

the line pipe people

PIPE MILL
COATING FACILITIES
BENDING FACILITIES
SPECIAL TUBES



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## **OFFICES & MANUFACTURING FACILITIES**

#### Our Offices:

- Our Head office is located in the heart of Mumbai
- Man Industries has a global presence with its sales offices in Dubai and representations all across the globe.

#### **Our Manufacturing Facilities:**

- Man Industries has **2 Manufacturing facilities in India**.
- Both located strategically to cater to both Domestic and International customers' requirements.

#### 1. Anjar Plant:

- Strategically located near 2 Major
   Seaports (Adani Port & Deen Dayal port) in Gujarat in the West coast of India
- It is Man Industries' state of the art line pipe & Coating complex.
- Recently in March 2023, Man Industries Inaugurated their ERW facility in Anjar plant.

## 2. Pithampur Plant:

- The Pithampur plant is located in the heart of India in Madhya Pradesh.
- It caters to the domestic requirements in the country.



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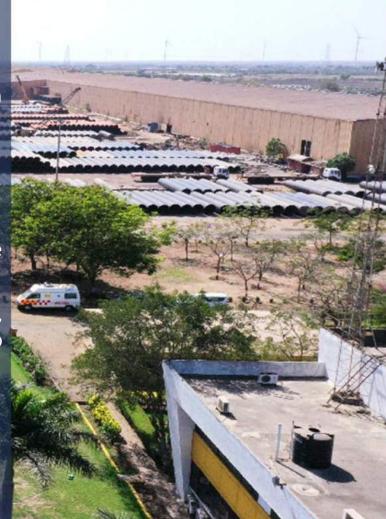


## **CORPORATE OVERVIEW**



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- The MAN Group was established by the Mansukhani family in the 1970s.
- ❖ MAN Industries (India) Limited is the Flagship company of the MAN Group which was incorporated in 1988.
- With 35 years of experience and counting, Man Industries (India) Ltd is an API Q! / ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Company manufacturing & coating Large Diameter Carbon steel pipes
- Man Industries (India) Ltd. is a prominent player in the league of world-class Line Pipes and Coating Systems manufacturers in the Global market.
- ❖ Man Industries (India) Ltd. caters to International clients in the oil & gas industry, petrochemicals, water, dredging & fertilizers. The company has positioned itself to bid for almost all pipe projects across the globe



# MANUFACTURING WELDED CARBON

# MAN Industries (India) Ltd

## STEEL PIPE & MORE

- ightharpoonup Comprehensive size 1/2'' 130'' (13 3300 mm) in length of 12 18 meter
- ❖ Quality System API Q1 for all production lines within house test lab certified to ISO 17025.
- Complete package of in-house services incl. induction bending, internal lining, external coating, conductor and flange welding and other pre-fabrication services.
- Competitive large volume production of lower / medium wall thickness pipeline systems for onshore and offshore oil, gas and water transmission lines
- ❖ Large Scale Economical Production > 1 Mio. tons on one site
- \* Excellent Shipping possibilities from largest Indian deepwater port nearby
- ❖ 30 years' Experience with global track record
- ❖ Approvals from many energy companies incl. ADNOC, KOC, OQ, PDO, PTTEP and many others.
- Financially strong public listed company
- Ongoing Sustainability and community development programs





|      | Method of Manufacturing | Outside<br>Diameter<br>(Inch) | Wall Thickness (mm)* | Grades                       | Specifications                               | Installed Capacity (MT PA) | Pipe Length<br>(meter) | Welding<br>Lines (ID)<br>Nos. | Welding<br>Lines (OD)<br>Nos. |
|------|-------------------------|-------------------------------|----------------------|------------------------------|--|----------------------------|------------------------|-------------------------------|-------------------------------|
| LSAW | 3 Roll (Line-I)         | 16 to 56                      | 6.0 to 35.0          | Up to API<br>5L Grade        | API 5L, API 2B,<br>ISO 3183,<br>DNV-OS-F101, | 350,000                    | 8.0 to 12.20           | 2                             | 2                             |
|      | JCO(Line-II )           | 18 to 56                      | 6.0 to 55.0          | X80 PSL2<br>or<br>Equivalent | ASTM A671 /                                  | 300,000                    | 8.0 to 12.20           | 2                             | 2                             |

| /    | Plant  | Outside<br>Diameter<br>(Inch) | Wall<br>Thickness<br>(mm)* | Grades                            | Specifications                                   | Installed<br>Capacity (MT<br>PA) | Pipe Length<br>(meter) | Welding<br>Lines (ID)<br>Nos. | Welding<br>Lines (OD)<br>Nos. |
|------|--------|-------------------------------|----------------------------|-----------------------------------|--|----------------------------------|------------------------|-------------------------------|-------------------------------|
| HSAW | HSAW-2 | 18 to 130                     | 6.4 to 19.0                | Up to API<br>5L Grade<br>X80 PSL2 | API 5L, ISO 3183<br>& customer<br>specifications | 140,000                          | 6.0 to 13.0            | 2                             | 2                             |
|      | HSAW-3 | 24 to 130                     | 7.1 to 25.4                | or<br>Equivalent                  |  | 300,000                          | 10.0 to 18.0           | 4                             | 4                             |

<sup>\*</sup>Based on wall thickness & grade combination

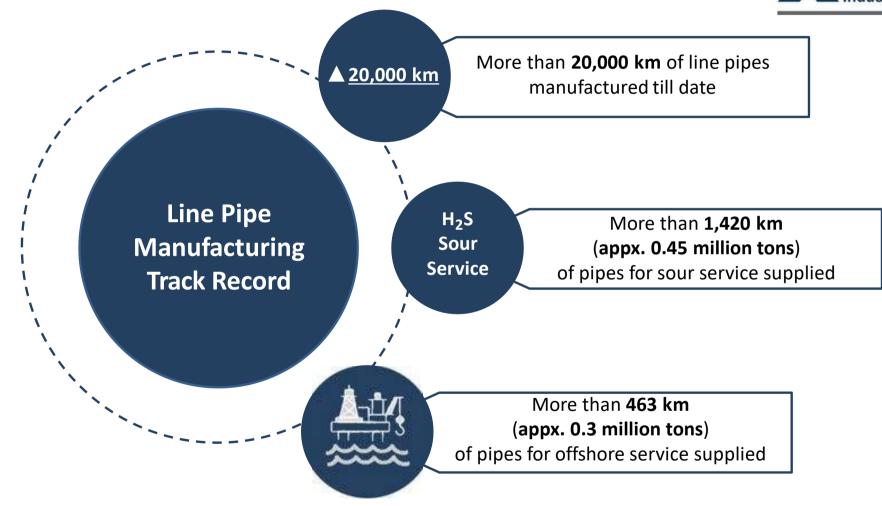


## PRODUCT RANGE (CONTD.)

| ERW | Product Type                        | Size Range                        | Wall Thickness<br>(mm)* | Grades  | Yield<br>Strength<br>(MPa) | Installed<br>Capacity (M<br>TPA)    | Pipe Length<br>(meter) |
|-----|-------------------------------------|-----------------------------------|-------------------------|---|----------------------------|-------------------------------------|------------------------|
|     | ERW API Pipes                       | ½" to 3" &<br>6" NB to 18" NB     | 4.8 to 14.3             | API 5L-Grade B up to X80<br>or equivalent                   | 240 to 550                 |                                     | 5.8 to 18.2            |
| E.  | Circular Hollow<br>Sections         | 6" NB to 18" NB                   | 6.0 to 14.3             | ASTM A53, EN10255, EN<br>10219, EN0217-1,<br>AS1163, AS1074 | 170 to 550                 | 125,000                             | 5 to 12.20             |
|     | Square &<br>Rectangular<br>Sections | 132mm x 132mm to<br>350mm x 350mm | 4.8 to 10.3             | EN10219, AS1163   | 210 to 550                 |                                     | 5 to 12.20             |
| HIB | Product Type                        | Size Range                        | Wall Thickness<br>(mm)* | Grades  | Bending<br>Radius          | Installed<br>Capacity (N<br>o's PA) | Bending Angle          |
|     | Hot Induction<br>Bends              | 4" OD to 80" OD                   | 4.8 to 40               | API 5L-Grade B up to X80<br>or equivalent                   | 2D- 10D                    | 6,000                               | 0-90 Degree            |

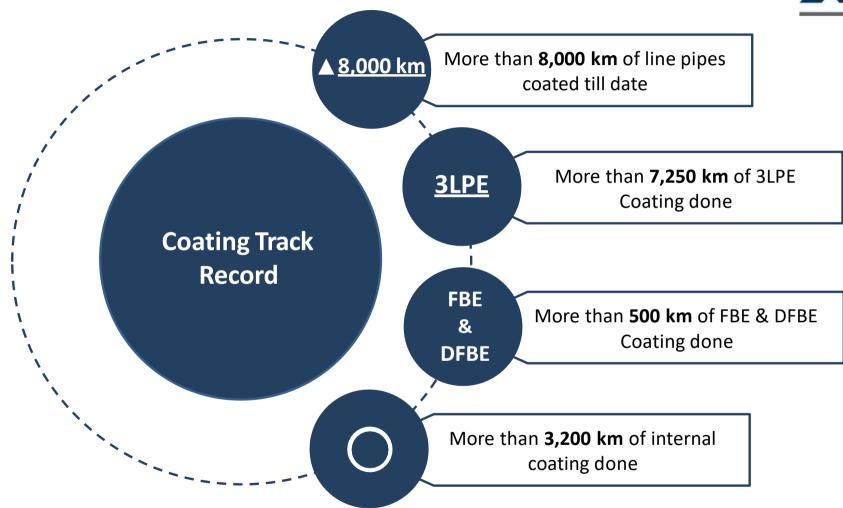
## TRACK RECORD-LINE PIPE







## TRACK RECORD- COATING



## **MAJOR GLOBAL CUSTOMER**





































## **CERTIFICATIONS**



| Certification    | Issued By | Valid Up to |  |  |
|------------------|-----------|-------------|--|--|
| API Q1           | APIQR     | 14.05.2027  |  |  |
| ISO 9001:2015    | APIQR     | 14.05.2027  |  |  |
| ISO 9001:2015    | TUV Nord  | 28.07.2026  |  |  |
| ISO/TS 29001     | TUV Nord  | 14.06.2026  |  |  |
| ISO 14001:2015   | TUV Nord  | 24.05.2027  |  |  |
| ISO 45001:2018   | TUV Nord  | 24.05.2027  |  |  |
| API Spec 5L      | APIQR     | 14.05.2027  |  |  |
| API Spec 2B      | APIQR     | 14.05.2027  |  |  |
| ISO/IEC 17025    | NABL      | 25.09.2025  |  |  |
| ISO 3834-2       | TUV Nord  | 01.05.2026  |  |  |
| CE – PED Marking | BVIS      | 21.05.2027  |  |  |

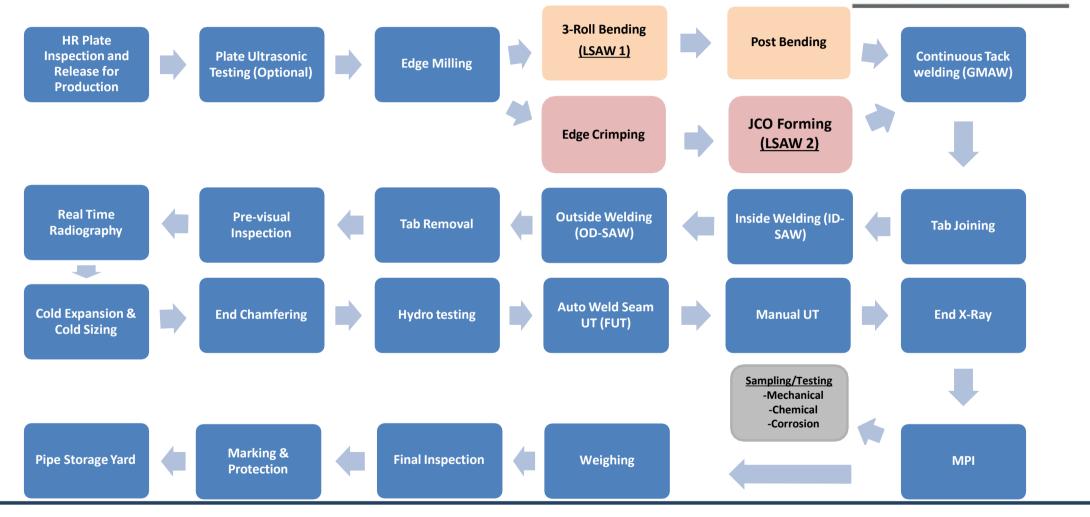






## PROCESS FLOW (LSAW)





## **PRE-FORMING QUALITY CONTROL (PLATES)**





#### <u>Plate Inspection & release for</u> Production

- Correlation of plate marking.
- Verification of chemical and mechanical properties given in raw material test certificates with approved TDC / Steel MPS.
- Verification of Chemical composition and mechanical properties by performing random control tests.
- Visual inspection of plates
- Dimensional inspection of plates i.e. plate thickness, width, length, diagonal difference.



#### Plate Ultrasonic Testing (LSAW 1)

- Make: GE Inspection Tech., Germany
- No. of probe: 102Channel: 102 Nos.
- Minimum 100% Body Coverage up to 5500 mm
- Normal Probe : Size 60 mm
- Frequency: 8 MHz



#### **Plate Ultrasonic Testing (LSAW 2)**

- Make: RD Tech, Olympus, Canada
- No. of probe: 78
- 100% body coverage for plate width up to 3500 mm.
- 100% edge up to 100 mm
- Normal TR Probe : Size 64 mm
- Frequency: 5 MHz

## **FORMING (LSAW)**





## 3 Roll Bending (LSAW 1)

**Equipment Make : Haeusler-Switzerland** 

OD : 16 to 56 inch WT: 6 to 35 mm

## JCO (LSAW 2)

**Equipment Make: Indigenous OD: 16 to 56** 

inch

WT: 6 to 55 mm



## **WELDING PROCESS (LSAW)**



#### 1. Root Welding (GMAW)

#### LSAW 1

- Make: Haeusler Switzerland
- Welding/Technology: U&S, GERMANY Make with Laser control system

#### LSAW 2

- Make: Indigenous
- Welding/Technology: ESAB-SWEDEN, Make with Laser control system



## 2. Inside SAW Welding - (Offline)

#### **Both LSAW**

- Make: ESAB- SWEDEN
- Wire System: 03 Wire (Lead -1DC, Trail- 2AC)
- DC 1600 Amp max, AC 1250 Amp max
- Seam tracking with guide roll



## 3. Outside SAW Welding - (Offline)

#### LSAW - 1

- Make: ESAB SWEDEN
- Wire System: 04 Wire (1DC, 3AC)
- DC 1600 Amp, AC 1250 Amp
- Automatic laser seam tracking

#### **LSAW - 2**

- Make: ESAB- SWEDEN
- Wire System: 03 Wire (1DC, 2AC)
- DC 1600 Amp, AC 1250 Amp
- Automatic laser seam tracking



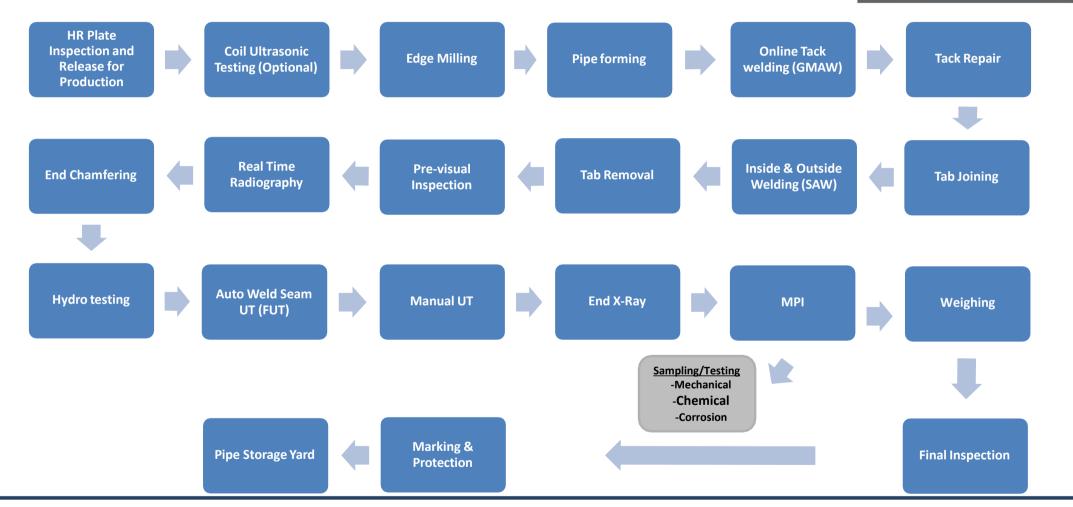


#### **Expansion**

- Make: Uzin Export Romania
- Capacity: 1200 MT (LSAW 1) & 800 MT (LSAW 2)
- Expansion Range: 0.3 To 1.5 %
- Length: 12.20 m
- Overlap Length: 50 mm Minimum
- Rapid travel speed: 120 m/s
- Expanding speed: 120 mm/s

## **PROCESS FLOW (HSAW)**





## PRE FORMING QUALITY CONTROL (COILS)



## 1. Coil Inspection and Release for Production

- Correlation of Coil marking.
- Verification of chemical and mechanical properties given in raw material test certificates with approved TDC /Steel MPS.
- Chemical composition and mechanical properties are verified by control test performed randomly from the selected heat.
- Visual and dimensional inspection of Coil.



2. De-coiling

#### **Flying Car**

• Make : THMC-China

• Capacity: 1500-2100 mm width



• Make : THMC-China

• Capacity: 35 MT





#### 3. Coil UT

- Make : R.D. Tech Olympus Canada
- Coverage : 100% of coil width Up to 1500 mm (HSAW 2) 100% of coil width Up to 2200 mm (HSAW 3)
- 32 Channels (HSAW 2), 48 Channels (HSAW 3)
- 32 probes (HSAW 2), 48 probes (HSAW 3)
- Frequency 5 MHz
- TR type Probes
- Automatic Spray Gun

.

## **FORMING PROCESS (HSAW)**







HSAW Pipes are manufactured in 2 Step Forming Process to ensure low welding defects and tighter dimensional tolerance.

**Step 1 : Forming + GMAW Welding** 

Step 2: Offline Inside and Outside SAW Welding

| HSAW – 2  | HSAW - 3   |
|---|--|
| Make: Haeusler-Switzerland OD: 16 to 56 inch WT: 6 to 19 mm Pipe Length: 13 meter | Make: Indigenous OD: 24 to 120 inch WT: 6 to 25 mm Pipe Length: 18 meter |

## **WELDING PROCESS (HSAW)**







#### 1. Forming with Continuous Tack Welding

- Make: BLOHM-Germany
- Forming Speed: 5.5 Meter / Minutes max.
- Continuous Tack Welding (GMAW)
- Welding system :1600 AMP DC, Make-ESAB Sweden.



#### 2. Offline External & Internal Welding

- Make: ESAB- SWEDEN
- Wire System: 03 Wire (1DC, 2AC)
- DC 1600 Amp, AC 1250 Amp
- Automatic seam tracking with Laser sensor

## **ADVANCED INSPECTION & TESTING FACILITY (LSAW/HSAW)**





## 1. Real Time Radiography with Digital Recording

- Make (Source): YXLON, Germany
- Capacity: 225 KV
- Focal Spot Size: 1 mm & 5.5 mm
- Imaging medium: Digital Recording
- IQI: ISO/ASTM Wire type
- Sensitivity: Better than 2% based on IQI
- Equipped with flat panel (Model XRD0822) for digital recording of radiography image



#### 2. Hydrostatic Test

- Make: THMC, China (LSAW 1), Indigenous (LSAW 2)
- Capacity: 4000 MT (LSAW 1), 3000 MT (LSAW2)
- Testing pressure: 290 Bar (LSAW 1), 650 Bar (LSAW 2)
- Computerized Chart Recording



#### 3. Automatic Ultrasonic Test

- Make: Olympus RD Tech, Canada (LSAW 1) Vivasonic, India (LSAW 2)
- Channel: 36 Nos.
- Probes: 24 Nos.
- Auto Seam tracking device
- UT Probe Configuration: Inter changeable Mode I, X, On Bead , HAZ, Tandem
- Equipped with UT Chart Recorder facility

## **ADVANCED INSPECTION & TESTING FACILITY (LSAW/HSAW)**



#### Manual Ultrasonic Testing - pipe Ends & AUT indications

 Make: Modsonic • Model: Einstein - II A-Scan facility



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#### 5. Radiography Examination (Film Radiography)

• Make: YXLON, Germany

• Capacity: 225 KV

• Focal Spot Size: 1 mm & 5.5 mm / 1mm & 3 mm

• Imaging medium: Film radiography

• IQI: ISO/ASTM Wire type

• Sensitivity: Better than 2% based on IQI



#### 6. Magnetic Particle Inspection

• Make: K-Electronics, India

Capacity: 9000 amp

• Type : Coil / Yoke • Techniques: Wet (fluorescent/Non

Fluorescent)

Particle: Red/Black/Gray



#### Final Visual **Dimensional Inspection**

#### **Visual Inspection:**

Outside and inside

#### **Dimensional Inspection:**

• Inside and Outside diameter, Thickness, Out roundness, Bevel angle, Root face, Squareness, Straightness, Bead height, Offset Flatness, Peaking and Length & Marking

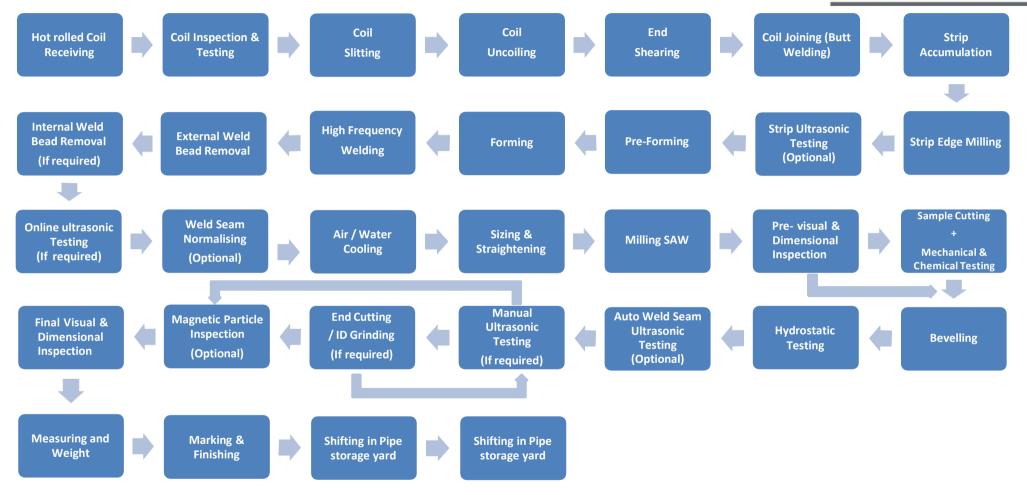


**HF-ERW** 



## **ELECTRIC RESISTANCE WELDED (HF-ERW) PIPES – PROCESS FLOW**





## **PRE-FORMING ACTIVITIES (ERW)**





1. Plate Inspection & release for Production

- Correlation of Coil marking.
- Verification of chemical and mechanical properties given in raw material test certificates with approved TDC /Steel MPS.
- Chemical composition and mechanical properties are verified by control test performed randomly from the selected heat.
- Visual and dimensional inspection of Coil.





2. De-coiling

#### De-Coiler

• Make : ZHW-China

• Capacity: 30 MT

#### **Coil Slitting**

• Make : ZHW-China

• Roll Material: 42 CrMo - 300 mm Dia



## 3. Edge Preparation (End Shear And Butt Welding)

Make: ZHW – CHINA

• Hydraulic Operated

• End Scarp Collection by driven trolley

• Coil Width: 530 to 1500 mm

• Coil Thk.: 6 mm to 14 mm

## **FORMING (ERW)**



#### 1. Finpass

Make: ZHW – CHINA

Qty: 01 Group (3 Sets of Finpass Stand)

Type: 04 RollersSize: 6 5/8" to 18"

• Thickness: 4 mm to 14 mm

• Strip Speed: i. 14 mm - 15 M/Min

ii. 6 mm - 24 M/Min

Shaft Dia: 260 mmRoot Dia: 520 mm



#### 2. Sqeeze Roll

Make: ZHW- China

• Five Roll Assembly

• Size: 6 5/8" to 18"

Thickness: 4 mm to 14 mm

Strip Speed: i. 14 mm - 15 M/Min

ii. 6 mm - 24 M/Min

• Load Capacity:

Top Roll: 800 KN Side Roll: 1400 KN Bottom Roll: 500 KN





#### 3. Forming And Welding

• Make: ZHW- China

• Size: 6 5/8" to 18"

• Thickness: 4 mm to 14 mm

• Strip Speed : i. 14 mm - 15 M/Min

ii. 6 mm - 24 M/Min

• Power capacity: 1000 Kw

• Frequency: Min 200 KHz

• Contact and Induction type Welding

## **POST FORMING ACTIVITIES (ERW)**





#### 1. Online UT

Make: Blue star IndiaSize: 6 5/8" to 18"

Thickness: 4 mm to 14 mm

• Strip Speed: i. 14 mm  $\rightarrow$  15M/Min

ii. 6 mm  $\rightarrow$  24 M/Min

No of Probe: 8 NosAuto Tracking



#### 2. Sizing

Make: ZHW China

 Qty of Sizing Frame: 5 Sets - Four Roll Stands

• Size: 6 5/8" to 18"

Thickness: 4 mm to 14 mm

Strip Speed: i. 14 mm - 15 M/Min

• ii. 6 mm - 24 M/Min

Stand Structure: Gantry Type
 Casting Steel Frame, Worm Gear
 Box Speed Reducer Press Down,
 Adjustment manually

Root Dia: 520 mm



#### 3. Seam Normalizer

Make: Thermocool

• Size: 6 5/8" to 18"

• Thickness: 4 mm to 14 mm

• Strip Speed: i. 14 mm  $\rightarrow$  15M/Min

ii. 6 mm  $\rightarrow$ 24 M/Min

• Power capacity: 600 Kw x 02 Nos

• Frequency: Min 1 KHz



#### 4. Bevelling (End Preparation)

Make: 7HW- China

• Pipe Transferring speed: 30 m/ min

 Motor power:- 2.2 Kw, speed can be adjusted with AC convertor

• Linear speed of cutting: 110 m/min

 Precision of radial runout of spindle -0.1 mm

• Size: 6 5/8" to 18"

• Thickness: 4 mm to 14 mm

• Pipe Length: 5.8 Mtr to 18 Mtr

• Bevelling Angle: 32.5 ° and 37.5 °

Ovality: Max 1% of OD

# MANUFACTURING FACILITIES

HOT INDUCTION BENDING



## **Hot Induction Bending**



Induction bending is an advanced metal bending process, offering optimum precision, efficiency and consistency It is suitable for a very wide range of applications and completely overcomes the potential limitations of cold bending techniques, such as distortion and wall thinning.

Straight pipe, tube or other section types are placed on a machine bed with a swing arm set to the required radius. The material is then hydraulically pushed through an induction coil at a carefully controlled and monitored temperature of approximately 1000°C focused on the area which requires bending, while cool air and water is sprayed on the area adjacent to the heated zone







| Parameter                                    | Product Range  |  |  |
|--|--|--|--|
| Outside Diameter                             | 4" TO 80"  |  |  |
| Wall Thickness                               | 4.8 mm to 40.0 mm  |  |  |
| Grades                                       | Up to API 5L Grade X80 PSL2 or Equivalent  |  |  |
| Specifications                               | ISO 15590-1, ASME B16.49, DNV, SHELL DEP and other client specification                                |  |  |
| Installed Capacity Bend radius               | 2D ≤ R ≤ 10D   |  |  |
| Bend angle                                   | 0-90 Degree  |  |  |
| Pipe Length                                  | Up to 12.2 Meters  |  |  |
| Application                                  | Oil & Gas (Mainline, station, distribution & Casing), water & sewage, structural and automotive grades |  |  |
| *Based On Wall Thickness & Grade Combination |  |  |  |







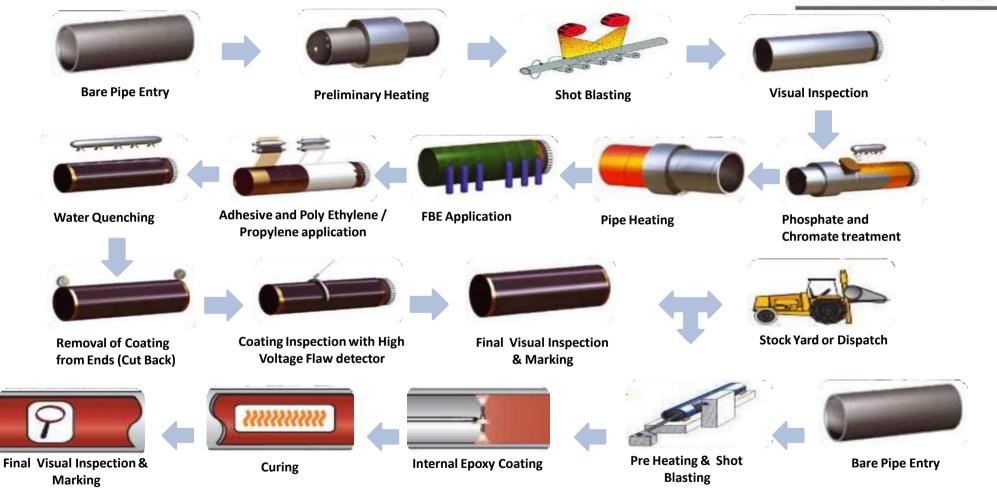


## **TYPE OF COATING & PRODUCT RANGE**

| Type of Coating                                 | Diameter Range<br>(Inch)                       | Combined Capacity<br>(Sqm/Annum) | Specifications Followed  |
|---|--|----------------------------------|--|
| 3LPE: Three Layer Polyethylene                  | 4 to 130                                       | 6.0 million                      | FBE  |
| 3LPP: Polypropylene                             | 4 to 130                                       | 6.0 million                      | <ul> <li>NACE SP0394</li> <li>DEP 31.40.30.32 (Shell 2011)</li> <li>GS EP COR 222 (TOTAL)</li> <li>AWWA C213 (2007)</li> <li>3LPE</li> </ul>                 |
| FBE & DFBE: Fusion Bonded Epoxy / Dual<br>Layer | • CSA Z2 • DIN 30 • ISO 213 • ISO 213 • DEP 31 |                                  | <ul> <li>CSA Z245.21</li> <li>DIN 30670</li> <li>ISO 21809-1</li> <li>ISO 21809-4</li> <li>DEP 31.40.30.31 (SHELL)</li> <li>GS EP COR 220 (TOTAL)</li> </ul> |
| Internal Epoxy Flow Lining                      | 14 to 130                                      | 4.9 million                      | API 5L RP 2,<br>ISO 15741,<br>AWWA C210  |

## **COATING PROCESS FLOW**





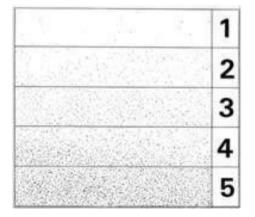
#### **INSPECTION OF BLASTED SURFACE**

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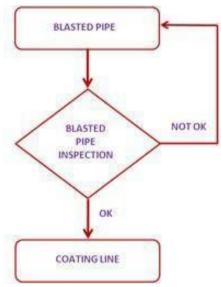
#### **Inspection of Blasted Surface**

- Visual Inspection of Blast clean surface to check the degree of cleanliness as per ISO-8501-1
- Measurement of Surface roughness using roughness tester. The roughness shall be between 50-100 microns.
- Measurement of Salt Contamination on pipe surface.
- Checking degree of dust as per ISO 8502-3.
- Other steel surface defects (if any)
- Any pipe which does not meet the requirement of blast surface shall be sent for re-blasting.
- Only accepted pipes will be sent further for coating









#### **EXTERNAL COATING**

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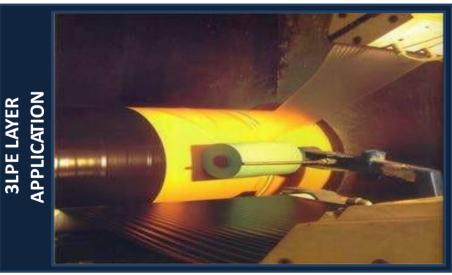
#### **FBE Application**

- Pipes are Heated using Induction Heater. The pipe temperature shall be around 220 °C or as recommended by Epoxy powder manufacturer.
- Epoxy powder is applied using compressed air within the time interval specified by Epoxy power supplier.
- The pipe can coated with a thickness of epoxy coating around 500  $\mu$ M for single layer and 800  $\mu$ M for double layer coating.

#### **3 Layer Poly Ethylene Coating**

- 1st Layer is Epoxy.
- 2nd Layer is Extruded Adhesive. Adhesive will act as bond between Epoxy and PE/PP
- 3rd Layer is Poly Ethylene / Poly propylene.
- Adhesive and PE/PP are also heated up to 220 °C or as per recommendation.
- The extruded Adhesive and PE/PP films are pressed on pipe surface using pressing rollers to achieve complete bonding





#### **INTERNAL COATING**

#### **Type of Internal Coating done**

- Friction resistance Coating for Gas Pipeline
- Food Grade Solvent Liquid Epoxy Coating for Potable Water as pe AWWA C-210 spec
- Glass Flake Epoxy coating for waste water pipelines.
- Internal Coating can be on pipes ranging from 14" to 120" diameter





**Internal Shot Blaster** 





**Internal Coating Application** 

#### **INSPECTION ON COATED PIPES**

#### **Holiday Inspection**

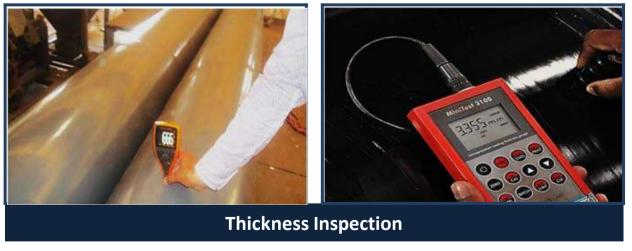
- Holiday test works on the concept of electrical conductivity.
- In line DC pulse type Holiday detectors are used to detect visible / invisible pinholes / discontinuity in coating.





#### **Other tests performed on Coated Pipe**

- Thickness Inspection
- Bond Strength (Peel) Test
- Impact Resistance Test.
- · Flexibility of coating.
- Indentation Test
- Visual Inspection of Coated surface including coating cutback area.





#### **CONCRETE WEIGHT COATING FACILITY**

| CWC Plant Technical Details |                |   |               |                  |  |
|-----------------------------|----------------|---|---------------|------------------|--|
| Pipe OD Range               |                | 16 to 48 inch   |               |                  |  |
| Concrete Density            |                | Up to 3500 Kg/m3 or as per customer requirements  |               |                  |  |
| Concrete Thickness          |                | Up to 150 mm  |               |                  |  |
| CWC Coating Capacity        |                | 125,000 M³/Annum  |               |                  |  |
| Reinforcement               |                | Upto 3 layers   |               |                  |  |
| Production Capacity         |                |   |               |                  |  |
| Pipe Size (OD)              | CWC Thick (mm) |   | Reinforcement | No. of Pipes/Day |  |
| Up to 30"                   | 150            |   | 3 layers      | 110              |  |
| 30" to 42"                  | 150            |   | 3 layers      | 50               |  |
| 42" to 48"                  | 150            |   | 3 layers      | 45               |  |
| Type of Pipe to be coated   |                | Seamless, LSAW, HSAW with a suitable external coating of Bitumen, Coal tar, Epoxy, Roughened PE/PP or otherwise, which is suitable to allow the application of impingement concrete coating process |               |                  |  |

#### **CONCRETE WEIGHT COATING FACILITY**





Wire Mesh Wrapping



**Concrete Application** 



**Testing on CWC Pipes** 



**Anode Installation (Optional)** 



**Finished Coated Pipes** 











- In-house testing laboratory equipped with all required mechanical & chemical testing equipments for carrying out tests as per Line pipe specifications and client requirements.
- Laboratory is accredited by NABL in accordance with ISO/IEC 17025:2017.



| Sr. No. | Description of the Equipment                       | Make            | Capacity  |
|---------|--|-----------------|---|
| 1       | Optical Emission Spectro Meter                     | Shimadzu        | Model: PDA 5000 to test 20 elements                                       |
| 2       | Universal Tensile Testing Machine                  | Fie Engineering | Model: UTE-100 0-1000KN   |
| 3       | Universal Tensile Testing Machine                  | Jinan           | WAW-1200E, 0 to 1200 KN   |
| 4       | Vickers Hardness Tester                            | Fie Engineering | 5-50 Kgf. HV05 TO HV10  |
| 5       | Rockwell Hardness Tester                           | Fie Engineering | Model: RAB-250 100(B), 150(C)<br>KGF.                                     |
| 7       | Charpy Impact Testing Machine.                     | Fie Engineering | 0-400 JULES   |
| 8       | Profile Projector                                  | Labovision      | 10X-50X   |
| 9       | Drop Weight Tear Testing Machine                   | Indigenous      | Velocity: 7.67 m/s<br>Working Height: 3.0 mtrs.<br>Hammer Weight: 761 kg. |
| 10      | Drop Weight Tear Testing Machine                   | Admech          | Working Height: 5.0 mtrs<br>Hammer Weight: 1000 kg                        |
| 11      | Dead Weight Pressure Gauge Tester.                 | Yantrica        | 0-1000 Kgf/Cm2  |
| 15      | Inverted Reflected Light Microscope                | Leica           | 5X - 100X   |
| 16      | Automatic Karl – Fischer Type Moisture<br>Analyzer | Mettler Toledo  | To check the moisture in flux   |





#### PIPE STORAGE & TRANSPORTATION



#### **Pipe Storage**

- Pipes are stored in Pipe Storage area within same premises of Pipe Manufacturing.
- Pipes are stored above ground.
- Pipes are stored based on the Pipes size and grade.
- It is ensured that Pipes are not in direct contact with land or metallic surface.
- Dedicated Storage area for Bare Pipes and Coated Pipes.

#### **Pipe Handling & Ship Transportation**

- Pipes are handled through one of India's biggest PORTs. Adani Port, Mundra & Pandit Deendayal Port, Kandla. Both ports are around 40 km away from our plant.
- Pipe handling at PORT and stowage in the Vessel is done as per approved handling and transportation procedure and API 5LW





Total Facility Area: 390,200 m<sup>2</sup>

Pipe Storage Area: 297,000 m<sup>2</sup>

**3LPE Coated Pipes Loading in Ship** 



| UAE (2025)      |                                     |  |
|-----------------|-------------------------------------|--|
| Product         | Bends/ Pipe Coating                 |  |
| Capacity        | Bends- 4000 Nos./ ~3 Million Sq. m. |  |
| Pipe Diameter   | 4" to 80"                           |  |
| Bending Radius  | 2D< R< 10D                          |  |
| Thickness       | 6.35mm to 60mm                      |  |
| Max. Arc Length | 18 meters                           |  |
| Grade           | API 5L X-80                         |  |
| Coating         | 3LPE, 3LPP, FBE, IE                 |  |

# **UPCOMING FACILITIES**

| Kingdom of Saudi Arabia (2025) |   |  |
|--------------------------------|---|--|
| Product                        | HSAW/LSAW   |  |
| Capacity                       | ~300,000 MT/year  |  |
| Internal Coating Facility      | 2.5 million m²/year   |  |
| External Coating Facility      | 3 million m²/year   |  |
| Sizes                          | HSAW- 20"-84" (6.4 to 22.2 mm)<br>LSAW- 24"- 60" (6.4 to 30.5 mm) |  |





| India (2025) |   |  |
|--------------|---|--|
| Product      | Stainless-Steel Seamless Pipes                |  |
| Capacity     | 22,000 MT/year (Hot Forming & Cold Finishing) |  |
| Size         | Extruded (33.7-127mm)                         |  |







#### **FUELING THE FUTURE ONE STEP AT A TIME**



Our Pipes have been successfully tested for transporting Hydrogen by

### **RINA Consulting**

Centro Sviluppo Materiali S.p.A., Italy



SUSTAINABILITY &

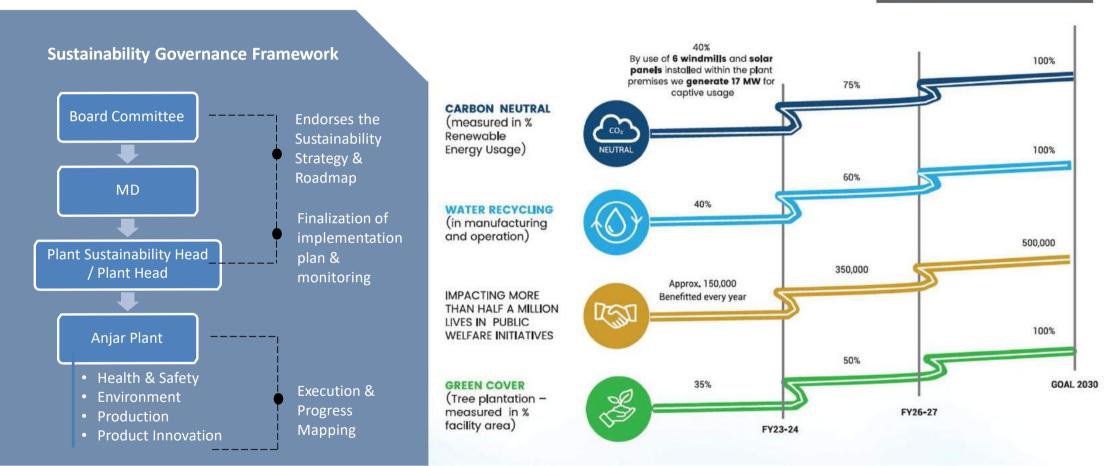
&
CORPORATE
SOCIAL
RESPONSIBILITY





#### **ROADMAP TOWARDS A GREENER INDUSTRY**







## Thank You!!