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Product Name :
Coiled Concentric Tube Heat Exchanger

Product Code :
LBNY-0005-10200020



Description :

The heat exchanger is fully instrumented using the Heat Exchanger Service Unit with thermocouples on the inlet and outlet of both the hot and cold streams. An example of an industrial Coiled Concentric Tube Heat Exchanger with turbulence enhancing tubes. The heat exchanger is deliberately not insulated so that heat losses in all of the configurations can be investigated. The heat exchanger can be arranged so that either hot or cold streams are in the inner tube. With either configuration both co-current and counter-current flow can be established.

Technical Specification :

Experimental Capability:

Demonstration of indirect heating or cooling by transfer of heat from one fluid stream to another when separated by a solid wall.

To investigate the effect of changes in hot fluid and cold fluid flow rate on the temperature efficiencies and overall heat transfer coefficient.

Conducting an energy balance across a shell and tube exchanger and calculate the overall efficiency at different fluid flow rates

To investigate the effect of driving forces with counter-current and co-current flow.

To determine the overall heat transfer coefficient for a shell and tube heat exchanger using the logarithmic mean temperature difference to perform the calculations

Demonstration of indirect heating or cooling by transfer of heat from one fluid stream to another when separated by a solid wall.

To demonstrate the differences between counter-current flow and co-current flows and the effect on heat transfer, temperature efficiencies and temperature profiles through a shell and tube heat exchanger.



Laboratory Instrument India