



Chattanooga,
TN

INDUSTRY

Highway construction equipment

PROJECT NAME

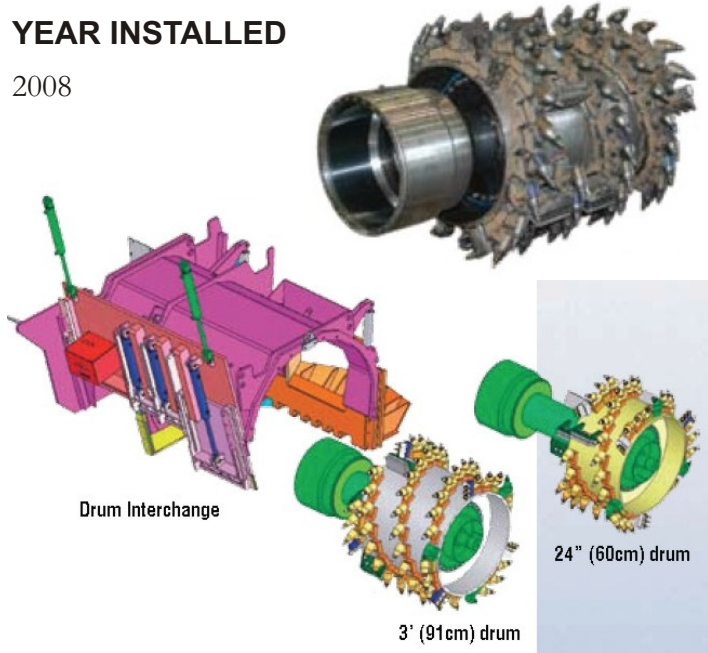
Cold Planer/Milling

PARTS

Tool Holders & Cutter Drums

YEAR INSTALLED

2008



CUSTOMER BENEFITS

- Automate manual welding operation
- Reduce manufacturing process cycle time
- Improve product quality

SYSTEM OVERVIEW

The welding cell consist of one IRC5 controller with multi-move capability for an IRB 4400 material handling robot and one IRB 2400L welding robot mounted on a robot travel track, one IRBP 2000L positioner with movable tailstock, BullsEye® calibration unit, Wolf Cell Control, SmarTac™ tactile sensing, AWC advanced weld control, Lincoln 455 Power Wave power source, torch cleaner station, safety light beams and protective fencing and park switch.

Two separate welding operations are performed using a fixture to weld subassembly components and then welding the subassembly parts to the actual drum workpiece. The positioner rotates the subassembly fixture and/or milling drum as required to present the welding robot access to all necessary areas for welding while maintaining an optimum weld position.

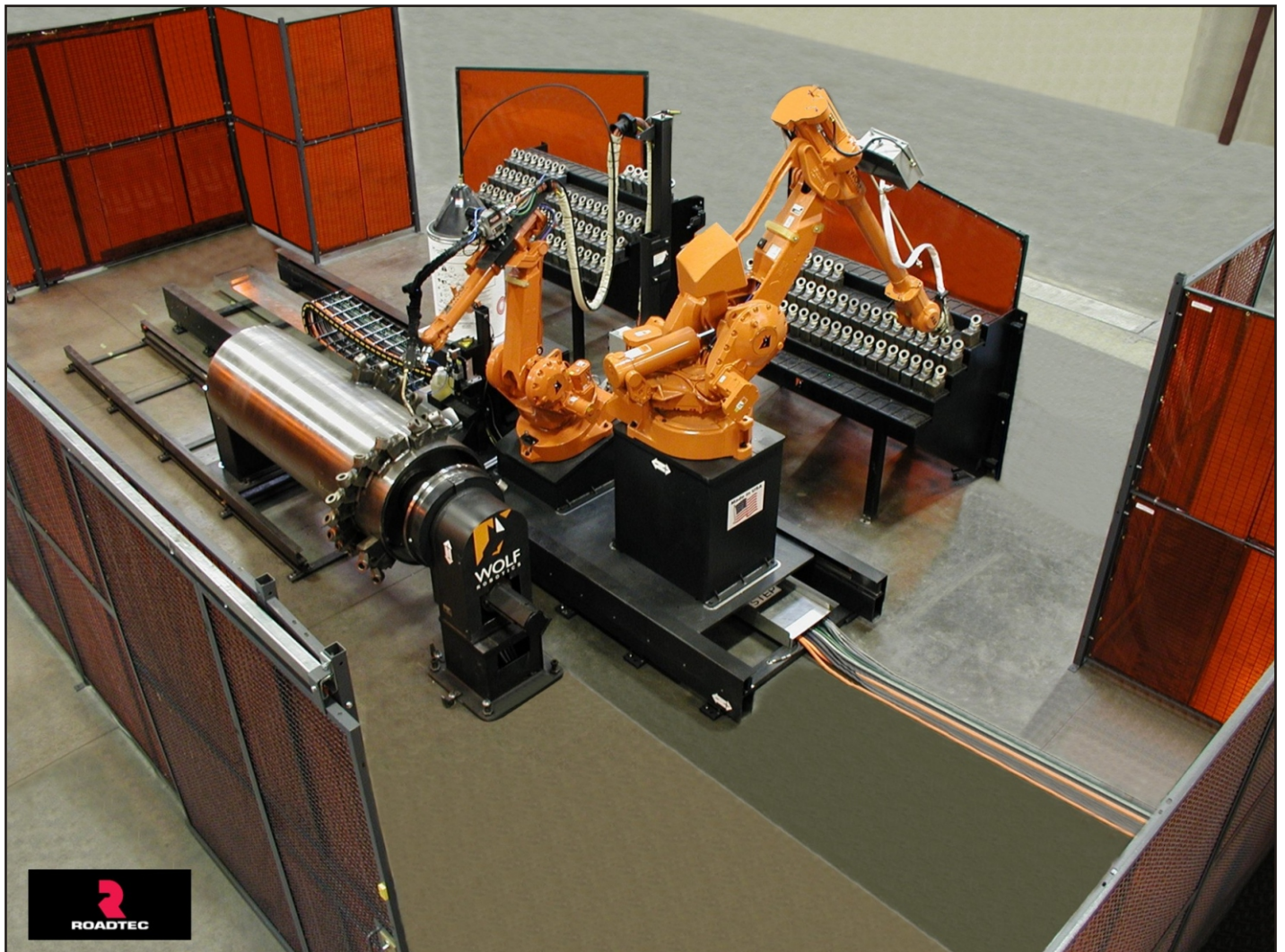
The material handling robot picks, places and holds welded subassemblies on the drum for welding by the welding robot. A location jig is utilized to ensure that the subassembly parts are positioned correctly.

An ABB BullsEye® automatic calibration system continually monitors the robot accuracy and adjust the programs as required to maintain optimum repeatability.

SmarTac™ sensing helps detect joint location, AWC adapts the parameters during welding and the torch cleaning station prolongs the life of the welding consumables.

The cell is protected from accidental entry with solid fencing and light beams to monitor operator interface.

The IRB 4400 robot picks subassembly parts from a staging area and places them on the cutter drum for the IRB 2400L robot to weld.



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