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Pumps for Paint Shops in the Automotive Industry and other Surface Treatment Applications

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Summary

In the automotive industry, surface treatment plays a major role – on the one hand for pre-treating components for further processing and on the other for producing a pleasing, stylish appearance of the automobiles. Processing steps include, for example, washing, cleaning, degreasing, pickling, phosphating, passivation, priming and painting. These are, however, not only used in the automotive industry, but also in other sectors. Almost all parts liable to rust are either spray-coated or treated in a dipping bath to be protected against corrosion. In the process, the most varied fluids need to be transported or recirculated by pumps. The chemical composition of the fluid, mechanical loads and the solids content place high demands on pump design, components and material properties. A vital component installed in most centrifugal pumps is the mechanical seal. There are a number of designs and material combinations available, and it can be used as single or double seal. Alternatively a vertical seal-less pump can be used for particularly demanding fluids, such as, for example zinc phosphate solutions. For the process to run smoothly and without disturbance, the pump must offer high operating reliability and availability in the system. This can be ensured by selecting the pump so as to match the individual operating conditions, the fluid handled and the temperature.