

APPLICATION CASE STUDY #113

SIC Code:
3300

Product Handled:
Rolls of Aluminum Tubing

Machine Type:
Hydraulic Manipulator

**HANDLING
DESCRIPTION:**

The machine cycle consists of removing the rolls from a mandrel and transferring them to a pallet. The pick position has the rolls positioned with the core horizontal and they are then rotated 90° for core vertical positioning on the pallet.

PROBLEM:

The grip range of the tooling must handle large variation in roll O.D.'s (48" to 25"). The roll can not withstand excessive grip force. The manipulator will need to handle up to 1,000 lbs. of payload and still rotate easily. The top of the roll will be 92" off the floor in its highest position (core horizontal) . The radial reach needed is 96".

MATERIAL HANDLING REQUIREMENTS

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| <ul style="list-style-type: none">• Heavy payload• Large amount of vertical travel• "Soft" style grip | <ul style="list-style-type: none">• Adjustable grip range• Larger than standard manipulator reach |
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MATERIAL HANDLING SOLUTION

Positech supplied a Model TPA-15 hydraulic manipulator with 1,500 lbs. of tooling and payload capacity. Powered main post rotation was provided to facilitate moving the 1,000 lb. load through the work cell. The standard 55" vertical travel was increased to 64". The radial reach of 89" was extended to 117.5". An extra long, "T", spring counterbalanced handle was used to provide ergonomic operator interface with the control station. Pin adjustable jaw arms with 33" x 18" coped jaws pads with 1" thick neoprene closed cell sponge inserts were provided for a "soft" grip on to the wide range O.D. rolls.