Oil recovery up to 95% with the Washing Centrifuge by Dr. Goessling

Categories: JOEST,GOESSLING

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De-oiling, washing, cleaning and drying in a single machine

In the fall of last year, the Dr. Ing. Goessling Maschinenfabrik GmbH, a subsidiary of the JOEST group, delivered the Washing Centrifuge WZ550 to the client baier & michels GmbH & Co. KG. The company based near Frankfurt with over 400 employees is a specialist for the development and production of innovative joining parts and c-part management for the automotive industry.

The patented process of de-oiling and cleaning mass production components enables the inline cleaning machine to achieve an oil recovery of up to 95%. Three identical drums are mounted to a rotating frame, in which the process steps de-oiling, washing, cleaning and drying are performed in sequence. It is therefor not necessary to empty the drums in-between steps. The lids, which vary from step to step are fixed.

The existing machine is charged by a Hinged Belt Conveyor with an integrated scale, which is also part of the Dr. Goessling product portfolio. The majority of the oil is separated in the first step by centrifuging the parts at up to 1.000 RPM. The oil is collected and then either stored in containers or directly fed into a new process.

For an optimal result, the mostly de-oiled material is washed with warm suds of up to 80°C. This also acts as a corrosion prevention. Bevor the material enters the last step, it is centrifuged once again to remove the washing suds.

In the last step, the material is rinsed to get rid of any remaining suds. It is then dried with hot air of up to 350°C. The drum is completely emptied into a container. After each step, the frame mounting the drums is rotated by 120° to move the parts to their next processing station. This is done fully automatic, and the timing can be adjusted based on the amount material.

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Frischlauge
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The centrifuged suds and water are separated and processed for reuse in the processing station that is located next to the machine. The station also servs as an unobstructed provider of water and suds as well as an oil separator. The oil contained in the water and suds is separated and stored in an additional container. Since most of the oil is already recovered during the first step, a carry-over of oil is prevented and a total recovery rate of up to 95% can be achieved.

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