

Pantograph Base Maintenance for Queensland Rail, Maintenance Division Brisbane, Australia

Project 857

Overview:

- Queensland Rail, Maintenance Division for rolling stock
- Maintenance Division conducts repairs on many types of electric passenger trains; from old style to high-speed trains
- Of many repairs, pantograph bases represent the most frequent and timely for repairs

Objective:

- Explore opportunity to reduce repair time, while maintaining specification and quality standards



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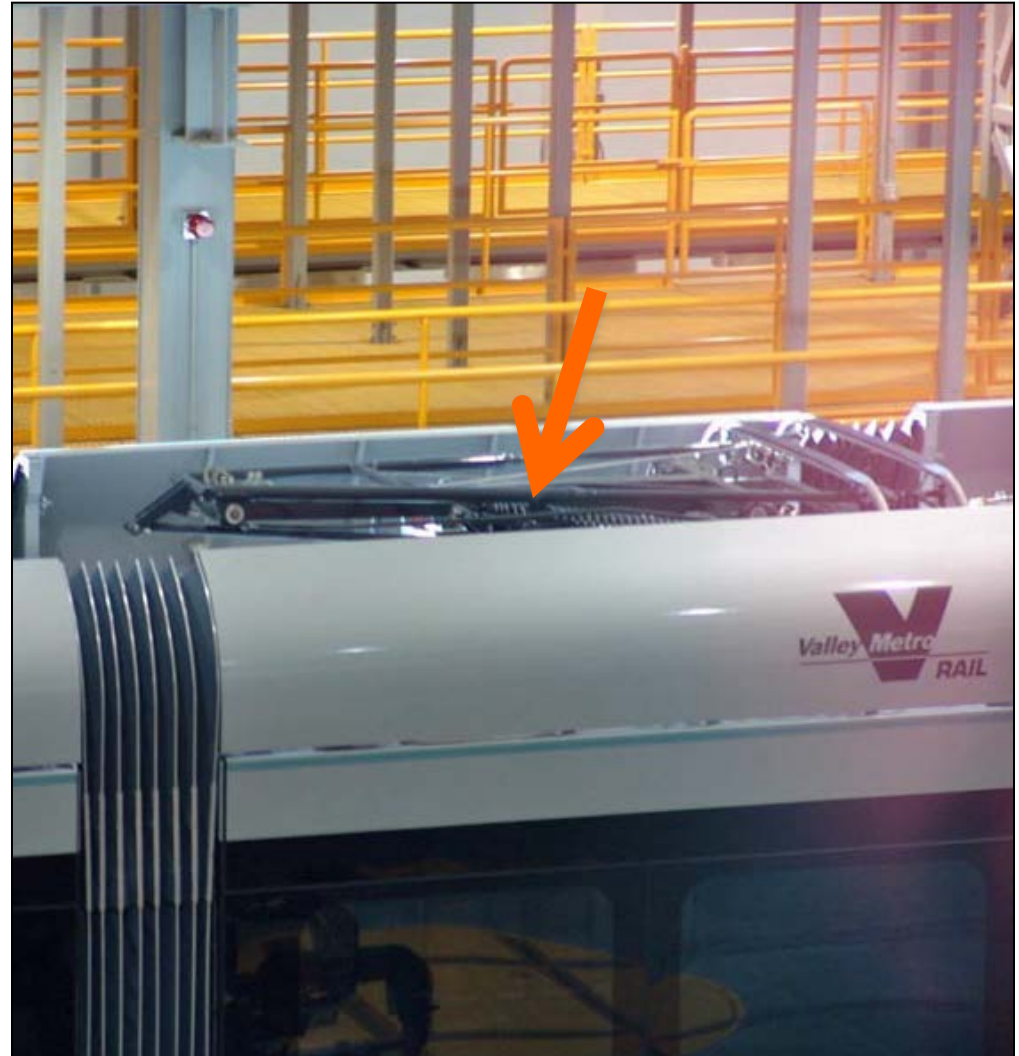
Substrate: Stainless steel

Size: 6.2m² (67ft²) per unit

Surface Condition: Ceramic (insulating) coating; 1.6mm thick

Former Process:

- (1) Transfer carriage to large spray booth
- (2) Two workers used power tools, flap disk grinding to remove coating
- (3) It takes an average 32 hours to complete the project using 140 to 300 grinding disks



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Areas Where Pantographs are Bolted

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**Close-up with Pantograph Mounting
Plates Removed**



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Used: Silver 60 Sponge Media™
abrasive, 100-HP Feed Unit™
and 35-P Sponge-Jet Recycler™

Surface Cleanliness Level:

Near White Metal Blast Cleaning
NACE 2 / SSPC SP-10 / Sa2.5

Production Speed: Profiled 1.5m²
(16ft²) in five minutes

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Result:

- Estimated savings; 60 hours per train (minimum 26 trains per year); **Total savings \$156,000** without including expended flap disks (\$3/disk)

- Queensland Rail is purchasing 100-HP Feed Unit and Sponge-Jet 35-P Recycler

Outcome:

- Current trials at sister plant tested Sponge-Jet surface preparation on coal train carriages; The plant processes 4/day, while Sponge-Jet results process 8/day

