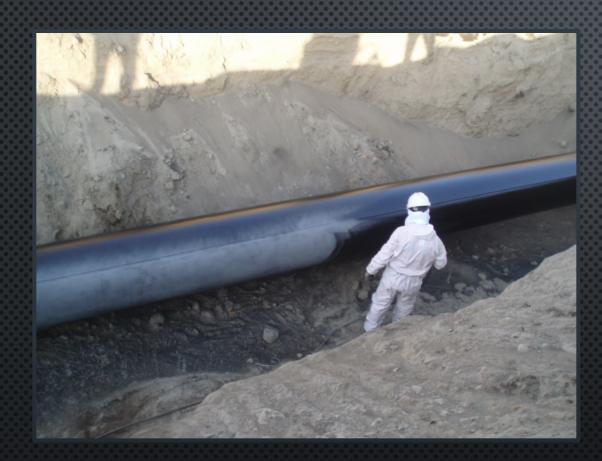






#### RAM-100 SP PLUS COATING





## ON-SITE APPLICATION BY SPRAY GUN W/AIRLESS PUMP





#### RAMFILL PLUS NM



COMPOSITE WRAP MADE OF RAM-100 EPOXY RESIN AND HIGH RESISTANCE SYTHETIC MESH FOR ON-SITE INSTALLATION WITHOUT WELDING TO THE PIPELINE OR SHUTTING DOWN **OPERATIONS** 





#### RAM-100 MANUFACTURES STEEL SLEEVES FOR PIPELINE REPAIRS:



#### TYPE 'A' SLEEVES

FOR PERMANENT SOLUTIONS OF EXTERNAL NON-LEAKING
INTEGRITY DEFICIENCIES

#### TYPE 'B' SLEEVES

FOR PERMANENT SOLUTIONS TO REPAIR AND REINFORCE PIPELINES WITH LEAKING OR NON-LEAKING OLD/WORN ACCESORIES AND OTHER MAJOR INTEGRITY DEFICIENCIES

FOR SPECIAL DESIGNS TO FIT UNIQUE CONDITIONS



#### TYPE 'A' SLEEVES

FULL ENCIRCLEMENT SPLIT SLEEVES, MATCHING PIPE SPECIFICATIONS FROM 2- TO 48-INCHES IN DIAMETER

MANUFACTURED FROM API
PIPING OR ASTM-CERTIFIED
STEEL PLATE MATCHING
CARRIER PIPE SPECIFICATIONS

INSTALLED WITHOUT WELD APPLICATION TO THE PIPELINE



COMPLIANT WITH ANSI/ASME B31.4 & 31.8, ASTM, ISO AND PCC-2 STANDARDS AND SPECIFICATIONS

FOR PERMANENT SOLUTIONS OF PIPELINES WITH UP TO 80% LOSS OF WALL THICKNESS





#### TYPE 'B' SLEEVES





INSTALLED WITH LONGITUDINAL AND CIRCUMFERENTIAL WELD APPLICATION TO THE PIPELINE

RAM-100 EPOXY PASTE APPLIED TO THE INTERNAL WALL OF THE PIPE ELIMINATING VOIDS AND PROMOTING ADHESION

PERMANENT SOLUTIONS FOR INTERNAL OR EXTERNAL INTEGRITY DEFICIENCIES WITH – OR WITH A POTENTIAL FOR – LEAKS



#### TYPE 'B+RE' SLEEVES

FULL ENCIRCLEMENT STEEL SLEEVE
WITH ENLARGED DIAMETER AND
CONCENTRIC REDUCTIONS TO FIT
SNUGLY ONTO THE PIPE

RAM-100 LIQUID EPOXY RESININJECTED TO ELIMINATE VOIDS AND PROMOTE TRANSFERRING STRESS FROM THE PIPE TO THE SLEEVE

PERMANENT SOLUTIONS FOR MAJOR INTEGRITY DEFICIENCIES OR SPECIAL CONDITIONS







#### RAM-100 - CERTIFICATIONS

OUR STEEL SLEEVES ARE
MANUFACTURED UNDER AN
ISO CERTIFIED QUALITY SYSTEM

ISO 9001:2008

NMX-CC-9001-IMNC-2008

ISSUED BY

AMERICAN TRUST REGISTER, S.C.

CERTIFICATE NUMBER:

**ATR-0779** (12/14/11)



Registro de Certificación SON SAS 1800 SON S

El presente certifica que el Sistema de Gestión de: This certifies that the Management System of:

RAM-100 DEL SURESTE, S. A. DE C. V.

Lateral autopista México-Puebla, km 28.1, Colonia San Isidro, Valle de Chalco

ha sido evaluado por ATR y se encuentra conforme con la(s) siguientes(s) norma(s): has been evaluated by ATR and found in agreement with following standard(s):

NMX-CC-9001-IMNC-2008 (ISO 9001:2008)

Alcance: / Scope of registration:

Manufacture, Sale and Application of liquid high solids epoxy coating to steel pipe, manufacture and installation of non-metallic mechanical reinforcements for pipes, Manufacture of metal reinforcement type A, Manufacture of metal reinforcement bipartite type B (Container Boiler pressure type) manufacture of metal reinforcement RS and manufacturing bipartite type of metal reinforcement for illegal taps bipartite TC type; drivers for installation in operation hydrocarbon products.

Annex AC779 is an integral part of this document.

Número de Certificado: O Certificate Number:

Fecha de Expedición: 10-12-14

Issue Date:

Accreditation No. 34/11 Effective from 2011/05/13

Luis E Monez Batista

Director General, ATR President, ATR

International Certification Group

No

2874



Este certificado tendrá validez de ocuerdo a las fechas de caducidad indicados en lals) etiqueta(s) que se encuentran al reverso del presente This registration will only be valid according to the expiration dates indicated in the stickers found in the back of this document.



#### RAM-100 - CERTIFICATIONS

CERTIFICATE OF COMPLIANCE FOR THE MANUFACTURING AND APPLICATION PROCESSES OF COMPOSITE AND STEEL REINFORCEMENT SLEEVES ISSUED BY ABS GROUP





CERTIFICATE OF COMPLIANCE FOR THE FUNCTIONALITY AND PERFORMANCE OF COMPOSITE AND STEEL REINFORCEMENT SLEEVES ISSUED BY IMP (MEXICAN INSTITUTE OF PETROLEUM)





## RAMFILL-MC TYPE 'A' & 'B' SLEEVES



#### RAMFILL - MC









WE CAN MATCH ANY PIPE SPECIFICATION FROM ASTM-CERTIFIED STEEL PLATE OR API PIPING







WE MAINTAIN STOCK OF STANDARD LENGTH AND DIAMETER STEEL SLEEVES TYPES 'A' & 'B' FOR PROMPT DELIVERY









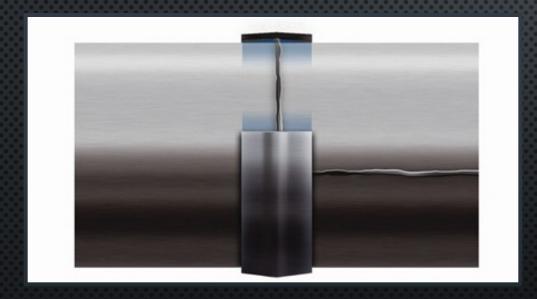
## TYPE'B'SLEWES FOR GIRTH WELD REINFORCEMENT



## RAMFILL – RS PATENT PENDING (TYPE 'B' SLEEVE)



STEEL SLEEVE FOR REINFORCEMENT OF WELD DEFICIENCIES







## RAMFILL – RS PATENT PENDING (TYPE 'B' SLEEVE)



CARBON-STEEL HALF SOLES WITH A BOILER-TYPE MIDDLE SECTION, TO BE PRESSURE-FILLED WITH RAM-100 LIQUID EPOXY RESIN FOR REINFORCEMENT OF GIRTH WELD **DEFICIENCIES** 





## RAMFILL – RS PATENT PENDING (TYPE 'B' SLEEVE)



## PACKAGED AND DELIVERED WITH RAM-100 EPOXY COATING FOR PROTECTION UNTIL THEY ARE INSTALLED











## RAMFILL—B+RE TYPE 'B' SLEEVES

SPECIAL DESIGNS
WITH EPOXY FILL





FULL ENCIRCLEMENT STEEL SLEEVE, **BOILER-TYPE FOR PRESSURE** CONTAINMENT, FILLED WITH RAM-100 LIQUID EPOXY RESIN, FOR INSTALLATION WITHOUT STOPPING **OPERATIONS** 









TO REPAIR LARGER AND MORE SIGNIFICANT INTEGRITY DEFICIENCIES, PREVIOUS COMPOSITE OR SPLIT SLEEVES, CURVED, ELBOWS, OR 'T' SECTIONS OF PIPING, MAJOR DENTS, LEAKS, ILLEGAL TAPS OR UNIQUE CONDITIONS









CUSTOM MADE WITH CONCENTRIC REDUCTIONS AND PRESSURE FILLED TO ELIMINATE VOID SPACE



#### FIELD-VERIFIED SPECIAL DESIGNS









## FOR REPAIRS OF OLD/WORN ACCESORIES









### FOR PERMANENT REPAIR AND REINFORCEMENT OF OLDER TEMPORARY SOLUTIONS





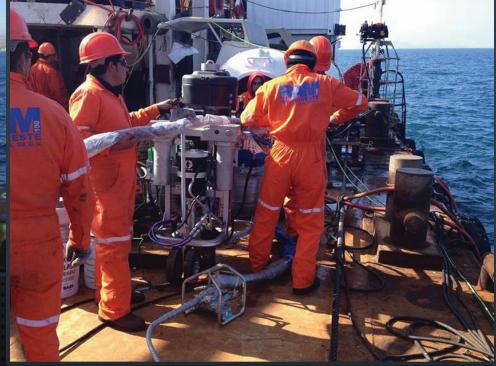






### DESIGN AND INSTALLATION FOR REPAIRS ON SUBSEA INFRASTRUCTURE





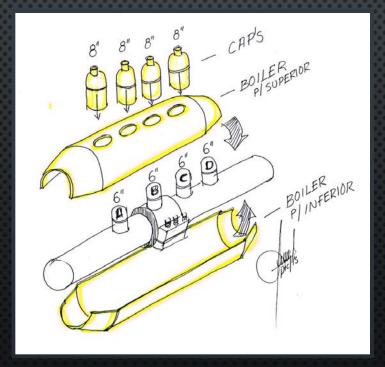


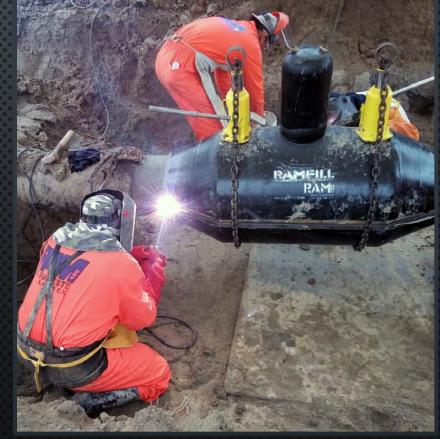




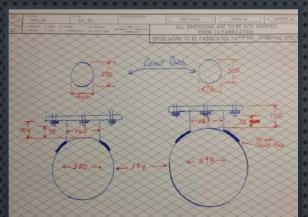
SPECIAL DESIGNS FOR IMMOBILIZATION OF ILLEGAL TAPS WITHOUT STOPPING

**OPERATIONS** 











CUSTOM MADE DESIGNS TO FIT EXISTING

CONDITIONS











SPECIAL DESIGNS TO REINFORCE ENTIRE DEFICIENT SECTIONS INCLUDING EXISTING ACCESORIES, BENDS, PIPING, AND OTHER OBSTACLES











# SAMPLES OF COMPLETED PROJECTS



#### RAMFILL-B+RE ON 14" DIAMETER PIPELINE

























#### RAMFILL-B+RE ON 48" DIAMETER PIPELINE













#### RAMFILL-B+RE ON 36" DIAMETER PIPELINE







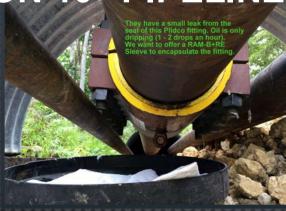






#### RAMFILL-B+RE ON 10" PIPELINE OVER LEAKING BOLTED SLEEVE





























#### RAM-100 - USERS AND CLIENTS































#### RAM-100 - PRODUCTS

RAM-100® PRODUCTS ARE DESIGNED AND MANUFACTURED TO SERVICE THE OIL & GAS INDUSTRY PROVIDING REAL SOLUTIONS TO CORROSION PROBLEMS AND TO MAINTAIN AND REPAIR IN-SERVICE TRANSMISSION PIPELINES WITHOUT STOPPING OPERATIONS.

RAM-100® PRODUCTS ARE ALSO AN EXCELLENT ALTERNATIVE TO REPAIR SUBSTRATES EXPOSED TO ABRASIVE ORGANISMS OR AGGRESSIVE AGENTS, CONCRETE INFRASTRUCTURE, NEUTRALIZATION PITS, AND ANY SURFACE REQUIRING PROTECTION AGAINST CORROSION.

## RAM-100 PRODUCTS PROVIDE SOLUTIONS FOR CORROSION PROBLEMS





#### THANK YOU!



RAY A. MARTINEZ
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