

Use of Over the Side Heater

One peculiar heater that stands out among the immersion heaters manufactured by WATTCO™ is called over-the-side heaters. These heaters work simply by hanging the heating elements into the medium over the side of the container, hence the name “over-the-side”, and heat up the medium directly off of the submerged heating rods. They are very useful in a practical application and reasonably economical as well. They are specifically designed to hang over the upper portion of the container so that they may hang above the medium or onto the side.



The application for the over the side heaters varies greatly from simply water heating or freeze protection to some more complicated setup such as viscosity control for oil or wax products that require a steady flow. The heating elements are usually made of steel, copper, or titanium alloy. The heating rods are very portable and can be easily handled for installation or removal. There are plenty of space available in the container as the heating elements occupy the side of the container and can be moved around easily. The heating elements are also very light and moisture proof against oxidization and corrosion. Over and above, they are easy to maintain while maximizing the heat transfer as well as maintaining the uniform temperature.

Even though most immersion heaters have the straight heating rods in an arm length, the heating elements of over the side heaters are flexibly designed to suit various needs in shape and dimension. WATTCO™ customizes these heaters upon request for special size and wattage to meet the necessary specification. The type of uncommon substances that these heaters are used for include paraffin, solvent, salt or other caustic solutions. The application for paraffin is of a particular interest in heating up the lamination wax. One of the difficulties in wax heating for lamination was the use of a conventional heater that couldn't keep up with the wax requirement for consistent heating and the non-uniformity of wax in the process. Using the over the side heater, the laminating wax can maintain the maximum temperature with a constant viscosity and a uniform thickness of the lamination of wax.

Another interesting application involving over the side heaters is solvent degreasing. Solvent is most widely used for degreasing various metals. The process of degreasing with solvent usually consists of either spraying or immersion of which the latter is the most common method. In the process of immersion, maintaining the specific viscosity is extremely important in order to maximize the degreasing effect to every parts of the object for degreasing. The over the side heater is best suited for the process because the heat transfer is immediate and the temperature can be controlled to the point that no more heat is used than absolutely necessary.

The over the side immersion heaters (<http://www.wattco.com/over-the-side-heaters.html>) available at WATTCO™ are designed with heating elements to be directly immersed from the top of the container toward the bottom. Harnessed onto the bracket, the cold sections are carefully calculated and the heating elements are harnessed in the depth that will prevent the overheating in case the level of liquid in the container drops below a certain point due to evaporating. In the overall perspective, the over the side heater is one of the most simple yet useful immersion heater with lots of prospect for various industrial application.