Continuous Improvement Report

Client: Automotive Parts Manufacture **Location:** Ontario **Report:** CI-221

Problem:

This Automotive Parts manufacturer was struggling to consistently meet their OEM's part cleanliness requirements. A significant source of contamination on their parts came from the dirty masks they used during the painting process. As a corrective action, they decided to start cleaning their masks using a 3rd party off-site resource. Though this solution did seem to address the parts cleanliness issue, it created a number of new challenges for plant operations and drove their per piece cost up significantly.

- Turn-around time required that their mask inventory had to be increased
- Since masks were tossed into collection bins by operators and then transported off-site, they were often damaged, and any damaged masks were thrown away by their 3rd party resource. New masks had to be ordered as replacement
- Fluctuations in production and mask turn-around time resulted in line interruptions or mask re-use which increased risk of a parts cleanliness re-occurrence
- When the masks allowed "bleed" onto the part, it created a significant re-work expense for the plant as parts were quarantined and sent off-site for 3rd part stripping
- High per mask cleaning Price (which included non-value add transport to/from the plant to the service provider, ie waste)

Management looked at the option of bringing this operation in-house using in-house personnel and management, however due to HS&E issues, together with Union concern the plant decided that it was best to keep their resources focused on production related operations.

Objectives:

- Bring the mask cleaning operation on-site to address the transportation and logistics challenges
- Ensure all HS&E issues are being managed and risk minimized
- Have Zimmark manage the entire process in order to ensure mask cleanliness and availability meets our clients production and quality requirements
- Reduce risk of mask "bleed" (and therefore subsequent off-site rework costs) by maintaining cleaner masks
- Provide a per mask cleaning cost in order to guarantee a measureable savings to the client
- Repair damaged masks on-site in order to new mask cost due to damage.

Prior State:

- Approx: 23,000 masks cleaned per year
- Number of damaged but repairable masks: Unknown

Investigation:

Several masks were brought to Zimmark's lab and tested with various chemistries in order to determine the most cost effective in-house process. Developing the control plan, consumption model and by modifying a used parts washer, Zimmark was able to guarantee a per mask cleaning on-site solution.

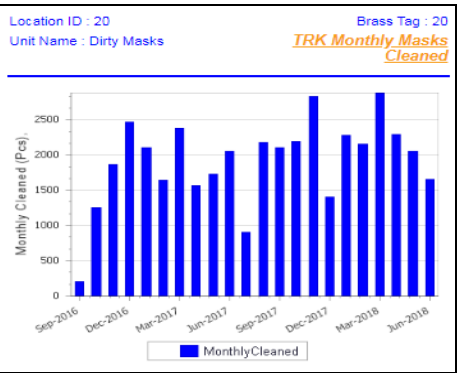
Implemented Changes:

Zimmark installed a Parts washer in a controlled area away from operations where a trained on-site technician is able to perform the necessary cleaning using the appropriate PPE. Repairs to damaged masks are performed on-site and subject to inspection by Zimmark supervisory personnel. Daily production metrics are managed and maintained and available to our client 24/7 online and on a monthly basis overall process performance is reported to plant management.

Results:

Turn-Key Service Cost:

- Mask Cleaning: approx. annual savings: $92,000 per year
- Mask Repair Savings: $38,000 per year
- Off-site Part Re-work (stripping): TBD
- Reduced mask inventory
- 100% availability



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