



cladtek 
delivering additive solutions

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Welcome to Cladtek the largest supplier of weld overlay Corrosion Resistant Alloy (CRA) pipe in the world today, and a leading supplier of CRA mechanically lined pipe (MLP).

From humble beginnings 20 years ago, Cladtek products are now in service around the globe with some of the world's largest and most respected organisations including Adnoc Group, Aramco, Chevron, Exxon, Petrobras and Shell.

Cladtek has three manufacturing facilities:

Batam, Indonesia

Rio De Janeiro, Brazil

Dammam, Saudi Arabia

We offer a range of standalone related services such as induction bending, pipe spool fabrication, thermally sprayed aluminium coating, design and manufacture of clad valves, and design and manufacture of clad pressure vessels including pig launchers and receivers. We also offer complete, integrated clad product solutions that allow our customers to combine our various products and services into a single, seamless package that extends all the way to fabrication of skids and modules.

Cladtek is ISO 9001/API Q1 certified and holds API 5LC (Lic 0019) and API 5LD (Lic 0007). We also carry U, U2 and R stamp certification and API 6A and 6D certification for valves and flanges. Our commitment to quality is reflected in our continuing investment in new equipment and methods for quality assurance and control. Our in-house Research and Development team are constantly focused on developing technologies to enhance our products and give our customers absolute peace of mind.

Values

Value	Description
Unity	<ul style="list-style-type: none">• There's power in UNITY• Together we are much more powerful• We value each person and actively create opportunities to harness the unique skills that each member brings• We embrace diversity and utilise many and varied perspectives in building one unified eco-system• We build strong union with our valued clients to fortify both our futures• Our commitment to each other means that we are reliable and we go beyond to help our fellow team members• We understand that accountability is a cornerstone in the pursuit of excellence. We take full responsibility for our actions and acknowledge that we are accountable for the results that we deliver, both individually and collectively
Innovation	<ul style="list-style-type: none">• Progress demands INNOVATION• We constantly innovate to continuously improve• We motivate each other to think differently, explore possibilities and break boundaries• Our innovative approach helps us to overcome obstacles and devise solutions to complex challenges
Excellence	<ul style="list-style-type: none">• We thrive on delivering EXCELLENCE• We understand that excellence can only be attained when all parts of the business achieve a level of precision• We strive to attain excellence across every dimension of our business• We develop the necessary systems to maintain levels of excellence across our operations
Sustainability	<ul style="list-style-type: none">• We value life and champion SUSTAINABILITY• We rigorously apply the highest safety standards across our operations, because above all things, we value our people.• We engineer solutions that stand the test of time• We take a long-term approach to the solutions we provide and the impact our actions have on our world• We develop sustainable programs that empower our people, so that they know they are making a positive difference• We innovate and adapt in order to reduce our environmental impact
Value	<ul style="list-style-type: none">• Delivering VALUE is paramount to our purpose• We want our clients to receive exceptional value and become strong advocates



Mission Statement

Deliver innovative, sustainable, additive manufacturing solutions that extend the lifetime and the value of clients assets.

Vision

Be the world's leading supplier of additive manufacturing solutions.



**Corrosion
Resistant
Alloy
specialist**

GLOBAL LEADER



in supply of CRA
Mechanically Lined
Pipe (MLP)



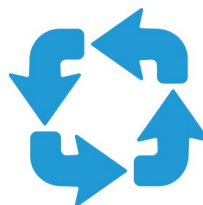
WORLD'S **LARGEST**
SUPPLIER OF **CRA**
WELD OVERLAY



Outstanding
Safety
Performance



API5LD, API5LC, API 6A-1877,
API 6D-1694, ASME U, U2 & R
and ISO9001, ISO18001,
ISO14001 **accreditation**



ONE-STOP-SHOP

CRA capability: Pipe,
Fittings, Induction
Bends, Pressure
Vessels,

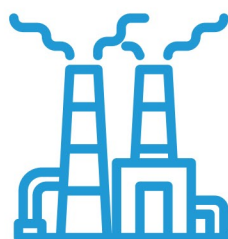
COST EFFECTIVE LOCATIONS WITH



**EXCELLENT GLOBAL
LOGISTICS**



Over **2000**
employees



**Manufacturing
facilities in
Indonesia
(Batam Island),
Brazil and
Saudi Arabia**

Full Service Offerings

We offer a range of standalone related services such as induction bending, pipe spool fabrication, various painting and coating applications, design and manufacture of clad valves, and design and manufacture of clad pressure vessels, slug catchers, pig launchers and receivers and manifolds.

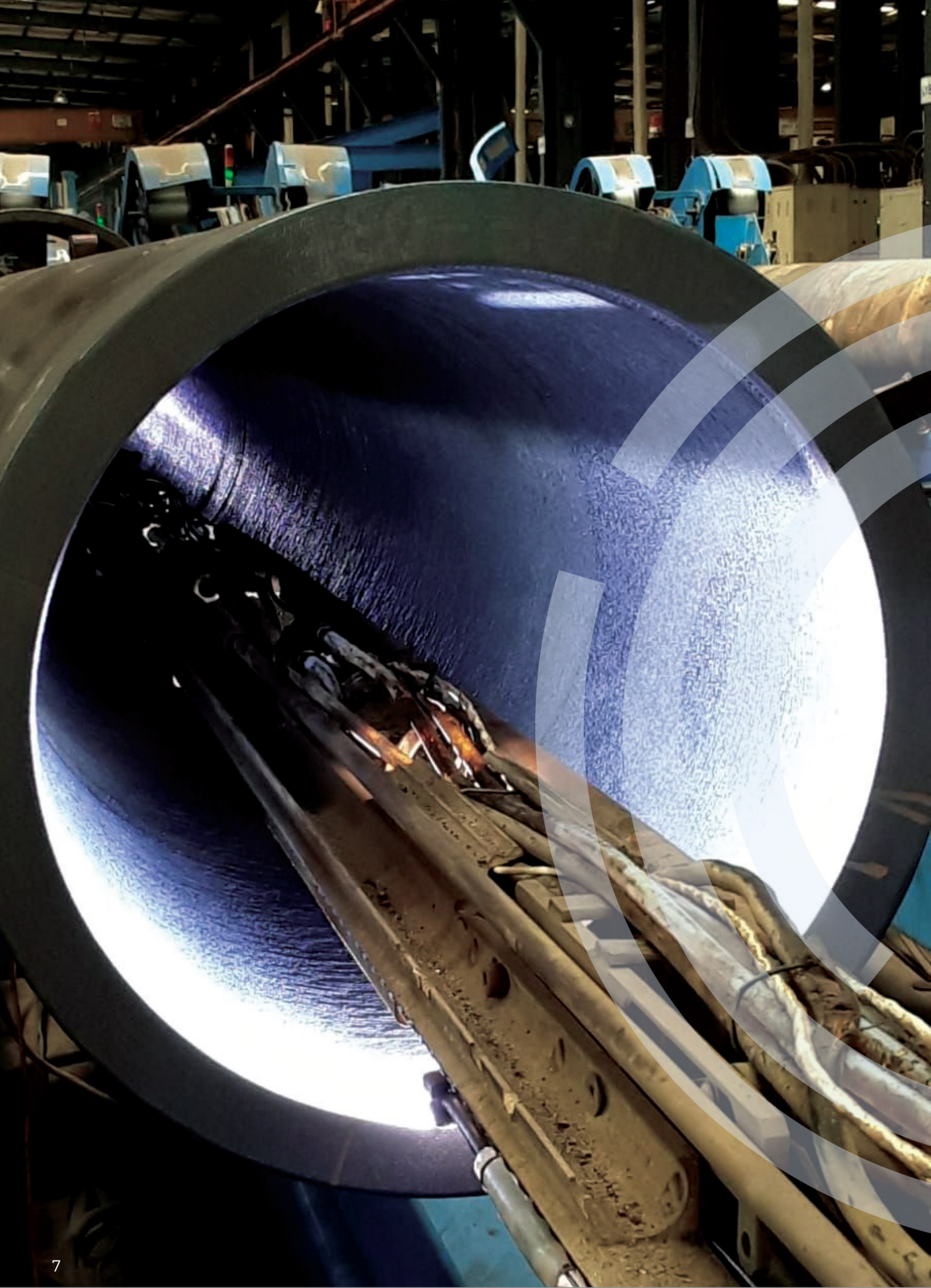
Engineering Solutions

We offer complete, integrated clad product solutions that allow our customers to combine our various products and services into a single, seamless package enabling fabrication of skids, modules and pipeline structures, etc.

Cost Effective

We offer cost-effective solutions with low unit costs and high productivity while providing industry-leading service quality at the same time.







Product Highlights

Capability Summary

	Batam	Santa Cruz	Dammam
Cladding of Mother Pipes	Pipes with OD from 6" to 60"	Pipes with OD from 4" to 24"	Pipes with OD from 6" to 60"
Bending	Pipes with OD from 6" to 36"	Pipes with OD from 2" to 16"	—
Heat treatment	Up to 36" 5D	Up to 16" 5D	—
Compound Bends	Limited	Yes	—
Bend Angle	180	170	—
Bend Radius	1.5 D TO 10 D	1.5 D TO 10 D	—
Wall Thickness	Up to 75mm	Up to 75mm	—
Material	Carbon Steel, CRA Clad, Stainless Steel, Duplex, Super duplex, Low alloy steels and nickel alloys		
Heat Treatment	Using our own API certified furnaces automatic handling systems, with a full range of heat treatment services in-house including normalising, PWHT, quenching and tempering and annealing		
Extensive NDE Process	All NDE performed in-house with qualifies NDT personnel to perform LPT, UT, MPI, Hardness Tests, Visual and Dimensional Checks		
Machine Solutions	Machining work to supply bends with either plain ends or machined weld preparation ends or internally bored ends to achieve stringent dimensional tolerances		

Manufacturing Facilities

Batam, Indonesia



- Mechanically Lined Pipe
- Weld Overlay Clad Pipes, Fittings & Flanges
- Clad Pipe Spooling, Pressure Vessels & Ball Valves
- Induction Bending & Heat Treatment Facility
- Fully-equipped Manufacturing Facility including Testing & Simulation Capabilities
- Conveniently located near the port for easy logistic
- Over 20,000 sqm state-of-the-art covered facility
- 35 quad head and 21 twin head horizontal weld overlay machines suitable up to 12.2 meters pipes
- 58 SHV (single head) weld overlay machines
- 50,000 sqm of pipe storage and lay down
- Strategically located near coating yard and the port

Rio de Janeiro, Brazil



- Mechanically Lined Pipe
- Weld Overlay Clad Pipes, Fittings & Flanges
- Induction Bending & Heat Treatment facility
- Clad Pipe Spooling
- Full Machining Capabilities of various components
- 77,197 sqm state-of-the-art covered facility. Total 123,200 sqm
- 2 Quad Head and 25 Single Head Cladding Machines for Pipes & Fittings
- Strategic location close to main industries and Oil & Gas operators

Dammam, Saudi Arabia

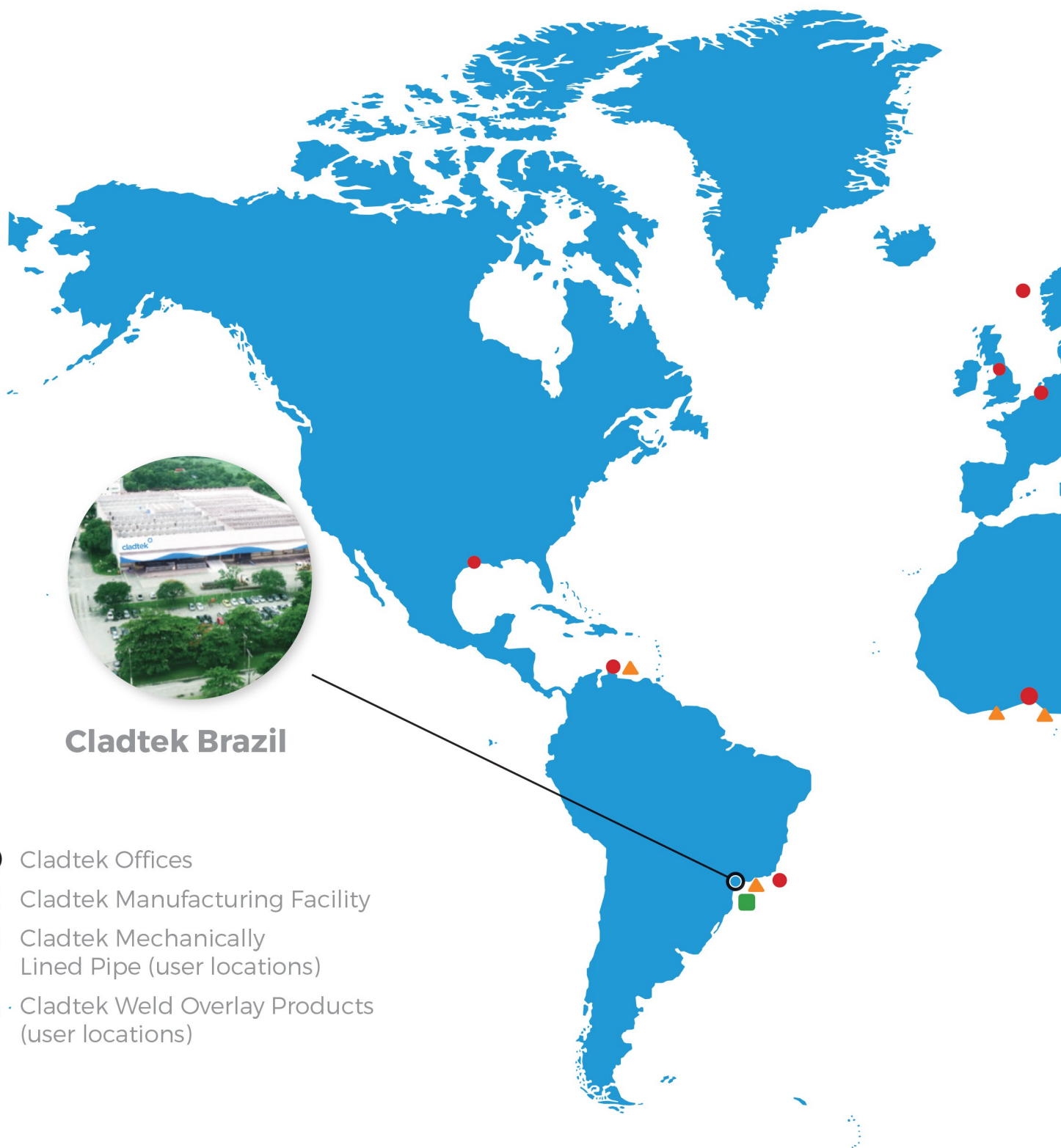


- Weld Overlay Clad Pipes, Fittings & Flanges
- Clad Pipe Spool Fabrication
- State-of-the-art covered facility at Damman 3rd Industrial City
- 10 Horizontal and 20 Vertical weld overlay machines
- 4 manual GTAW for spool fabrication
- Pipe storage and lay down
- Strategically located in Damman Industrial City, close to port, bending facilities and complementary manufacturers.

Experience

Cladtek has an extensive track record with top tier customers around the globe.

From a humble beginning 20 years ago Cladtek provides anti-corrosion technology used in oil and gas pipelines.



Cladtek Brazil

- Cladtek Offices
- Cladtek Manufacturing Facility
- Cladtek Mechanically Lined Pipe (user locations)
- ▲ Cladtek Weld Overlay Products (user locations)

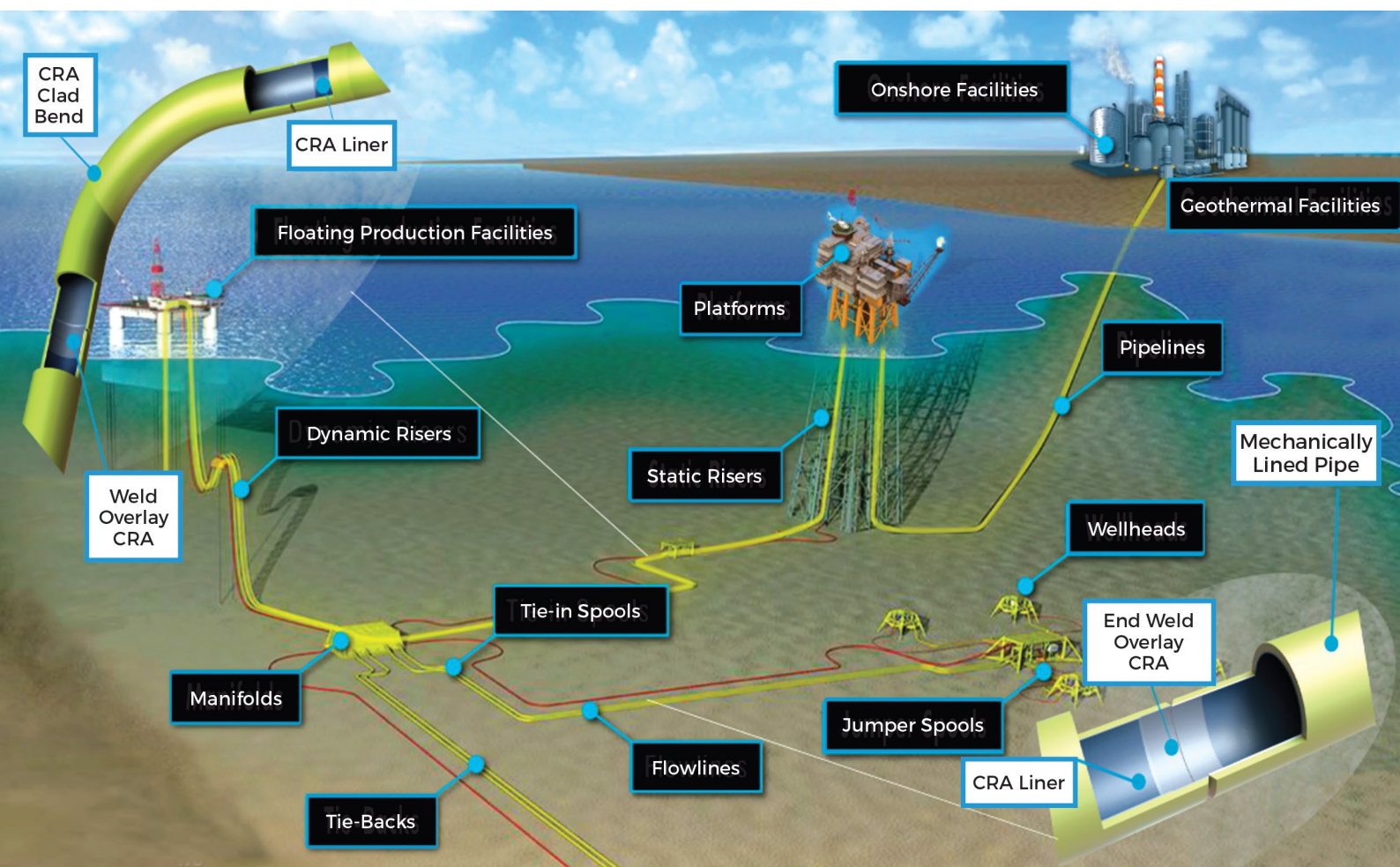
Cladtek Arabia

Cladtek global presence with three manufacturing facilities in Indonesia, Brazil and Saudi Arabia



Cladtek Batam

Product Applications



Cladtek products are in service
from wellhead to processing facilities

Subsea

Tie-in spools, gooseneck spools,
jumper spools, manifold spools,
flow loops, PLEM's, PLET's, FLET's,
SSIV Skids, Risers

Topside

Offshore Platforms
FPSO Modules

Onshore

Slug Catchers and Manifolds
Processing Plants
Wellhead and process skids
Refineries

Mineral Processing

Abrasion Resistance including
Stellite / Chromium carbide



Mechanically Lined Pipe is the ultimate flow line solution as it is low cost, reliable, is highly recyclable and has a low CO2 footprint



From 2" dia with a wide range of cladding alloys each optimized for cost and corrosion performance

CRA Clad - Fittings, Flanges and Bends



- Extensive cladding capability and experience
- Jigs for all fitting types and sizes
In-House machining capability
- CS, CRA & Clad induction bending experts
- From 2" to 36" in a wide range of materials
- Full heat treatment capability in-house

Full Service Capability

Fit Up / Welding

NDE Hydrotest

Surface Treatments

Including Painting and TSAa

Packing and Logistic Services

Site Installation Support

Site Welding Services

Pipe Spool Fabrication



Over 7700 CRA Clad Pipe Spools fabricated Goosenecks, Jumper and Tie-in Spools for subsea applications,

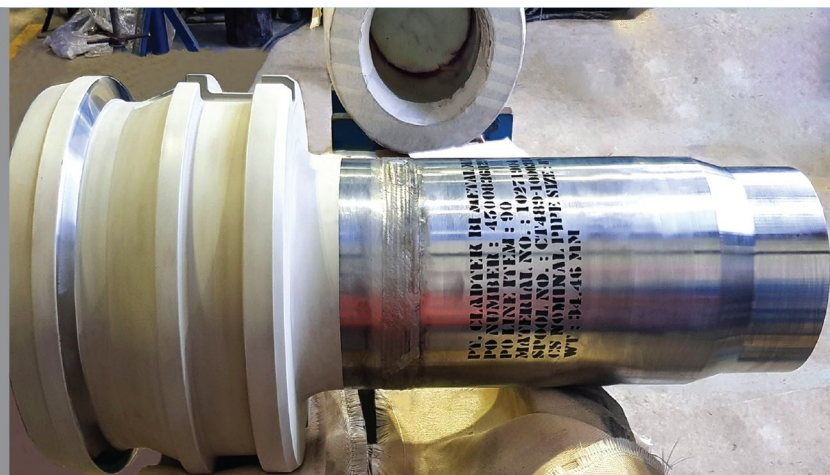


Product Applications



Fabricated Clad Spool in various sizes

Full turnkey solutions for corrosion resistant in production of oil and gas.

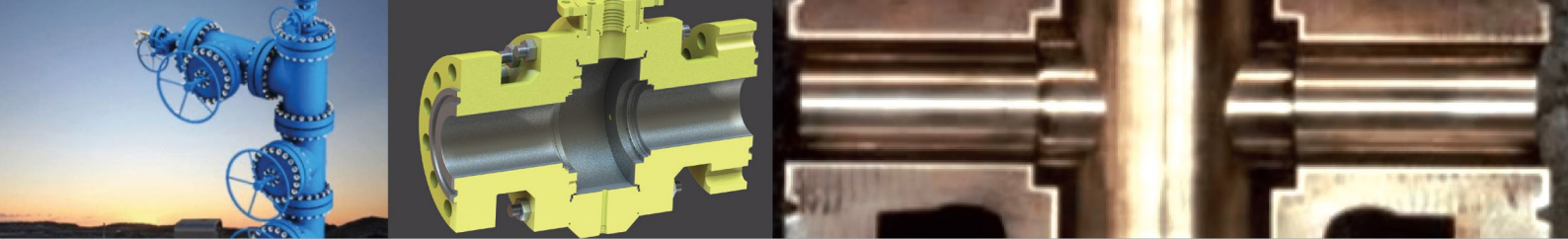


ASME 'U' Stamp Large Diameter Seawater Filter manufactured in accordance with ASME Section VIII Division 1 in our Batam facility.

Thermal Sleeves and Piping Injection Point Assembly - complex fabrications built with accuracy for refinery applications.







Geothermal Applications

Cladtek continues to diversify its product and solution offerings in the renewables sector, most notably across Geothermal applications.

Our weld overlay components have proven highly cost-effective compared to solid high nickel alloys and at the same time the clad enables the optimal selection of materials.

The CRA lined and insulated tubing for Geothermal applications reduces corrosion and increases thermal performance.

Solutions for Geothermal include:

- Steam Gathering Flowlines
- Process Piping
- Process valves
- Down Hole Production Tubing and Liners
- Reinjection lines
- Pre fabrication – Spools and Modules

Steam Gathering Flowlines:

- CRA Mechanically Lined Pipe (MLP) up to 30" and HeliClad pipe from 32" to 60" are the ultimate solution in terms of cost, reliability and installation performance.
- Compared to solid CRA and Metallurgically Clad pipes MLP and HeliClad have less than 50% of the CO2 emissions in the supply chain.
- MLP and HeliClad can be disposed of profitably at end of life, because the carbon and alloy can be separated and recycled.

Valves:

Cladtek develops Process Valves for Geothermal with the following benefits

- Lower cost with competitive lead times compared to solid CRA valves
- Improved temperature related derating performance
- Use only the alloy you need for the wetted areas
- Use hard facing to combat erosion in susceptible areas

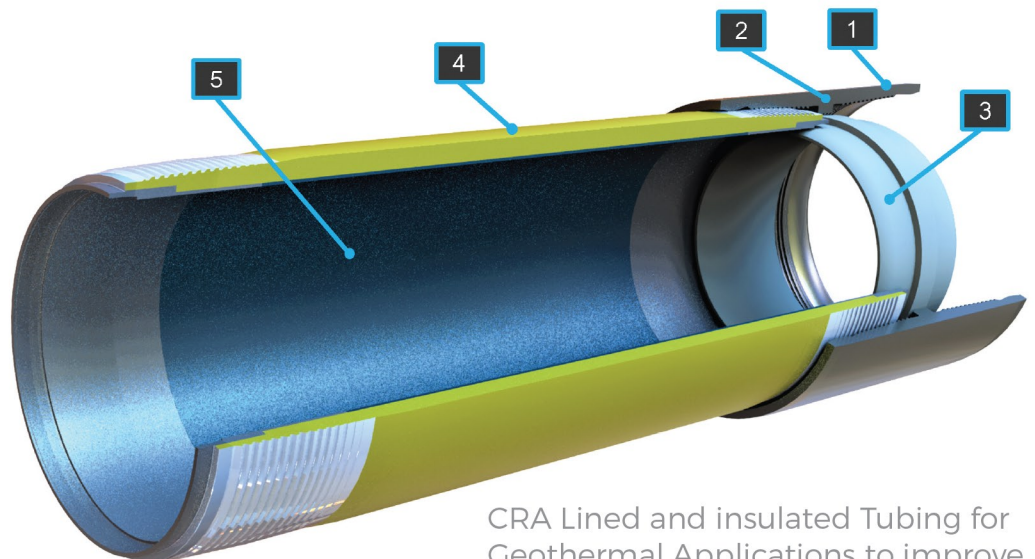
Process Piping:

Advantages of Cladtek's Process Piping are numerous with the key aspects being:

- Weld overlay (WOL) components are very cost effective compared to solid high nickel alloys like 625 and C276
- WOL can also be cost effective against Duplex and Super Duplex in high temperature applications due to reduced temperature related derating
- Clad enables optimal selection of materials

Geothermal

1. Coupling
2. Seal Ring
3. Insulation Sleeve
4. Outer Tube typical L80
5. Inner CRA Tube - Alloy 625/ Titanium Gr 12



CRA Lined and insulated Tubing for Geothermal Applications to improve corrosion and thermal performance.

Down Hole Tubulars:

The features of Down Hole Production Tubing and Liners include:

- Alloy 625 lined tubing up to 20" diameter
- Titanium Grade 12 lined tubing under development
- Extremely cost effective compared to solid CRA and Titanium Alloy liners
- Technology is economically scalable to larger diameters – less attractive for small bore below 6"

First MLT pin and connector with CTR controlled Thermal Resources Limited:

The SEAL-LOCK APEX is a threaded and coupled non-upset premium connection. Designed and tested for HPHT wells and critical service applications using CRA material.

- Transition connector: 7" 26ppf 4140/4340 85 ksi SLXD Box X BTC Box
- Tubing 7" 26ppf L80 SLXD Pin x Pin, 30ft
- Connector/coupling 7" 26ppf 4140/4340 SLXD

Complete CRA Solutions

Our aim is to fully satisfy our customers' CRA Cladding requirements by providing complete CRA Cladding solutions.



CRA Clad Pressure Vessels

including heat exchangers, separators, seawater filters, pig launchers and receivers and slug catchers



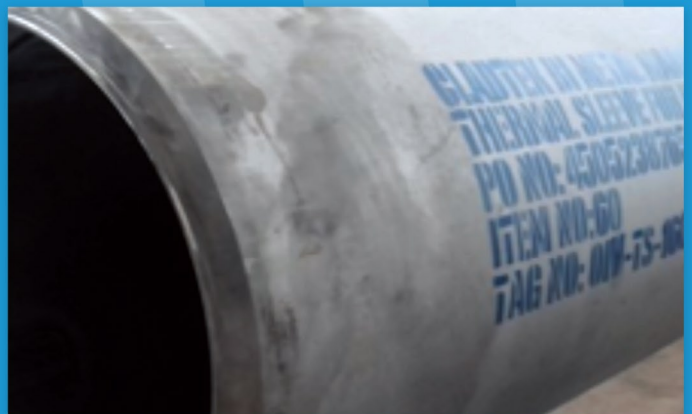
Independent Bend Testing and Simulations

for pipe to simulate operating and / or installation conditions, including for both coated and uncoated pipe and static and dynamic applications



Seawater Tubes and Underwater Sheaves

for FPSO's and other vessels



Thermal Sleeves

for refineries and specialist applications



CRA Cladding Solution for Valves

for geothermal surface components in HTHP service



Hard Facing Weld-Overlay

for solution for sand erosion and other abrasive applications

Quality and Reliability

We have an extensive array of in-house testing equipment and processes to ensure the highest standards of quality and reliability, which includes an in-house R&D department, developed for continuous innovation and automation.

We hold an extensive range of quality certification which includes:

ASME U/ U2/ R

ISO 14001

ISO 18001

API Q1

API 5LD



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