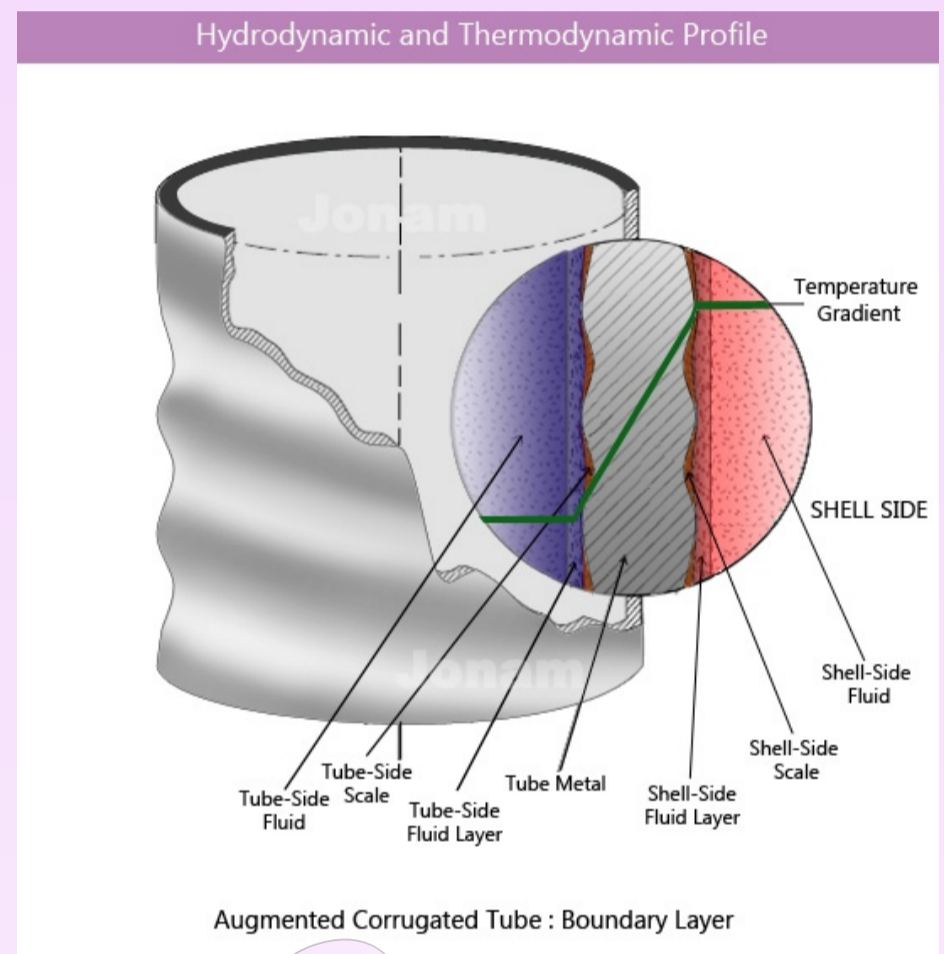
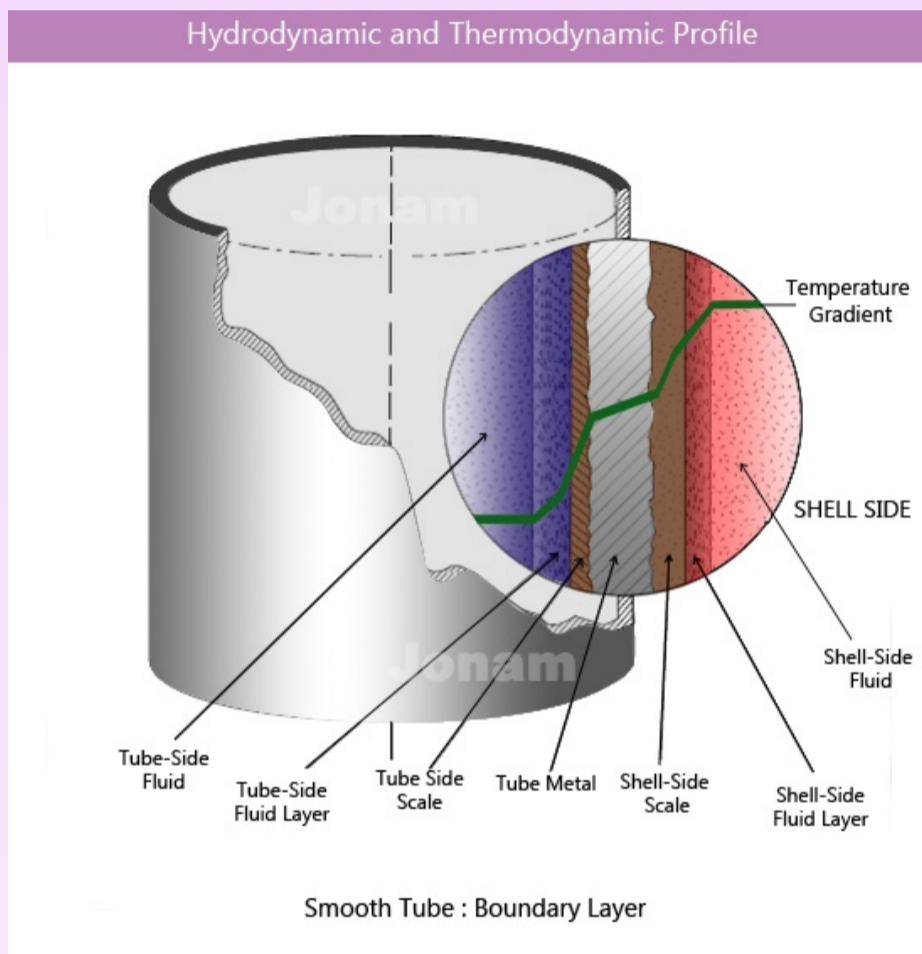


Indento Corrugated Tube Heat Exchangers

Jonam applies Corrugated tubes in its shell and tube heat exchangers. The corrugated profile on the inner and outer side of the tubes creates extra turbulence. It disrupts the boundary layer near the tube wall where most of the resistance to the heat transfer takes place. The boundary layer near the tube wall helps the fouling to build up due to zero velocity at the tube walls. The extra turbulence created due to corrugation reduces the formation of fouling layers.

Jonam has heat exchangers for Industrial applications based on TEMA and ASME configurations. The heat exchangers find successful application in heat recovery, condenser and re-boilers. The major advantage of the Augmented tube heat exchangers are

- Lower and reduced fouling
- Increased heat transfer due to increased turbulence
- Lower heat transfer area is obtained for a given heat transfer duty.
- Reduction in the size / length of the heat exchanger. Lower floor space / foot print .



| Type of Duty | Applications | Industry |
|----------------|--|--|
| Liquid -Liquid | Preheating, Heating, Cooling and Heat Recovery | Petrochemicals, Refinery, Steel Making, Textile, Pulp and Paper, Metal / Ore Processing, Waste water treatment, Veg. Oil Refining, Compressor, Pharmaceutical, Distillery and Fruit Processing |
| Vapor -Liquid | Process Condensers, Reflux Condensers, Vacuum Condensers, Vent Condensers, Re-boilers, Gas | |
| Vapor | Air Coolers, Steam Condensers | |

Applications:

Heaters, Condensers, Coolers, Regenerators, Thermic fluid heaters, Re-boilers – Thermosyphons and forced circulations etc

Industry:

Chemical Process Industry, Edible oil industry, Pharmaceutical industry, Petrochemical

Advantages:

- Augmentation on the tube side and shell side.
- Reduction in the heat transfer area
- High Thermal efficiency
- Low fouling occurrence and higher running times.
- Increased heat transfer is obtained as compared to smooth tubes.
- Reduces the overall size / length of the heat exchanger.