



# United heat transfer pvt. ltd.

*Transformation of energy with safe & efficient design*



## SHELL & TUBE 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, Surface Extended 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.

## [ ] SHELL AND TUBE HEAT EXCHANGERS

Shell and tube type heat exchangers are most common type of heat exchangers and are widely used in oil refineries and large chemical process plants and is suited for high pressure applications. It essentially consists of a shell with a bundle of tubes inside. One fluid runs through the tube and other through the shell side.

### Material of Construction:

- ▣ Stainless Steel
- ▣ Carbon Steel
- ▣ Cupro-nickel
- ▣ Copper
- ▣ Brass
- ▣ Gun Metal
- ▣ Aluminum
- ▣ Aluminum Bronze
- ▣ Naval Brass
- ▣ Hastelloy
- ▣ Inconel
- ▣ Monel
- ▣ Nickel

### Fluid Handled:

- ▣ Mineral Oil
- ▣ SAE Oil
- ▣ Furnace Oil
- ▣ Vegetable Oil
- ▣ Chemicals
- ▣ Ethylene Glycol
- ▣ Gases
- ▣ Steam
- ▣ Sea Water
- ▣ Black Liquor
- ▣ Sugar Syrup

### Overall Dimensions:

- ▣ Shell Dia from 90 to 2500 mm for heat exchanger
- ▣ Length up to 14000 mm



### Applications:

- ▣ Air Processing & Compressor Cooling
- ▣ Industrial (Fluid and oil coolers)
- ▣ Food & Beverage
- ▣ HVAC (Air conditioning)
- ▣ Marine Applications
- ▣ Petrochemicals Processing & Refining
- ▣ Pharmaceuticals
- ▣ Power Generation
- ▣ Metals and Mining
- ▣ Refrigeration
- ▣ Diesel Engines

### Advantages:

- ▣ Can be used in systems with higher operating temperatures and pressures
- ▣ Pressure drop across the tube cooler is less
- ▣ Tube leaks are easily located and plugged since pressure test is comparatively easy
- ▣ Using sacrificial anodes protects the whole cooling system against corrosion
- ▣ Large ratio of heat transfer to volume and weight
- ▣ Easy to construct and mechanically robust



## DESIGN & ENGINEERING

### Thermal Design

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
- Fluid 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

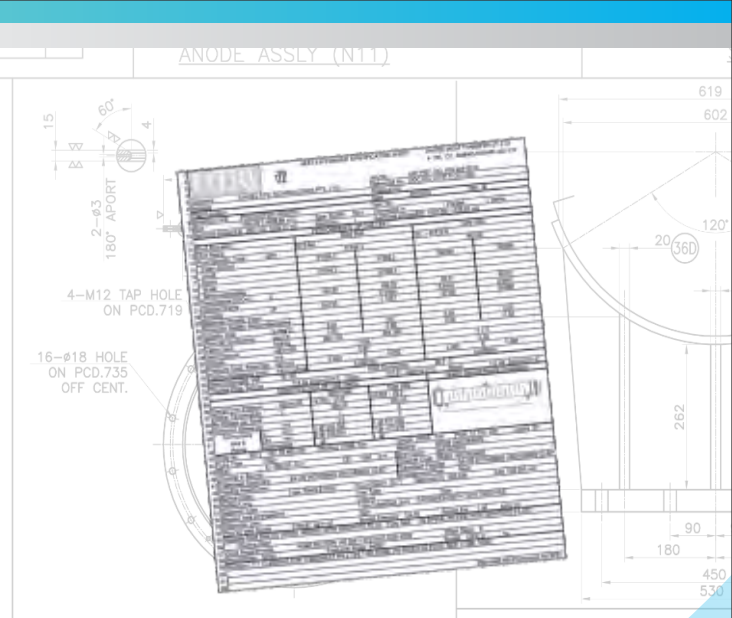
The strength calculations based on above codes and standards are carried out by means of software and the following analysis is done.

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

## QUALITY ASSURANCE

Products are backed up by comprehensive technical documentation for quality and safety, including:

- Material Certification
- Welder Qualifications and procedures
- Non-Destructive Testing Reports
- Third Party Inspection Reports
- Pressure Testing Certification
- Operating and Maintenance Instructions



## 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 : sales@unitedheat.net

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