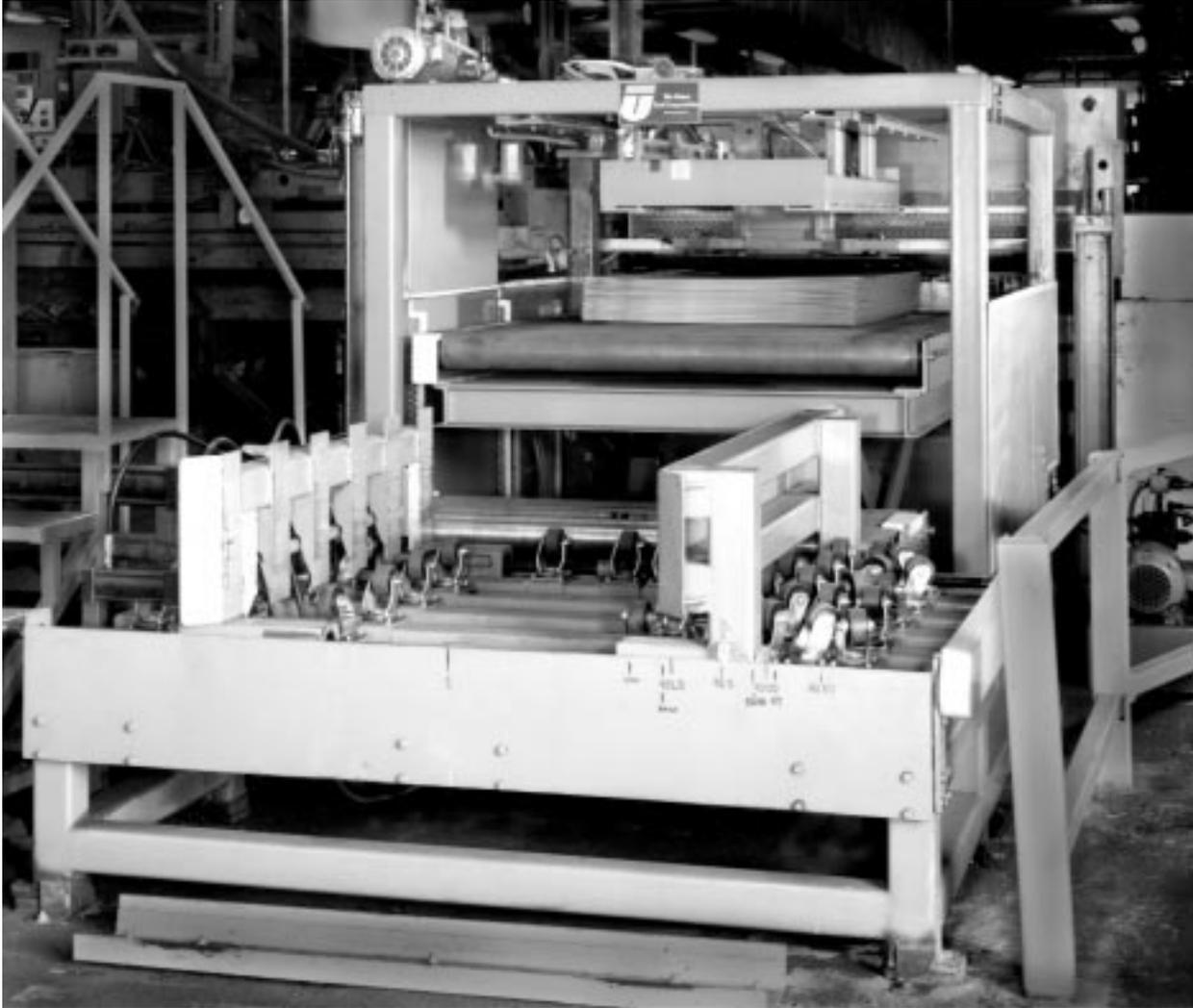


PINCH ROLL FEEDER



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PINCH ROLL FEEDER

Sheet Metal Feeder Simplifies Metal Forming Operation

PROBLEM: Costs and Safety

Manual labor costs and safety concerns spurred Bradford-White Corporation (a subsidiary of Nortek, Inc.) of Middleville, Michigan to purchase an automated sheet metal feeding system for their water heater operation. The metal forming system used at Bradford-White consists of a multifunctional piece of equipment that rolls a flat piece of steel into the desired cylindrical shape, transfers the rolled sheet to a welding station and welds the edges to constitute the water heater body.

Previously, the only non-automated procedure in the entire forming operation was the laborious hand feeding of the sheet metal into the forming and welding machinery. As Dave Tolley, Vice President of Manufacturing at Bradford-White, states: "Before the purchase of Union Tool's Pinch Roll (PR) Feeder, two operators were required to complete the feeding/metal forming/welding process—one operator to physically position the steel sheets so they could enter the roll forming station, the other to monitor the forming/welding equipment. This manual lifting/positioning procedure was a heavy job—frequently resulting in slower than anticipated production times, some downtime and shoulder and back problems for the feeding operator."

SOLUTION: Precision, Automatic Feeding

Union Tool designed the PR Feeder to accommodate two 150-sheet stacks of steel, each weighing approximately 10,000 pounds. Upon activation, sheets of the first stack are fed into the forming machine. Simultaneously the second, or waiting, stack of steel is moved into feed position and self-aligns (for precise entry into the rolling station) as soon as the initial source is depleted.

In the actual feeding operation, vacuum suction cups lower to engage the top sheet of metal, the vacuum is activated, and the sheet is moved forward to within four inches of the roll forming machine. The programmable controller on the PR Feeder then awaits a signal from the roll forming machine before the sheet metal is delivered to its "pinch" rollers. This cycle is repeated until the feed stack is exhausted and the backup stack is brought automatically into place.

RESULTS: Fast, Lower Cost Operation

Union Tool's Pinch Roll Feeder is able to feed up to 15 sheets per minute into Bradford-White's forming and welding system. Substantial savings are experienced in manpower hours and operator safety concerns are virtually eliminated.

Dave Tolley also notes that Union Tool's Pinch Roll Feeder is "simpler in design and construction, and generally easier to maintain" than similar pieces of equipment offered by other suppliers. Dave thought this was reason enough to be pleased with their purchase, but as it turns out, the PR Feeder also costs considerably less—almost one-third as much—as competitive models. Now, that's really hard to beat.

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