



Electrical Safety Audit Update

POLA Electrical Mechanical Division-April 2015



Port Electrical Mechanic History

- In 2007 the classification of *Crane Container Mechanic* transitioned into "*Port Electrical Mechanic*" or PEM. This allowed a Journey level Mechanic to perform both electrical and mechanical work throughout the Port. POLA and the IBEW worked closely on the class specifications, transition and extensive training.

Qualifying Classifications

- Employees in the following classes (with experience) qualified to take the PEM exam:
 - Crane Mechanic (IBEW)
 - Electrician (IBEW)
 - Welder (SEIU)
 - Machinist (SEIU)
 - Electrical Craft Helper (IBEW)
 - Mechanical Craft Helper (SEIU)

Jurisdictional & Safety Issues

- IBEW electricians raised concerns about electrical jurisdiction and safety by non-electricians.
- Some complaints were anonymous and sent to the Board of Harbor Commissioners.
- Third party URS/Martin Technical & Zoubek were brought in to conduct a safety audit in the PEM Division in 2012.

Audit Methodology & Conclusions

- Audit conducted July & August of 2012.
- Audit report released in January of 2013.
- Audit implementation plan released June of 2013.
- Audit was performed to investigate if complaints and concerns by POLA workers regarding electrical safety were substantiated.
- Scope of audit covered 19 major areas.
- An overall score of 5.26 was given which relates to an average rating (out of a possible 10).

Safety Audit findings

- *“C&M Management shows genuine concern for the safety of all workers and generally provides a reasonable effort to comply with safety requirements; However gaps are present within Division 147 (PEM) related to safety communication, safety training, and knowledge on electrical safety requirements. ”* Page 6-

A total of 140 safety recommendations suggested

46% are complete

- 65 items completed to date.
- 75 items pending completion
- Requires funding or other POLA Division responsibility

Completion Highlights

- Electrical Engineer hired to act as the Technical expert. Works directly for C&M and has extensive Port experience.
- Electrical Supervisor hired for the Electric Shop, has extensive electrical background including training experience with the IBEW.
- A third PEM Supervisor was approved in the budget. Emergency appointment made.
- A 24 hour, 7 day shift coverage was established and 815 ships AMPed in the last 12 months.

Electrical Safety Committee

- An Electrical Safety Committee was established as recommended by safety audit
 - Members include
 - IBEW local 11
 - POLA Chief Electrical Engineer
 - Journey level Port Electrical Mechanics (2)
 - POLA Risk Management Representative
 - Supervisors from the following shops
 - HVAC
 - Building Operating Engineer
 - Port Electrical Mechanical Division
 - Port Electrical Division

Funding

- Fiscal Year 2014-15
 - \$50,000 to establish contract with Square D to test and provide switchgear maintenance.
- Fiscal Year 2015-16 (proposed) \$415,000
 - \$240,000 for Infrared Inspections, circuit breaker testing, Relay testing, transformer oil analysis and GFCI testing.
 - \$175,000 for job hazard and arc flash analysis
- Upcoming Fiscal Years-projected annual funding of \$400,000 (\$4 million in 10 years)

Yang Ming Ship Amp Plug Explosion (Feb 2015)

- A ship amp cable exploded at Yang Ming Berth 121 on February 9th, 2015.
- C&M Electrical Engineer, George Basha, investigated the incident and concluded the cause of the incident was termination failure inside the plug.
- All POLA equipment functioned as designed and no injury to any personnel occurred and fault was contained within AMP Vault.

Ship AMP Plug cable damage



Forward cable plug housing completely damaged and burnt off



For reference-red plug on the right is undamaged.

Questions?