KONTROLS & INDUSTRIAL WEIGHING

LEADERS IN WEIGHING, BATCHING & FILLING SYSTEMS

EXCELLENCE IN WEIGHING CONTROLS KIW

Check-Weighing of Stainless steel sheets

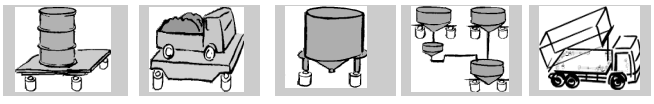
Summary: Ensuring that only one sheet of Stainless steel is picked up at a time for further processing.

The customer uses a Robotic system to lift Stainless steel sheets from a pallet into a polishing machine. The system used suction to lift the sheet from the pallet, but often these sheets would stick together causing multiple sheets to be put into the polisher at the same time. This was causing continual breakdowns in their stainless steel polishing line.

KIW designed a system to stop multiple sheets from being taken to the polishing machine. The KIW system used a PR1713 System controller with custom software and 2 tension load cells connected into 2 lifting points on the robotic arm to determine the weight of the sheet or sheets being lifted

When a pallet of sheets arrived for polishing, the operator would receive a form with dimension details of the sheets. Using the custom software on the PR1713 the operator could enter in the length, width and thickness of the sheets he was putting into the polisher. The software would then calculate the weight of a single sheet using a pre-defined density factor. The operator could then start the process of lifting sheets into the conveyor. If multiple sheets were lifted the PR1713 System controller detected the weight as being too much and lowered the sheet back to the pallet. The operator was then alerted of the fault so he could separate the sheets and start the process again.

The software also kept a database of sheet sizes that had been lifted into the polishing machine. This allowed the customer to keep records of the total number of sheets moved for each sheet size, and the total weight moved.



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The KIW system has the following features:

- Interlocking with the existing PLC driven crane system to drop the sheets back to the pallet if multiple sheets have been lifted

- Selectable manual mode operation to allow operation without weight-checking if sheets are not being lifted into the polishing machine

- Database of sheet sizes polished, and the number of sheets polished.

- Password protected settings for Sheet Density factor, and Weight Tolerances

The client now runs their stainless steel polishing system with confidence that they will not be interrupted with breakdowns from multiple sheets entering the system. The KIW System has the flexibility to run with any sheet size or any material type providing that the density factor is known.

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