



THE HEAT EXCHANGER SPECIALIST



Introducing



The most efficient condenser

www.kinam.in

Since
1981

8500+
Installations

Innovative
Heat Transfer Technology

Specialist in Heat Exchanger made from
Exotic Materials



Kinam Engineering Industries, a family owned business established in 1981 has built its reputation on the cornerstones of high quality products, customer satisfaction & superior service.

Fostered over by years of experience in both manufacturing and thermal designing of Heat Exchangers, Kinam has become one of the leading manufacturers of Shell & Tube Heat Exchangers (STHE) & Corrugated Tube Heat Exchangers (CTHE).

Kinam has marked its presence across the globe by catering to its clientele in various countries, with industries ranging from Chemical, Petrochemical, Fertilizers, Refineries, Pharmaceutical, Biotech, Oil, Paper, Steel, Cosmetics & Textile.

With extensive research and proven results, Kinam has developed the next generation heat exchanger "**KICC**". These exchangers are most efficient when it comes to condensing applications.

Innovative designs, new technological advancements, best in class manufacturing facilities and workmanship has enabled Kinam to deliver successfully 8500+ installations gaining trust of 400+ clients.

Kinam with its remarkable achievements continues to grow & be the leader in the heat transfer industry.

Quality, Performance
&
Committed delivery
- a tradition at Kinam

KINAM ENGINEERING INDUSTRIES

MFG.: VE-MECH IND.

Sr.No.KEI/C/ SWL-10 TON YEAR:2019

Mission

To be the preferred brand of choice, across the globe in the heat transfer industry by providing trusted solutions with the highest-quality & cost-effective engineering.

Vision

To be the world's renowned & leading engineering firm by revolutionizing the heat transfer industry with consistent research & innovation.

Our Facility

Infrastructure



3 fabrication units
 Total area under crane - 56000 sq. ft
 Team strength - 150+ personnel
 Heat Transfer area range -1m² to 4000m²
 Maximum weight handled per equipment- 100 tons

Design



Thermal design
HTRI
CHEMCAD 7
 Mechanical design
CademPVD
PV Elite
 Construction drawing
AutoCAD
GstarCAD
 Proprietary Software
ProHE

Cutting



CNC cutting upto 30 mm thick
 Plasma cutting upto 100 mm thick

Rolling



Maximum width 2.5 meter
 Maximum thickness 30 mm thick

Drilling



Tube-sheet drilling upto 400 mm thick & 4 meter diameter

Dished End



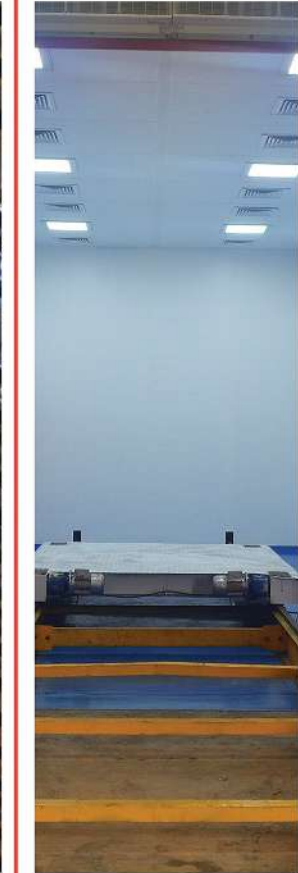
Dished End forming upto 3 meter diameter and 25 mm thick

Welding



GTAW
 SAW
 Orbital Welding

Clean Room



1000 sq. ft Clean room for welding of Titanium

Testing



Hydraulic and Pneumatic testing
 Vacuum testing
 Helium leak Testing
 Penetrant flow testing
 Radiographic testing
 Ultrasonic testing
 PMI testing

Materials handled - Austenitic Stainless Steel (All 300 series) / Carbon Steel / Alloy Steel / Hastelloy* / Inconel* / Monel* / Nickel 200 / Cu-Ni Alloys / Titanium / Tantalum / Duplex / Super Duplex

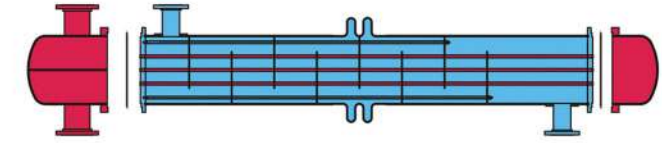
Construction Codes - ASME Boiler & Pressure Vessel Code / TEMA / EN 13445 & AD 2000 with PED & CE marking
 Certification - ISO 9001:2015, ISO 3834-2, ISO 14001, ISO 45001, U Stamp*

*All logos & trademarks in this catalogue are registered & proprietary of their respective owners

*Applied for it

Product Range

Shell & Tube Heat Exchanger
Fixed Tubesheet Type



710 m² Tail Gas Heater
Fertilizer Company, Maharashtra, India

1458m² Depropanizer Condenser
Floating head bundle of 4032 Nos. tubes, Weight: 55 Tonnes
Phenol Plant, Gujarat, India

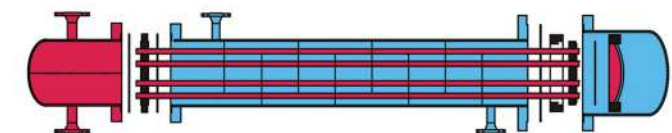


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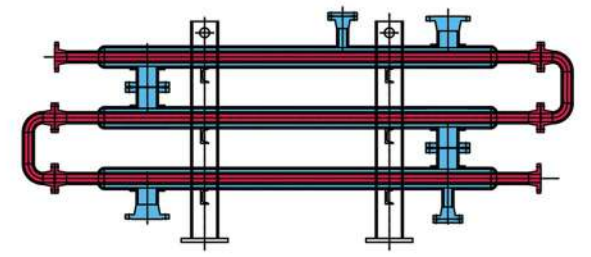
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MFG BY: KIRAN ENGINEERING INDUSTRIES.
CLIENT: DEEPAK PHENOLICS LTD.
INSPECTION BY: EKIS INDIA
EQT. NAME DEPROPANIZER CONDENSER
ITEM NO. 12-E-0913

Floating Head Type

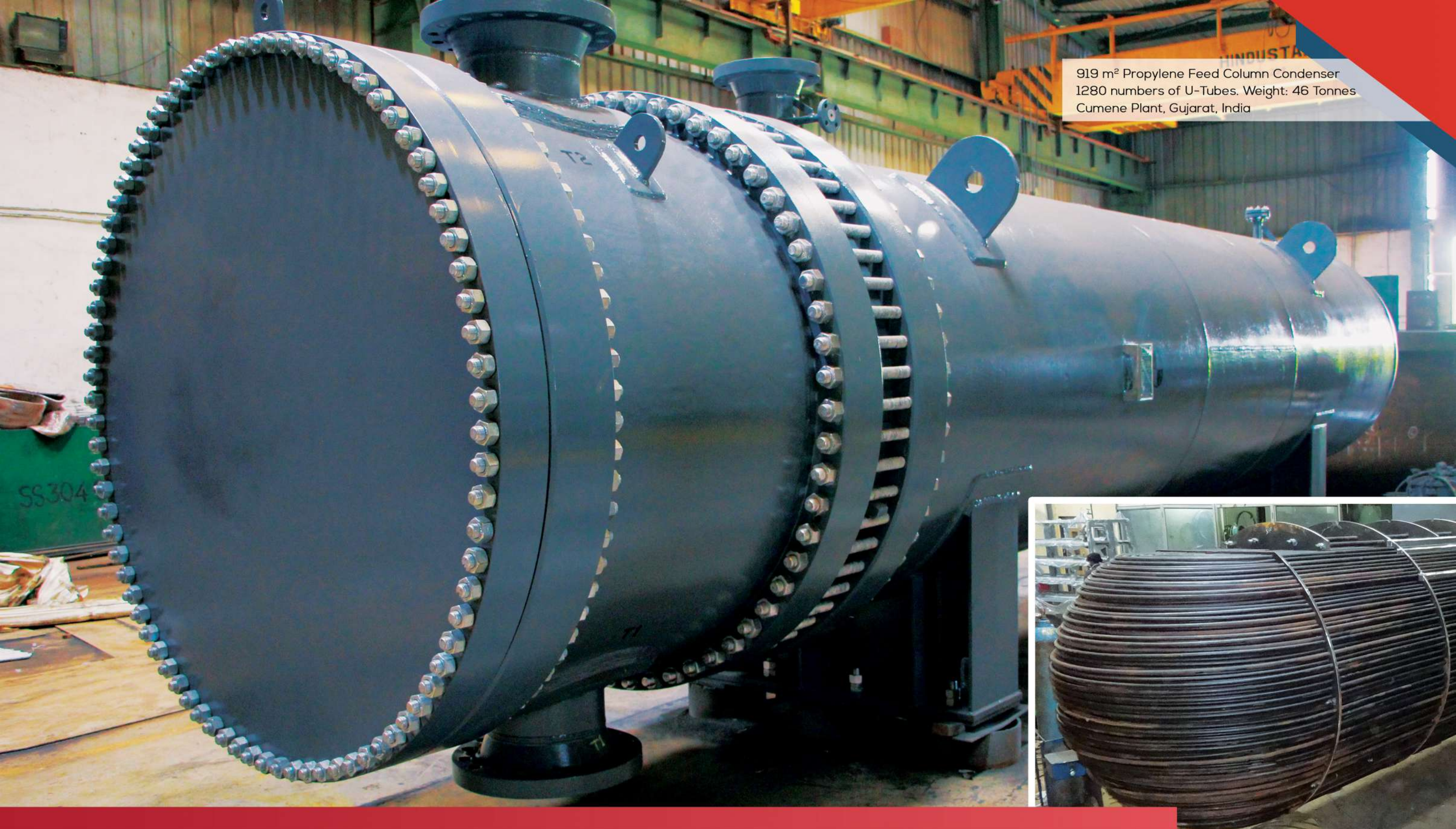


Double Pipe Type

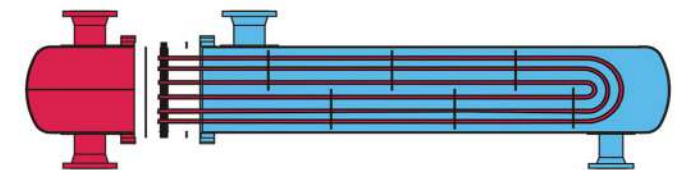


Sludge Heater For Non-Newtonian Fluid
Sewage Treatment Plant, Punjab, India

919 m² Propylene Feed Column Condenser
1280 numbers of U-Tubes. Weight: 46 Tonnes
Cumene Plant, Gujarat, India



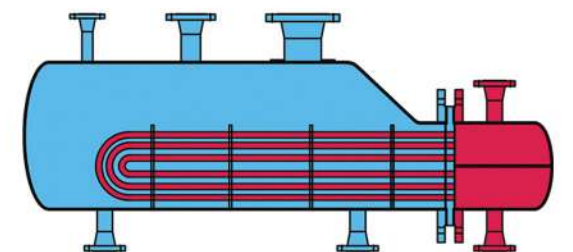
U-Tube Type



Column Kettle Reboiler
Rubber Chemical plant, Gujarat, India



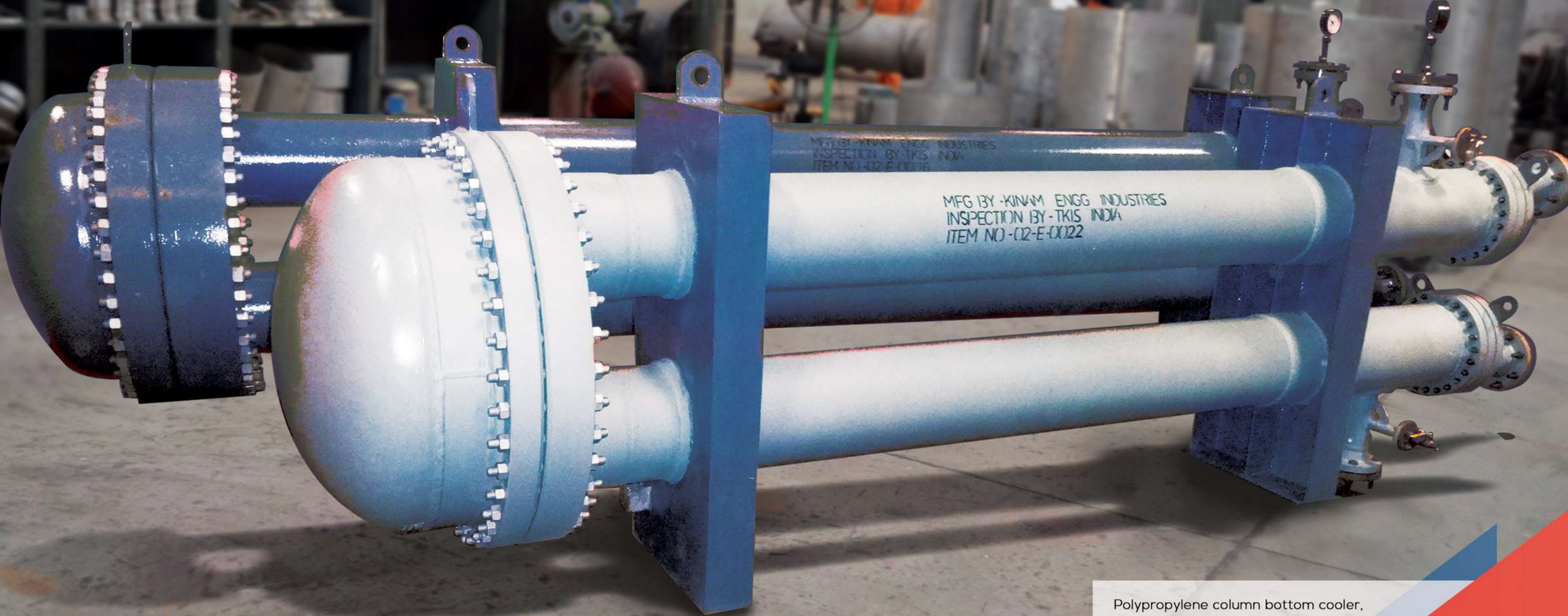
Kettle Type



Hair Pin (Removable Type)



These Exchangers are suited for the process conditions with temperature cross, high temperature differentials, cyclic operation, high tubeside pressure & mitigate FIV



Polypropylene column bottom cooler, Cumene Plant, Gujarat , India



The most efficient condenser

KICC Technology

Corrugations are produced by indenting the tube along the length in a helical pattern with the use of a special purpose machine designed for corrugation of the tube without thinning of wall or development of stresses in the tube.

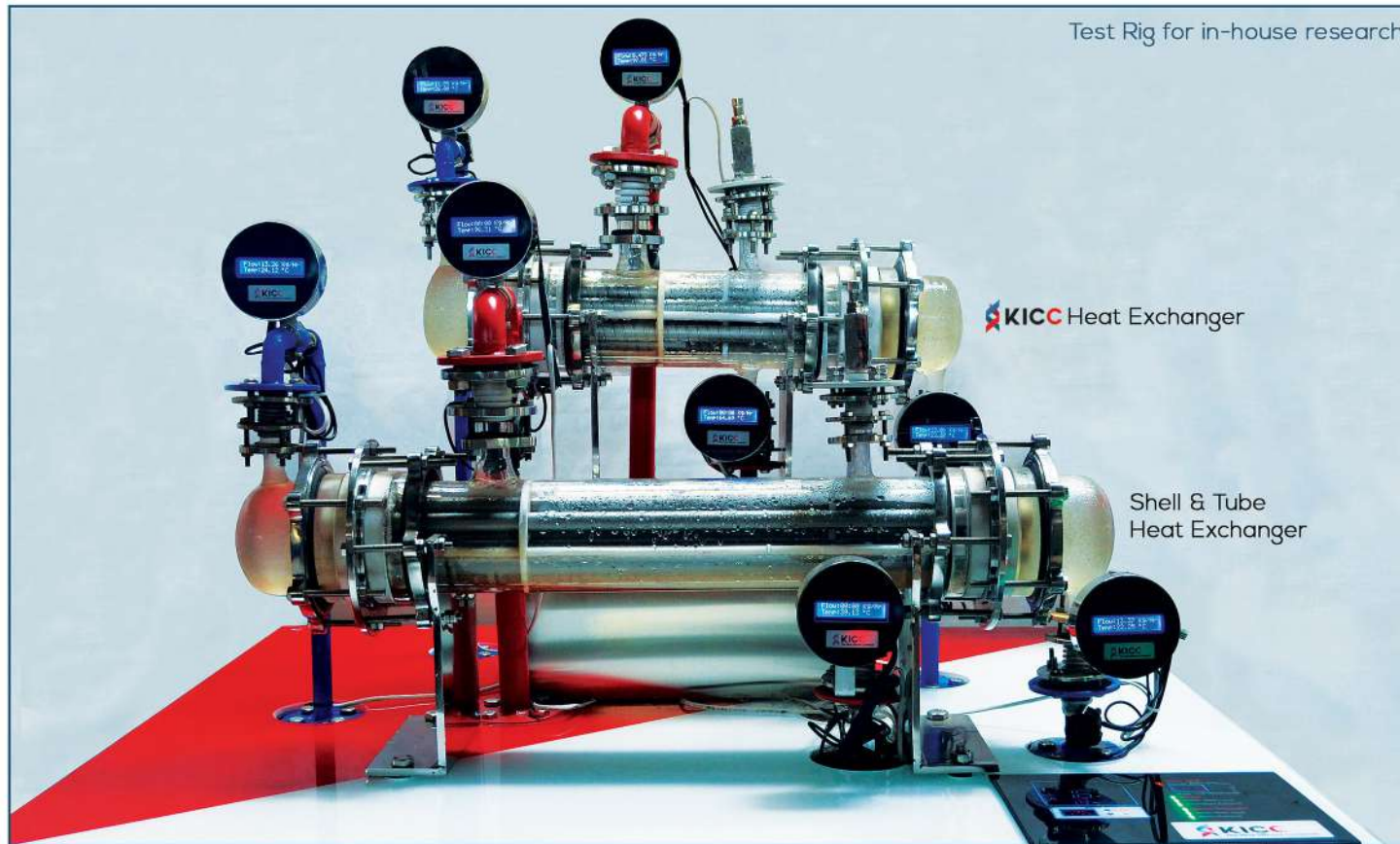
The helical pattern of the corrugations and the optimal depth of the indentation causes a two regime flow in the tube side fluid, spiral at core and eddies at the periphery creating turbulence even at a lower velocity of fluid resulting in higher Heat Transfer Coefficient.

KICC is the end-result of:

- Kinam's ongoing research and development.
- In-depth analysis of corrugation profiles and flow dynamics.
- Constant testing for various condensing applications.

What is New?

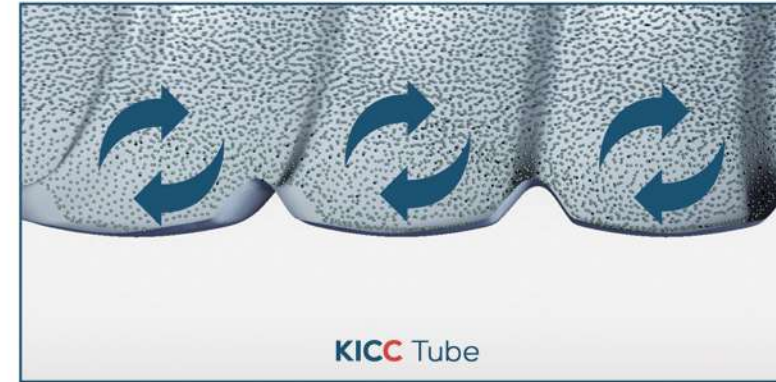
- New and improved corrugation profile for condensers resulting in even higher heat transfer coefficient.
- Compact and economical design, hence higher savings.
- Manufacturability in all exotic materials like Hastelloy, Titanium, Tantalum and Super Duplex Steels etc.



One of the test results of our extensive research had the following outcome:

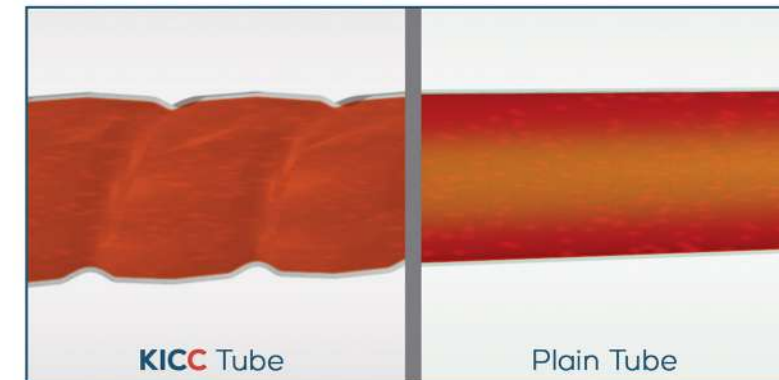
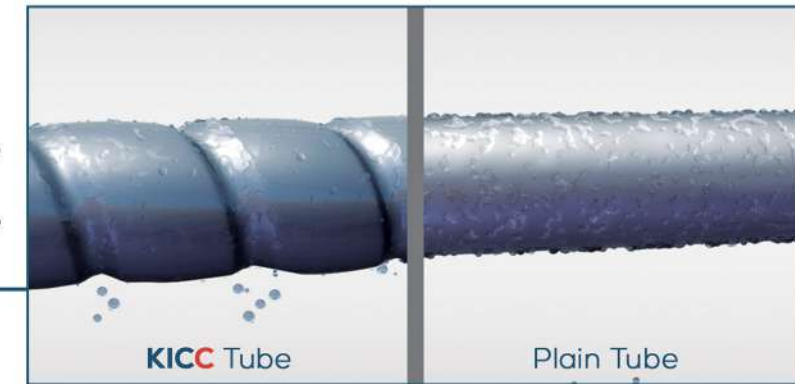
Condenser Type	Shell side flow rates		Shell side Temp		Cooling Water temp		Tube length	No. of tubes	Heat Transfer Coefficient Kcal/h-m ² -C
	Steam In	Condensate Out	Steam In	Condensate Out	In	Out			
STHE	13	12.2	98.75°C	97.9°C	23°C	33°C	570mm	7	423.8
KICC	13.2	12.5	98.75°C	96.75°C	23°C	32.6°C	300mm	7	1.9 Times x 423.8

Why KICC?



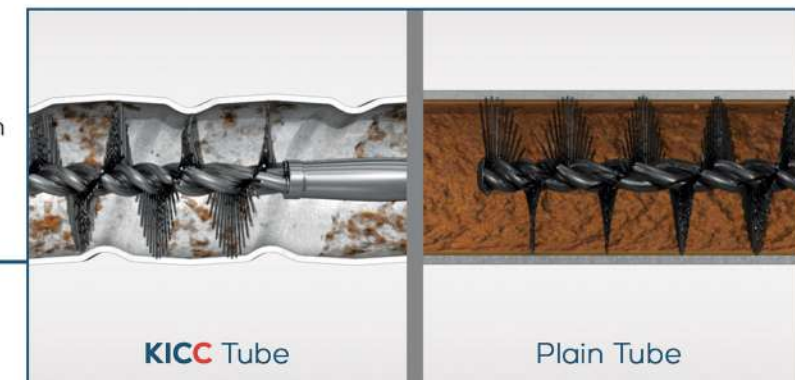
Turbulent flow inside the corrugated tubes due to its helical indentation enables a more effective mixing & agitation resulting in a high heat transfer coefficient.

Drop wise condensation resulting in better condensation compared to thin film formation in plain tubes. The corrugation provides a channel to the condensate layer formed on the surface of tube, always providing a fresh new surface for the vapours to condense.



Even temperature distribution due to flow pattern, since new layers come in contact with the tube boundary.

Higher periphery turbulence does not allow the suspended solid particle in the tubes to settle, thus giving it a self-cleaning effect which results in reduced fouling that ensure longer running time. Easier to clean due to intermittent scaling as compared to Plain tube.



KICC combines best advantages of PHE and STHE

Shell & Tube Heat Exchanger Plate Heat Exchanger KICC Tube Heat Exchanger



Heat Transfer Coefficient	Low	-	High	+	High	+
Size	Huge	-	Compact	+	Compact	+
Temperature Distribution	Non Uniform	-	Uniform	+	Uniform	+
Fouling	High	-	Low	+	Low	+
High Pressure Application	Yes	+	No	-	Yes	+
High Temperature Application	Yes	+	No	-	Yes	+
Maintenance Cost	Low	+	High	-	Low	+

KIC Series:

KICC series for condensing applications

KICH series for heating and cooling applications

KICF series for food processing and pasteurization applications

KICH series Heat Exchanger for an Edible oil application



KICC Condenser for solvent recovery for a Pharmaceutical company

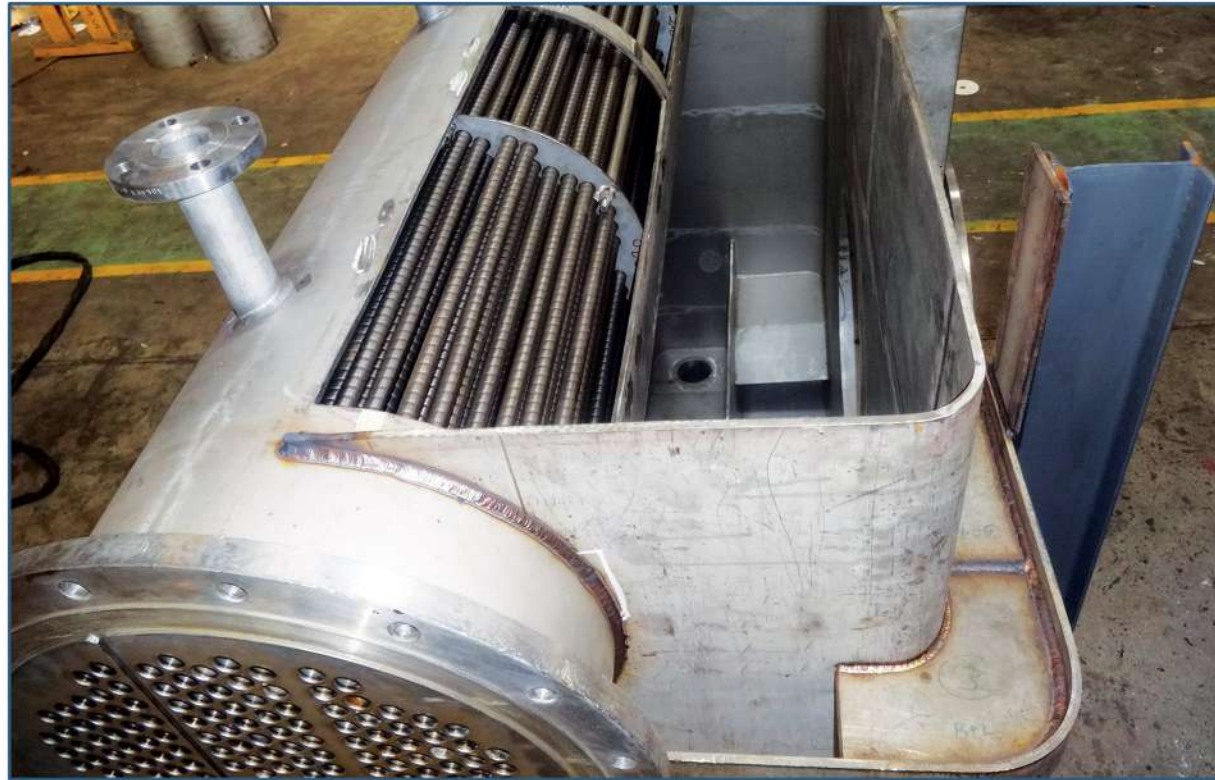


KICF series Heat Exchanger supplied to a food processing plant

Specialist in Heat Exchanger made from Exotic materials

Materials handled: Hastelloy* / Inconel* / Monel* / Titanium / Tantalum / Nickel 200 / Duplex / Super Duplex / Cu-Ni alloys

Titanium Tube Bundle for chlorine recuperator (With PP baffles)



Titanium Corrugated Tube Heat Exchanger for De-salination Pilot Plant

C-22 Condenser with Corrugated Tubes



C-276 Reboiler

Specialist in Heat Exchanger made from Exotic materials

Materials handled: Hastelloy* / Inconel* / Monel* / Titanium / Tantalum / Nickel 200 / Duplex / Super Duplex / Cu-Ni alloys

Inconel 600 Heat Exchanger



Monel 400 Heat Exchanger

Duplex Heat Exchanger with Titanium Tubes



Super Duplex Heat Exchanger

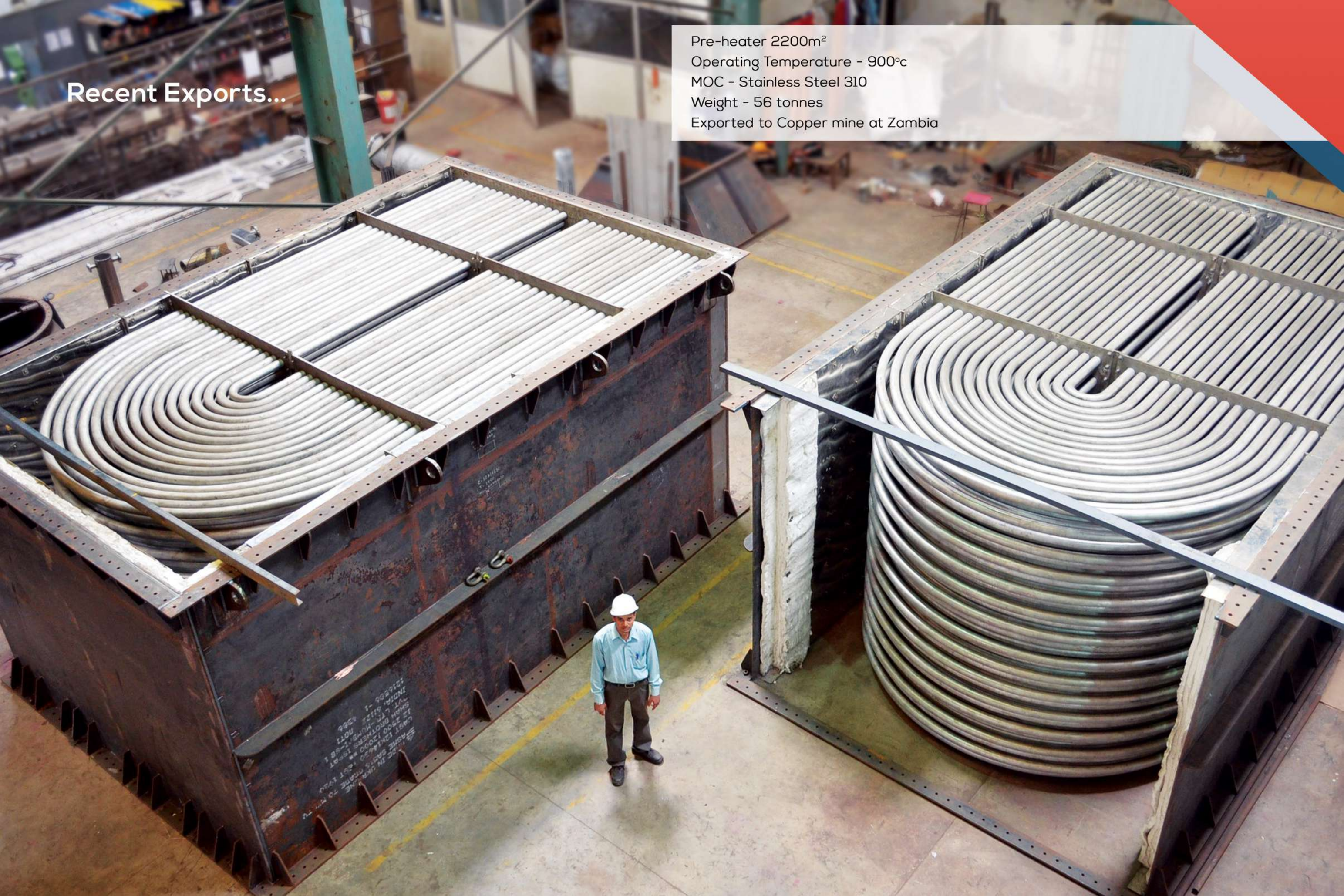
Recent Exports...



Falling Film Evaporator exported to Malaysia [DOSH Compliant]

Recent Exports...

Pre-heater 2200m²
Operating Temperature - 900°C
MOC - Stainless Steel 310
Weight - 56 tonnes
Exported to Copper mine at Zambia



Recent Exports...



12 nos. Heat Exchanger for Gold slurry application.
Exported to Kazakhstan

Our Esteemed Clientele

Chemicals



" Kinam has supplied us Titanium Heat Exchangers for Chlorine Recuperator and we are satisfied with their overall performance. Their Welding quality and finish in Titanium is remarkable and recommendable.

Mr. Nimai Panigrahi, GM Projects,
Grasim Industries Limited, Aditya Birla Group.

Petrochemicals



" Kinam has been our essential partner, manufacturing Hastalloy & Inconel 600 Heat Exchangers for our critical process applications. Kinam has always displayed consistent performance in quality & timely delivery.

Mr. Roshan Adhikari, GM Corporate Planning,
Navin Fluorine International Limited

Fertilizer



EPC



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Pharmaceuticals



" Kinam has been supplying Corrugated Tube Heat Hxchanger since last 7 years to our various plants at Dabhasa, Mandideep, Ankleshwar, Tarapur and Visakhapatnam. We recommend corrugated tube heat exchangers over the traditional shell and tube heat exchangers looking at the performance for our solvent recovery applications.

Mr. Prabhat Jain, Sr. Manager Projects,
Lupin Limited

Paints, Steel, Paper,
Oil & others



" Kinam is a reliable manufacturer of plain and corrugated tube heat exchangers. Their focus and specialisation in heat exchanger products has helped to deliver quality, competitive price and performance.

Mr. Arun Waghmare, VP - Technology and Projects,
Pidilite Industries



Since 1981

Our clientele across the globe



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Dapode, Bhiwandi-421302,
Thane, Maharashtra, India.

