Multi-Pass Floating Head Model - Acrylic

Model: 115-MPFH

A common characteristic of most mechanical and chemical systems is the need to transfer heat from one fluid (liquid or gas) to another, and most systems use heat exchangers to accomplish this task. In a heat exchanger, the two fluids do not make direct contact. Instead, heat passes from the hotter fluid to the metal isolating the fluids and then to the cooler fluid.

Common applications of heat exchangers include heating, ventilation, and air conditioning (HVAC) systems; preheaters or coolers in fluid systems; radiators on internal combustion engines; and boilers, evaporators, and condensers used with fluids like oils, wastewater, hydrocarbons, biogases, etc. in industries such as oil and gas refining and power generation.

Although heat exchangers come in a wide variety of shapes, sizes, and designs, the most common and basic type is the shell and tube heat exchanger, which consists of a set of tubes inside a cylindrical shell. Fluids flow inside the tubes (tube-side fluids) and outside the tubes (shell-side fluids) and remain separated at the ends of the tubes by the tube sheets.

In a floating head heat exchanger, one end of the tubes is held stationary to the housing with a fixed tube sheet, while the other side is free to expand using a component known as a floating tube sheet. The floating tube sheet allows the tubes to expand with increased temperatures without bending the pipes.

Floating head heat exchangers allow operators to access the tubes for easy cleaning. They also permit a higher temperature difference within the device without fear of breakdown. Floating head heat exchangers tend to be more expensive than other types of heat exchangers, but they also offer greater efficiency and ease of maintenance.

Shell and tube heat exchangers can also be either single-pass or multi-pass devices, which describes how many

times the tube- and shell-side flows pass through the heat exchanger. In multi-pass heat exchangers, the two fluids pass each other several times, thereby improving the overall performance of the heat exchanger.

Bayport Technical's Multi-Pass Floating Head Model - Acrylic (115-MPFH) showcases the operational features of a multi-pass floating head heat exchanger. This sturdy, transparent acrylic training model allows learner to dismantle the training aid, examine the component parts, and understand how the unit is assembled, including gasket positioning. Instructors can then let learners reassemble the unit for training purposes.

SPECIFICATIONS

- Allows for dismantling and reassembling

PRODUCT DIMENSIONS

- For overall dimensions, please contact Bayport Technical.

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