



# PANDJIRIS,<sup>®</sup> INC.

#1 in Fixed Welding Automation

**PIPP** PARTNERS IN  
PROFITS &  
PROGRESS

PRODUCT BULLETIN FOR LINCOLN PARTNERS

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## FLAT SHEET SEAMER FOR 100% PENETRATION OF RAILCAR PANELS WITH POWER WAVE TANDEM AC/DC SAW PACKAGE

The Pandjiris and Lincoln Partnership has had a long and successful history of working together to help railcar manufacturers improve the quality, operating efficiency and productivity in their facilities. Recently this teamwork produced another success story and a very satisfied customer by bringing them the latest technology, state-of-the-art fixed automation equipment, and value-added turnkey solutions.

A leading North American Hopper Car Manufacturer built new facilities that by railcar manufacturing standards are state-of-the-art. Our task was to develop and build the most advanced automated seam welding equipment fully integrated with Lincoln Electric's new Power Wave AC/DC submerged arc welding technology.

At the heart of the technology for this seamer are three key features unique to this project:

- Lincoln Power Wave AC/DC Tandem SAW Package for improved deposition and travel speed
- Pandjiris design PLC Programmable Control System
- Pandjiris custom Pressurized Flux Backing Bed/Conveyor System providing intimate contact of flux to the back bead of a 100% penetration weld.

The combination of these three features efficiently produces high quality welds on mild and stainless steel, 3/16" to 1/2" thick material along with an exceptional back bead appearance. DeviceNet communications were utilized to allow an interface between Pandjiris' PLC Control System and the two Power Wave AC/DC power sources. The system controls include two levels (operator and supervisor).

As a result of this highly successful collaboration, the customer has contracted for a second fully integrated seam welding system for their expanding facilities. Pandjiris and Lincoln Electric continue to team together to offer fully integrated fixed automation systems and turnkey solutions for customers in North America and throughout the world.

Contact Pandjiris Application Engineering Department for Automated Positioning Solutions to meet your customers' applications.



## SYSTEM FEATURES:

- Lincoln Power Wave AC/DC tandem submerged arc weld package
- Touch screen operator interface
- Pandjiris full system control utilizing PLC (includes welding power sources)
- Storage for up to 50 weld procedures
- Pandjiris Model 240 FS Seam Welder (20' Flat Sheet Seamer)
- Pandjiris pressurized flux backing bed/ conveyor system
- Model VSC-21-12 Carriage, 2,100 lbs. at 12" overhang
- Model 1815-A Pneumatic 18" Stroke Vertical Slide
- Model 615-P Motorized Cross Seam Slide
- Infeed and outfeed conveyors
- Pneumatic sheet elevators
- Pneumatic sheet alignment gauges
- Eight minute cycle time to load, align, clamp, weld and eject a 3/8" thick, 20' long sheet
- Laser alignment lights
- Weld Engineering flux recovery and feed systems
- Automatic flux recovery/recycling for both top and bottom sides
- Custom paint color per customer's specifications

