

Equipment Failure Mode & Effects Analysis

FMEA Identifies Best Design to Eliminate Risk of Costly Downtime

Client

OEM Vehicle Manufacturer

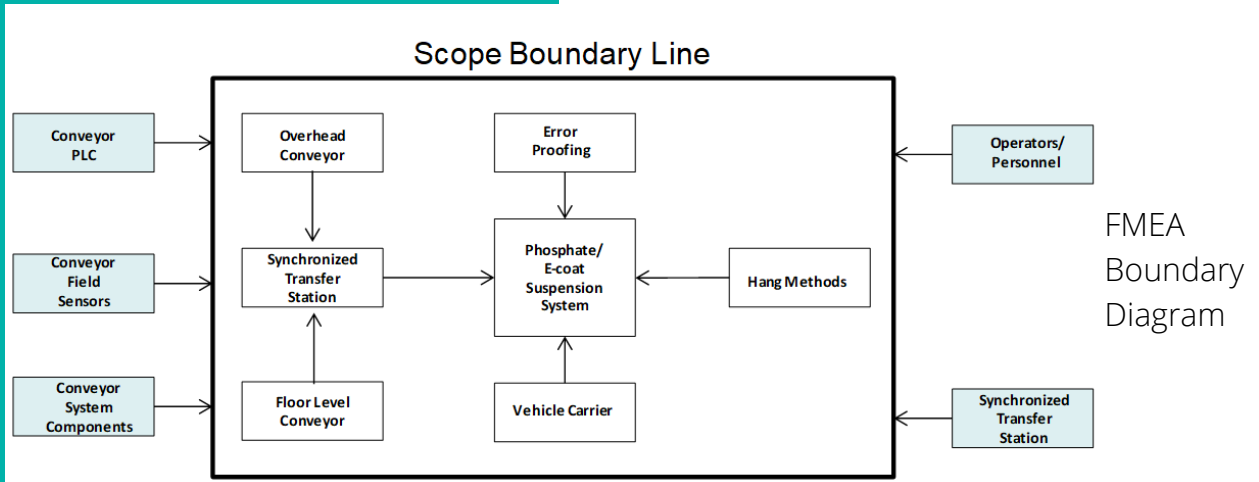
Objectives

1. Develop Boundary diagram identifying equipment & processes within the scope of the FMEA.
2. Document current equipment designs used by plants and develop P-Diagrams for each.
3. Analyze failure modes for effects and potential control plans to mitigate risk.

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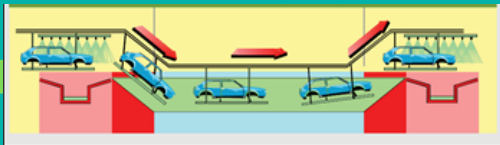
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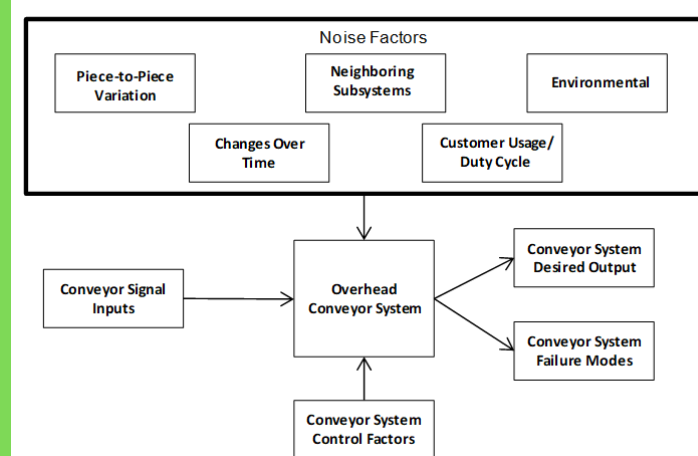


Project Description

Vehicle bodies going through the e-coat dip process occasionally become detached from the overhead conveyor and cause disruption of production and extensive downtime. Sandalwood was commissioned to lead an FMEA study of the conveyor systems and attachment mechanisms to minimize the risk of this costly downtime.



P-Diagrams for Systems/Factors



Results

- All Phosphate/E-coat suspension systems at customers North American plants were evaluated.
- All hang methods currently in use were reviewed for performance, reliability, ergonomics, MTBF, etc.
- Phosphate/E-coat suspension processes at each plant were documented.
- Downtime issues at each plant were documented.
- A Pugh analysis was developed in an effort to identify a Best Practice.

- An Executive Summary was written indicating recommended actions.
- A complete FMEA now exists, where none did before. This allows the customer to develop continuous improvement actions.
- A Best Practice was clearly identified for use on future installations.