OMEGA

THERMO PRODUCTS

OMEGA PILLOW PLATE HEATING ELEMENTS FOR THE BIOGAS INDUSTRY

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In order to increase the efficiency of the biogas production, the fermentation tanks are heated. The traditional system to heat up the manure is by installing PVC tube and pumping hot liquid/gas though these pipes. The downside of such system is:

- Built into the 200 mm thick concrete wall and bottom so not accessible and difficult to repair
- Kilometres of pipe needs to be installed which requires many labour hours
- The efficiency of this way of heating is often not as satisfactory as required

Therefore producers and engineers were looking for alternative ways of heating the manure and increase the production of biogas. One of the existing applications of laser-welded Pillow Plates are clamp-on plates, which are used as cooling or heating elements that are fixed around the tank wall. In case of fermentation tanks used in the Biogas industry, these Pillow Plate elements can be installed inside the fermenter tank for efficient heating and temperature control. Faster heating and improved control leads to increased production of biogas. To gain highest efficiency, the design of the Pillow Plate heating elements is based on the volume, the shape of the fermentation tank and of course the heating requirements. This is why the elements (produced in RVS 316L/1.4404) are custom-made.

By installing sufficient elements, with some space between the inner shell and the element the manure will be in touch with both sides of the Pillow Plate elements. The paddle agitator and/or propeller stirrers gives the manure sufficient turbulence which improves the heat transfer.
The number of elements to be placed is determined by the required capacity.

LEADING IN HEAT TRANSFER TECHNOLOGY

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