

Guidance

G3200 Process Failure Mode and Effect Analysis & (FAI) First Article Inspection

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1 Purpose

The purpose of this procedure is to detail the systematic approach to the development of a Process Failure Mode and Effect Analysis report (PFMEA), and the reporting of FAI / Sample Approvals.

2 Scope

The scope of this procedure applies to various activities within Trains Division which includes Product, Process and if required Project based delivery activities.

The scope of the this procedure allows for formalised periodic reviews of the the signalling equipment overhauled by REW, to establish the robustness of existing processes and process controls and where identified areas for improvement

Note: It must be noted that Trains Division do not act as a design authority, and as such all outputs form a product FMEA should be used on an informed guidance basis.

3 Procedure

3.1 Step 1. Review of product or Process

Use a process flowchart to identify each process and associated components applicable to the product, or applicable process activity.

Conduct a Holistic review of the process or product performance. Use process flow charts or specification requirements to establish key stages or components which may have a significant adverse effect on the activity or product.

3.2 Step 2. Brainstorm Potential Failure Modes

Review existing documentation and data for clues / pointers.

Conduct a comprehensive review of existing documentation and data, for guidance on potential failure modes. This may include but not limited to Warranty reports, general failure reports from the depot (MDBF), OEM data and or reports, process flow charts and other third party inputs.

3.3 Step 3. List Potential Effect of Failure

There may be more than one for each failure.

As a result of the brainstorming activity in clause / step 2, list all potential effects of key component failure, or failure of key stages in the process.

Note: For any key component or process stage there may be more than one effect for each failure mode identified