WORLD CLASS
STEEL PIPE MANUFACTURER
AND CORROSION PROTECTION APPLICATOR

KRAKATAU
PIPE & COATING

PT KHI Pipe Industries
We commit to provide Spiral Welded Steel Pipes for good infrastructure, oil and gas and construction projects, including technical engineering and financial solutions for the sake of nation and community prosperity.

**Spiral Welded Steel Pipe Capacity & Capability**

- **Total Design Capacity**: 150,000 tons/Years
- **Oil / Gas Line Pipe Capacity**: 100,000 tons/Years
- **Structural / Pilling Capacity**: 120,000 tons/Years
- **Water Pipe Capacity**: 100,000 tons/Years
- **Diameter**: 12” - 80”
- **Wall Thickness**: 3.2 mm - 25 mm
- **Material**: Up to SMYS 80,000 Psi

**Maximum Pipe Length**
- 12.4m for line pipe
- 65m for pile pipe

Our Commitment toward high quality products and implementation of quality management system has been proven and meet international standard such as:

- ASTM
- B
- AWWA
- JIS
- API 5L
- DIN
- AS

And accepted by our customer especially oil and gas, EPC companies which has already known by their high quality standard requirements.
In 2019, KHI supplied water linepipes for SPAM Lampung – PT Bangun Cipta Kontraktor with pipe diameter 1.016 mm, thickness 9 mm and pipe specification AWWA C200. This total project quantity is 4,400 Ton – total length 22.25 Km.

KHI supplied spiral pile pipe for PLTU Cilacap project - China Communications Construction in 2020. Total project quantity is 4.500 Ton. This project used steel pile pipe with diameter 1.000 mm, thickness 16 mm and pipe specification ASTM A252 Gr.2

KHI participated on Patuha Geothermal Project by supplying spiral welded linepipe with Diameter 558, 914 & 1066 mm x 12.7 mm WT in 2013. The pipe is used by PT JFE Engineering – contractor of this project to transfer geothermal to power plant.

KHI closes 2020 by completing the delivery of McConnell Dowell Constructors (Aust) Pty Ltd’s HMAS Coonawara project. KHI supplies piles pipe with the specification BS EN 10219 S355JO which will be used for jetty construction at HMAS Coonawarra, an Australian Navy Base located in the city of Darwin, Northern Territory. Producing pipes with dimensions and thicknesses that are at 25 mm thickness – the maximum engine capacity limit is one of KHI’s proud successes.

KHI Pipe Industries supplied 20,040 m Spiral Line Pipe for Senoro Gas Development Project for Joint Operating Body (JOB) Pertamina – Medco F&P Timor Sulawesi with specification API 5L Grade X60 PSL2 Dia 30” x 17.5mm x DRL with FBE Coating. The project is constructed by PT Tripatra Engineering & Contractor.
ELECTRIC RESISTANCE WELDED PIPE

We produce high quality ERW/Electric Resistance Welded Steel pipes for Oil, Gas and Water Pipe Installation, Infrastructure and Construction Projects to be market leader and fulfill customer needs for infrastructure growth.

HIGH FREQUENCY RESISTANCE WELDED (HFRW)/ERW CAPACITY & CAPABILITY

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<tbody>
<tr>
<td>Total Design Capacity</td>
<td>220,000 tons</td>
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<tr>
<td>Range of Diameter</td>
<td>1/2&quot; up to 20&quot;</td>
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<tr>
<td>Range of Wall Thickness</td>
<td>2.77 mm - 16 mm</td>
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<tr>
<td>Material</td>
<td>Up to 70,000 Psi</td>
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In order to fulfill pipe demand in oil and gas projects i.e. offshore and onshore projects; we expand our capability to include large diameter ERW line facility with advance technology of manufacturing process. The line production is capable to produce large diameter ERW pipes up to 20 inch as high strength API Grade up to API 5L X80 sour service, offshore requirement (DnV OS F101) and casing tubing products refers to API SCT.
KHI support national strategic projects of pipeline Rokan Oil Block, which is the backbone of national petroleum production. This projects required pipe diameter 508 mm, specification API5L Gr.X-52 with total quantity 12,700 ton.

KHI linepipe have small tolerance deviation on each pipes where this will make the installation process easier.

PT Pertamina developed linepipe distribution network to distribute gas with coverage area Boyolali – Pengapon. Pipe diameter 323.9 mm, thickness 10.3 mm with total volume 4,400 Ton. The pipe is coated by 3LPE (3 Layer Polyethylene) Coating.

In 2021, KHI supplied ERW pipe for water distribution with pipe specification SNI 0039:2013 with various diameter for SPAM Kalidendeng with total quantity 1,634 Ton. This project is located in Kupang. At the same time, KHI also supplied water pipe project for SPAM Malilin and SPAM Likupang.

KHI supplied erw pipe with various diameter and specification SA355 Gr.P22 for PT Pertamina Hulu Mahakam with total quantity 1,200 Ton.

KHI has many experience to supply construction pipe for building installations. One of airport project is New Yogyakarta International Airport (NYIA) in Yogyakarta. The project was conducted in 2019 and required 5,600 ton erw pipe. The main contractor is PT PP KSO. Aside this project, KHI also provide ERW Construction pipe for Jakarta International Stadium Project with total quantity is 1,450 Ton.

In 2019, KHI supplied electrical pole for PLN Project with specification SPLN D3.019:2012 and total quantity is 8,000 ton.
As integrated pipe mill, we also provide coating application service for oil and gas infrastructure project to protect your product against corrosion.

2. External Coating

- **External Painting Epoxy**
  - Diameter: 4 – 80 inch
  - Design Capacity: 800,000 sqm/year

- **Coal Tar Enamel Coating**
  - Diameter: 4 – 60 inch
  - Design Capacity: 800,000 sqm/year

- **Fusion Bonded Epoxy**
  - Diameter: 4 – 48 inch
  - Design Capacity: 800,000 sqm/year

- **3 Layer Polyethylene / 3 Layer Polypropylene (3 LPE / 3 LPP)**
  - Diameter: 4 – 48 inch
  - Design Capacity: 1,600,000 sqm/year

- **Concrete Weight Coating**
  - Diameter: 4 – 48 inch
  - Coating Thickness: Up to 150 mm.
  - Design Capacity: 500,000 MT/Year

- **Asphalt Enamel**
  - Diameter: 4 – 48 inch
  - Coating Thickness: Up to 5.5 mm.
  - Design Capacity: 800,000 sqm/Year

For external and internal coating process, KHI is equipped with shot blasting machine conforms to ISO 8501 1 and SSPC standards to assure the quality of product. The qualities of pipe coating are inspected using high voltage Holiday detected equipment.

COATING CAPABILITIES

1. Internal Coating

- **Epoxy Coating**
  - Diameter: 4 – 48 inch
  - Design Capacity: 800,000 sqm/year

- **Internal Cement Lining**
  - Diameter: 4 – 60 inch
  - Design Capacity: 800,000 sqm/year

OUR COATING PROTECTION MEETS THE FOLLOWING INTERNATIONAL STANDARDS:

**INTERNAL COATING**

- API RP 5L2 - Recommended practice for Internal Coating at pipeline for Non Corrosive Gas Transmission.
- NACE TM0104: Holiday Detection of Internal Tubular Coating.
- AWWA & British Standard.
- SSPC-PA-2: Measuring Dry Film Thickness.
- NACE SP 1 Steel Structures/Painting Council - Surface Preparation Specification No. 1: Solvent Cleaning

**EXTERNAL COATING**

- SSPC-SP10: Surface Preparation Standards for painting steel surface.
- SIS Standard 05-59-00-1088 - Swedish Standard Institute for Blast Cleaning.
- ASTM D4417: Field Measurement of Surface Profile of Blast Cleared Pipe.
- ANNI XVA & British Standard.
- ISO 21809-2.
External Epoxy Coating for HMAS Connawara

Pile pipe for Connawara project used external epoxy coating. The project required the coating with 0.6 mm thickness. This application able to protect the pipe in long term condition.

Coated pipe required Fusion Bonded Epoxy with total coating coverage 18,774 Sqm on Line Pipe was supplied for EPC Pertamina Tanjung Uban Project in 2014. The protection has good flexibility and excellence resistance to cathodic disbondment.

For more severe abrasive & temperature condition, Dual Layer FBE is applied. Dual Layer FBE is a dual powder abrasion resistant coating which is designed to provide excellent abrasion resistance to the pipes.

3 Layer Polyethylene with total coating area 87,604 Sqm was applied for Rokan Project line pipe in 2020. The project is located in Dumai. Inner (first) layer provides corrosion protection and flexibility while outer layer of Polyethylene provides impact and abrasion protection.

KHI has many experience to process concrete weight coating. One of the coating projects is Timas Suplindo – BIGP Project. The linepipe required 3LPE Coating thickness and Concrete Weight Coating. The coated pipe will be installed on offshore fields in the Natuna Sea A Block.

PT KHI Pipe Industries supplied 10.566 sqm coated for PGN SBU 1 using special epoxy coating material which has high quality and good reliability. This application used two parts of liquid epoxy paint system applied in a single coat as anticorrosion protection for steel pipes and able to protect the pipe in long term condition.

PT KHI Pipe Industries supplied water pipe with various diameter, specification AWWA C200 for PT Bestindo Putra Mandiri – Water linepipe distribution SPAM Semarang Barat. The pipe required Cement lining for internal coating and 3LPE for external coating which will be applied for transmission.

Cement lining prevent ruberculation by creating a high pH at the pipe wall and ultimately by providing a physical barrier to the water. Cement linings are also smooth which results in a high flow coefficient.
To ensure our product giving the maximum quality result, all KHI pipes undergo strict quality test before and after commercial production.

**Quality Control**

**Why Choose Our Products**

1. Package supply available in wide size range and large quantity.
2. Excellence in quality product based on world wide quality system certified ISO 9001 and API Q1.
3. Integrated Pipe Mill and Coating Applicator.
4. Guarantee supply of raw material from PT Krakatau Steel.

**Test Equipment**

- Non Destructive:
  - Ultrasonic tester online
  - Ultrasonic tester offline
  - X-ray
  - Fluoroscopy
  - Hydrostatic tester
  - Holiday test method

- Destructive:
  - Tensile test machine
  - Bend test machine
  - Drop weight tear test machine
  - Hardness test machine
  - Sample preparation workshop
  - Compressive test machine

- Emmission spectometer
- Mikroskop optic
- Polishing machine
- Tensile test machine

**Others Benefit**

- Maintenance guarantee
- Logistic handling

**Products**

- The port of Cipading (Krakatau Steel Group) - the deepest on the Java island, which is located 2 KM from the pipe mill.