



# United heat transfer pvt. ltd.

*Transformation of energy with safe & efficient design*



## EXTENDED SURFACE HEAT EXCHANGERS

ASME "U" "R" "NB"          

## COMPANY PROFILE

United Heat Transfer is an ISO 9001:2015 Certified Design & manufacturing company with a wide range of products like Shell & Tube Heat Exchangers, Extended Surface Heat Exchangers, Air Cooled Heat Exchangers, Pressure Vessels & Process Equipment.

We have 'U', 'R', 'NB' Certifications. We have exposure to CE marking also. Our registration EIL and authorization from IBR have added advantages.

Established in the year 1995, UHT has since been extending its expertise and expanding with the growing OEM industries. Our emphasis is on consistent high quality products supported by well trained work force.

## EXTENDED SURFACE HEAT EXCHANGERS (ASSEMBLED IN SHELL & TUBE TYPE CONSTRUCTION)

This is one of recently developed efficient products of United Heat Transfer in which continuous fins are used.

Extended surface in tubes provide rapid & effective heat transfer. The unique design of finned surfaces enables to improve the heat transfer coefficient by distributing the fluid flow apart from increasing the surface area. Gas flow patterns separates moisture efficiently. Selection of best combination of materials suitable for process and required duty conditions ensures most economic design allied with the longer service life. Additional surface protection against corrosion can also be incorporated in the form of galvanising on steel.



### Material of Construction:

#### Tube Material

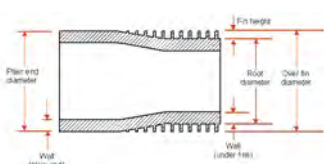
- Stainless Steel
- Carbon Steel
- Cupro-nickel
- Copper
- Brass
- Gun Metal
- Aluminum
- Aluminum Bronze
- Naval Brass
- Inconel
- Monel
- Hastolly

#### Fin Material

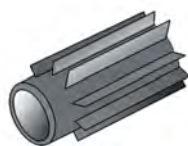
- Stainless Steel
- Cupro-nickel
- Coated Aluminum
- Aluminum
- Aluminum Bronze

The finned-tubes which are incorporated in the manufacture of our Extended surface Heaters or Coolers can be produced in a wide range of sizes, configuration of tubes like longitudinal, transverse, helical fins. These finned tubed units can also be manufactured in a variety of metals or combination of metals to customers' individual requirements.

To enhanced the performance of heat exchanger finned tubes are being used which are as follows:



LOW FINNED TUBE



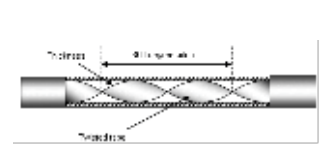
LONGITUDINAL FINNED TUBE



HIGH-FINNED TUBE



PLATE (CONTINUOUS)FIN



TWISTED TAPE TUBE

## DESIGN & ENGINEERING

Thermal design is carried out to meet customer service requirements taking care of the following Constrains:-

- Space Limitations
- Fouling From Operating Fluids
- Pressure Drop Limitations
- Flow induced vibrations
- Optimum Design

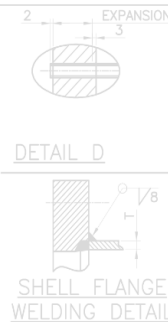
This is achieved by the Design Software "HTRI" which is part of our Design & Engineering Facilities. The availability of this software gives us tremendous engineering support in terms of:-

- Strong Database
- Quick Thermal Calculations
- Phase Change Graphs
- Vibrations Analysis

## Mechanical Design

Mechanical Design is carried out using various international codes & standards. Following are some of the major codes & standards used by us:-

- ASME Section VIII, Div.-1, Div.-2
- IS 2825
- IS 4503
- WRC Bulletin 107 & 297
- ANSI B16.5
- TEMA
- API 660, API 661



The strength calculations based on above codes and standards are carried out by means of software and the following analysis is done.

- Thickness Calculations
- Support Calculations
- Local Stress Analysis (Nozzle Load Calculations)
- Wind & Seismic Analysis

## APPLICATIONS OF EXTENDED SURFACE HEAT EXCHANGERS:



- Gas coolers ( $H_2N_2O_2$  etc)
- Process Heating & Cooling
- Waste Heat Recovery
- Driers
- Dehumidifiers
- Electric Rotating Machine Coolers
- HVAC
- Air cooled Steam condensers for turbines
- Economisers
- Condensers

## SALIENT FEATURES OF EXTENDED SURFACE HEAT EXCHANGERS:

- Low pressure drop
- Low Energy Consumption
- Low utility consumption
- Low power consumption
- Compactness
- In Built/External moisture separator
- Ease in access to tubes for Maintenance
- Flexible designs
- Maximum efficiency due to allowable cross over of outlet temp of cooling fluid
- Flexibility in locating nozzles
- Vibration less design & reduced pumping cost

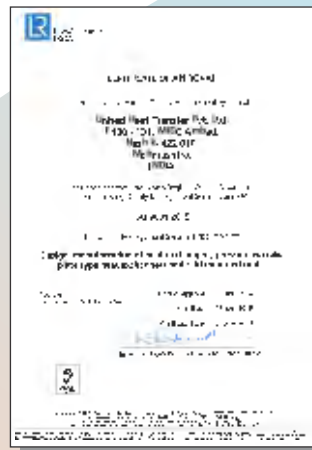


## THIRD PARTY INSPECTION AGENCIES

- ▣ Lloyds Register Ind. Services (I) Pvt.td. (LRIS)
- ▣ Bureau Veritas Ind. Services (I) Pvt. Ltd. (BVIS)
- ▣ Metallurgical Engg. Consultant India Ltd. (MECON)
- ▣ Aker Solutions
- ▣ Chemtex India Ltd.
- ▣ Tata Consulting Engineers Ltd.
- ▣ Intertech
- ▣ SGS
- ▣ TUV India Pvt. Ltd.
- ▣ Indian Register of Shipping (IRS)
- ▣ American Bureau of shipping industrial verification (ABSIV)
- ▣ CQAE(WE) (Warship Equipment)
- ▣ Projects and Development India Limited (PDIL)
- ▣ Inspection Consultancy Services(ICS)
- ▣ IBR
- ▣ Velosi
- ▣ Engineers India Ltd.
- ▣ Saipem



## CERTIFICATES



# United heat transfer pvt. ltd.

Plot No. F- 130 - 131, M.I.D.C, | Ambad,Nasik- 422010 | Maharashtra, India

Tel. No.: ( 091 ) 253-2382484 / 2385051 | Fax No.: ( 091 ) 253-2380737

E-Mail : directors@unitedheat.net | sales@unitedheat.net

[www.unitedheat.net](http://www.unitedheat.net)