

PANDJIRIS,[®] INC.

#1 in Fixed Welding Automation

PIPP PARTNERS IN
PROFITS &
PROGRESS

PRODUCT BULLETIN FOR LINCOLN PARTNERS

APRIL 2006

FULLY AUTOMATED HEAVY DUTY SIDE BEAM SYSTEM FOR WELDING HVAC PRESSURE VESSELS

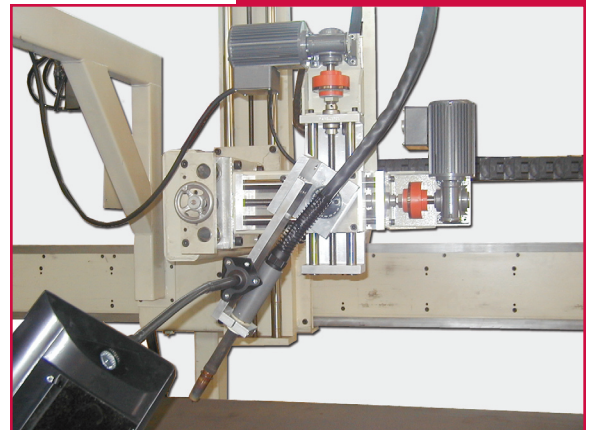
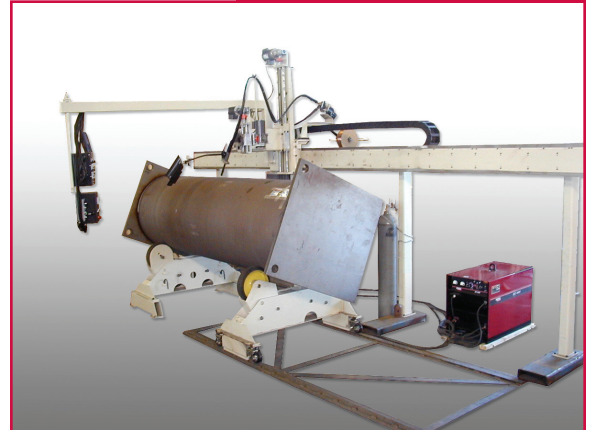
Seeking a fully automated turnkey system for production output and improved product quality, an HVAC System manufacturer came to Pandjiris and Lincoln Electric for a fixed automation and welding solution. As a result of their expertise and partnership, Pandjiris and Lincoln Electric worked in tandem to solve the positioning and welding issues.

Full scale samples were sent to the Lincoln Electric lab in Cleveland for application analysis to determine whether SAW or GMAW welding process would be utilized in this automated turnkey system. Preliminary results indicated that a part design change would be required in order to utilize the SAW process. So, due to the nature of the application and the fact the end user could not change the design, the GMAW process was the solution and weld procedures were developed and implemented for use on this girth welding system.

The customer's parts range in size from 12" to 48" in diameter and up to 20' in length and weighing up to 20,000 pounds. Pandjiris provided their Heavy Duty Side Beam and Variable Speed Carriage with their "new" EZ Link[®] PLC-based series controller to position the Lincoln NA-5 / DC600 GMAW package at either end of the pressure vessels to perform the circumferential fillet welds. A special design Model 4015-P Motorized Slide was utilized to accommodate the large diameter range with the fixed height side beam. Pandjiris Model MM-15/5-T Turning Roll sets were utilized to provide part support and rotation. The Missouri Mule Turning Rolls provide a constant center line of rotation relative to the side beam, thus minimizing the over center adjustment requirements. The Lincoln NA-5 Control and DC-600 power source were used for the GMAW process and integrated for a fully automated system. The customer was looking for the best technical, integration expertise and welding solution, and the Lincoln Electric-Pandjiris Team produced yet another success story. It has met and exceeded all expectations.

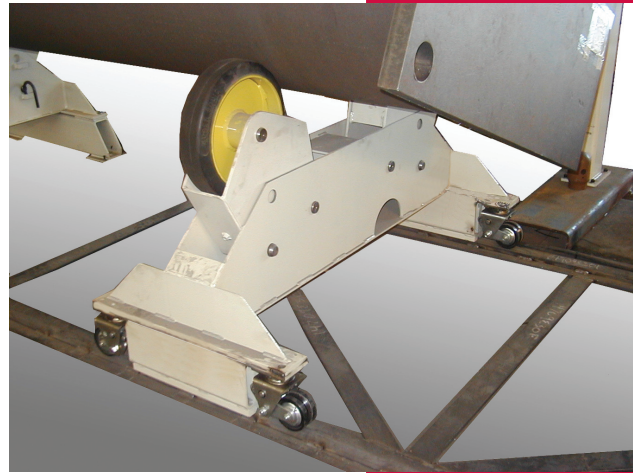
The Lincoln Electric and Pandjiris Team continue to work together to produce welding and positioning solutions, successfully integrated turnkey systems, and consumable orders both in the U.S. and throughout the world.

Call Pandjiris Application Engineering Department for automated positioning solutions and systems to meet your customer's application.



SYSTEM FEATURES:

- Lincoln NA-5 / DC-600 GMAW Weld Package
- Pandjiris EZ Link® PLC-based Controller for Automated Equipment Control Function; Weld Start/Stop and Auto Travel Integration
- Model CSC-21-12 Constant Speed Heavy Duty Carriage 2,100 Pounds at 12" Overhang
- Model PBT-12/288 Side Beam 24' Long Beam
- Model 60 Stanchions for Side Beam Support
- Model MM-15/5-T Power Roll on Riser
- Model MI-5-T Idler Roll on Casters
- 10' Sections of Model "V" Track
- Model 4015-P Motorized Slide, 40" Stroke with Supported Rods Provides Vertical Adjustment to Accommodate 12" to 48" Diameter Shells
- Model 615-M Manual Slide, 6" Stroke Provides Over Center Adjustment of Weld Head
- Heavy Duty Swivel to Provide Impingement Angle Adjustment
- Model 61-P Motorized Slides, 6" Stroke Provides Vertical and Cross Seam Adjustment of Weld Head via Joystick Control Mounted to Swivel
- Arm for EZ Link, Carriage and NA-5 controls.



Similar Pandjiris Side Beam/Turning Roll system integrated with Lincoln Powerwave AC/DC SAW Weld Package

