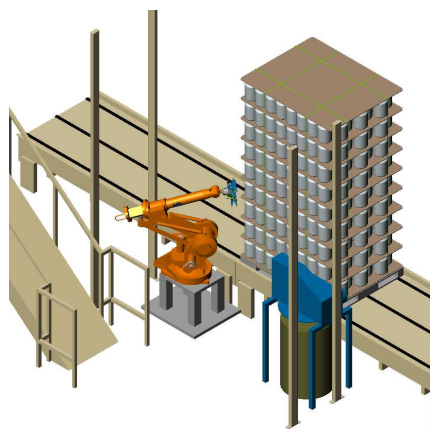


Case Study – Robotic Debanding

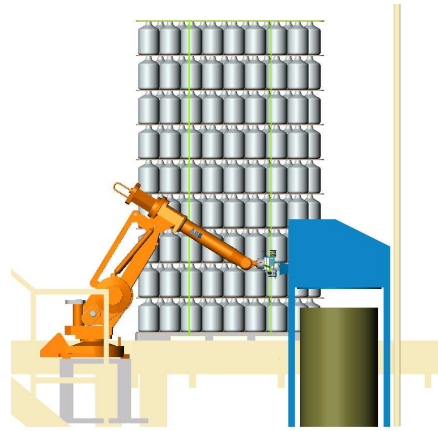
TEC designed and built a custom robotic solution for finding, cutting and chipping plastic strapping for a depalletizing process.

The pallets arrived to the cell from the blow molder via transport. The pallets were queued on the customer's conveyor with straps intact. The TEC system located plastic straps using a search routine, gripped and cut each strap one at a time and delivered each strap to a chipper that cut the strap into 2 inch long segments and dropped the chips into a bag. The chips were then recycled. A cell PLC, the ABB IRB1400 palletizing robot, an end-of-arm tool of TEC design, the powered chipper and the integration into the pallet conveyor controls were included in the system. A perimeter guard with gates (two – one for man access and one for chip removal access) completed the cell package.

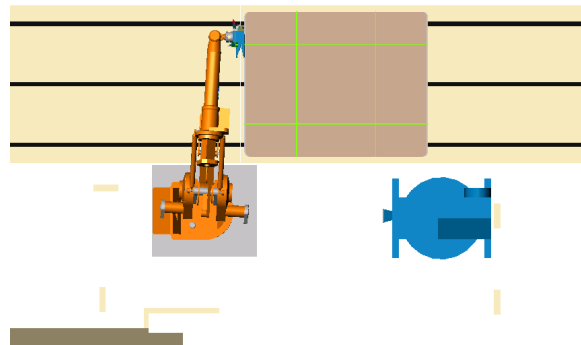
The operator interface included an operators' display with cell set up and run as well as alarm handling instructions.



Isometric view of the cell



Side view of the cell



Top view of the cell



The robot processes a pallet with four straps at a pace well ahead of the previous manual operation. The operator is freed up for other duties and the reclaimed strap is an ongoing savings to the customer.



Robot leaving strap at chipper



Robot in a search for a strap



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