

National Compact Stellarator Experiment (NCSX)

PVVS Fabrication

**3.2.1 MIT and QA Plans for the PVVS
In Reference to Section 3.2.1 of NCSX-SOW-121-01-01**



**Jason Gass
Mechanical Engineer**

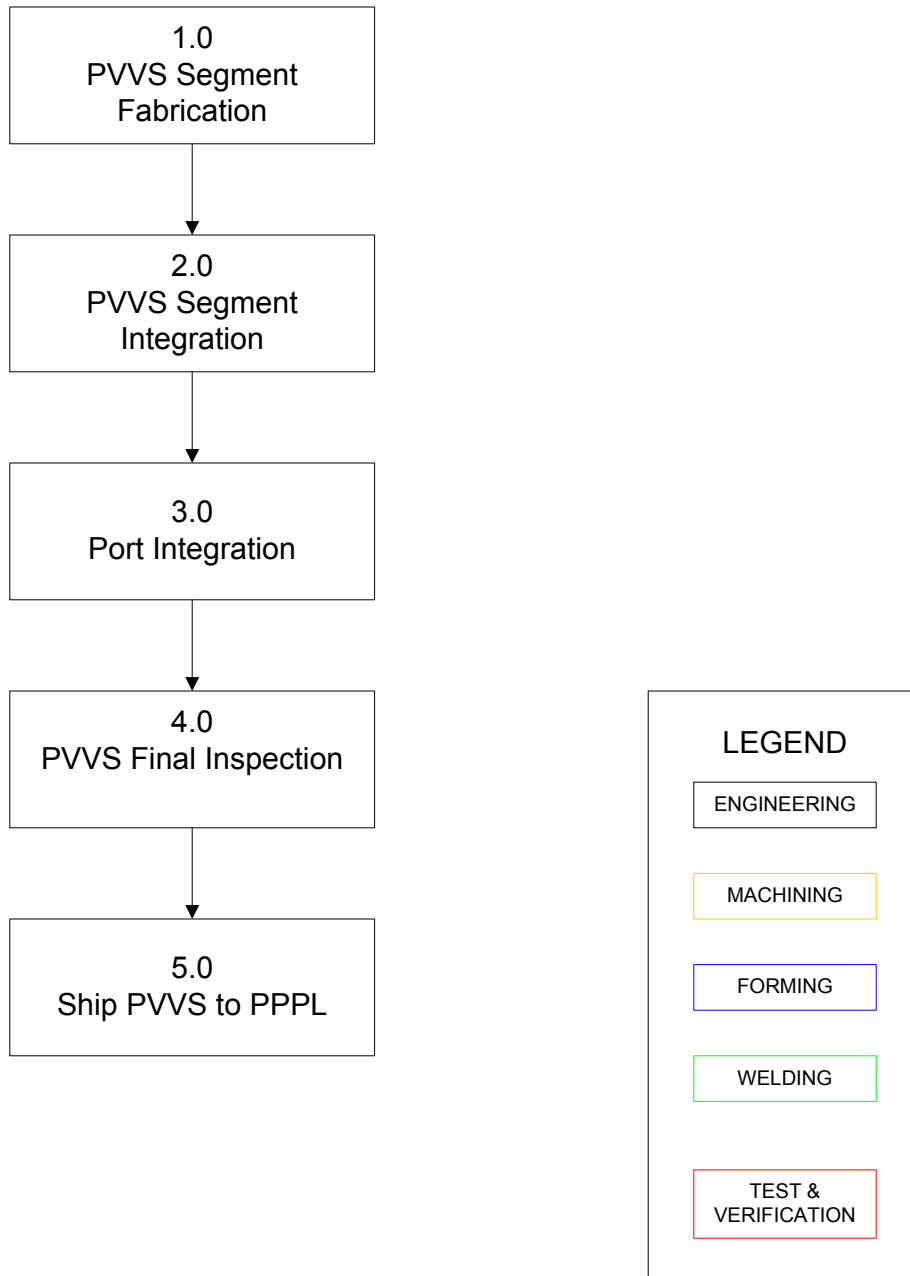


**Jeffrey Budd
Mechanical Engineer**

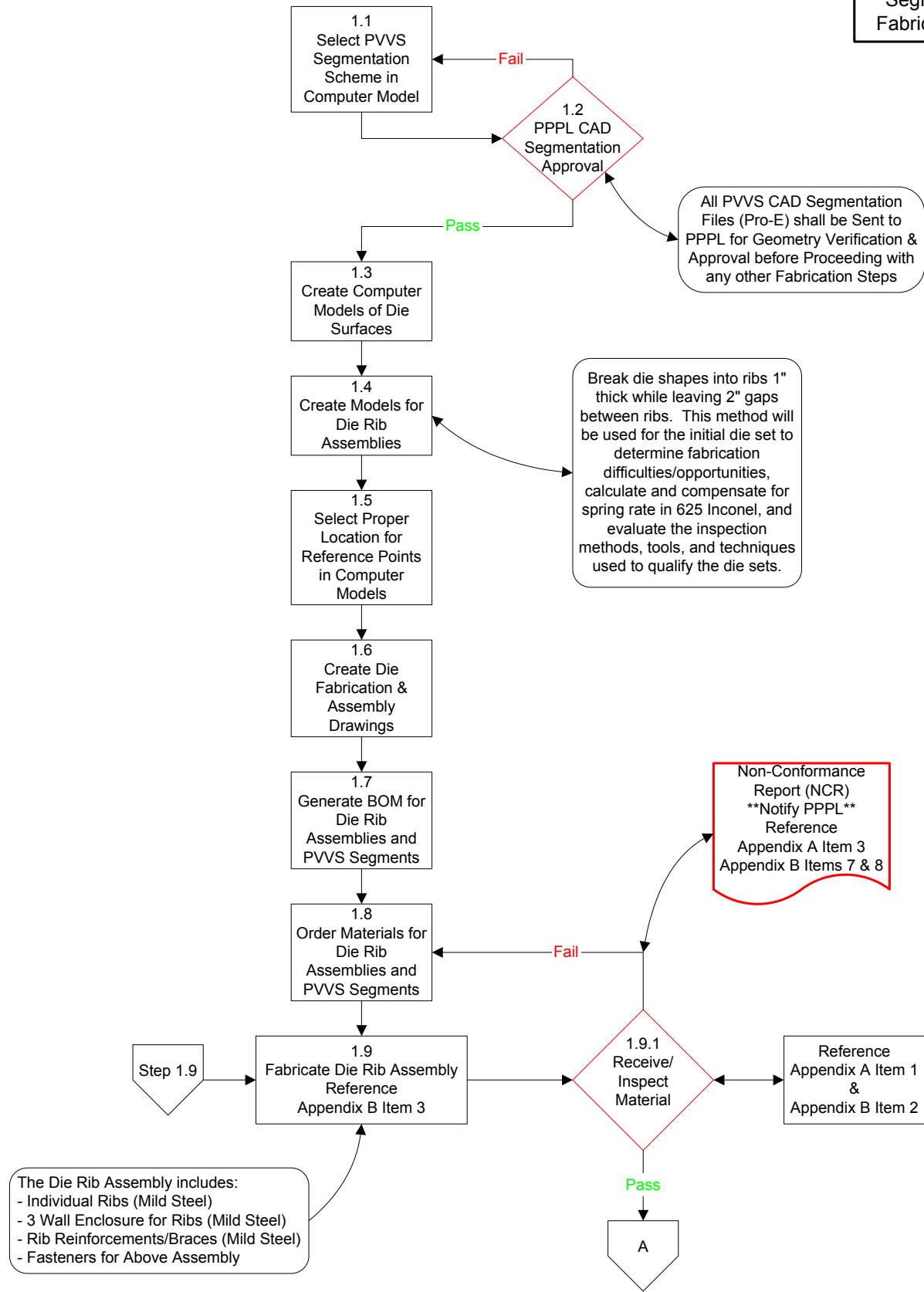


**Robert Williams
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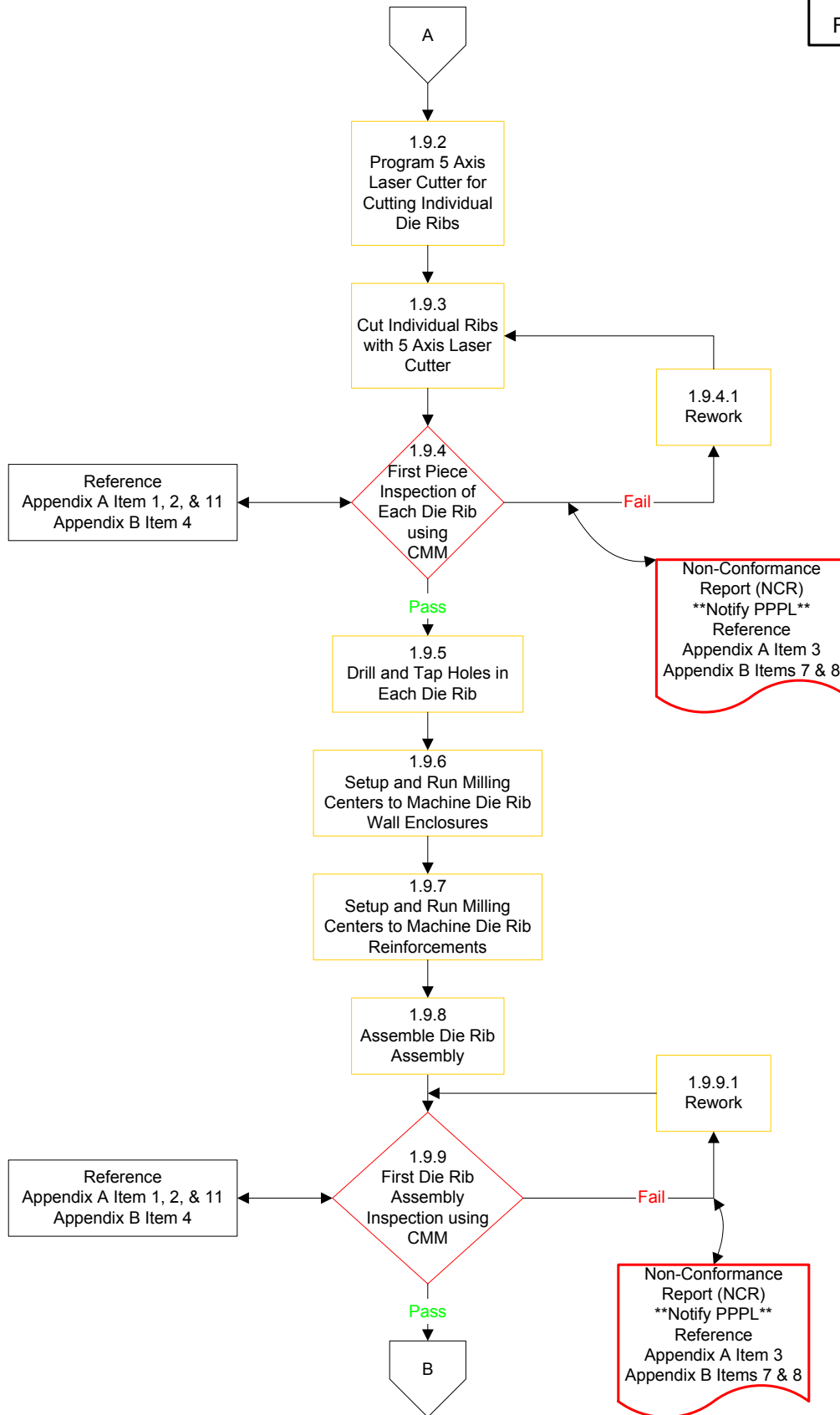
3.2.1 MIT and QA Plans for the PVVS



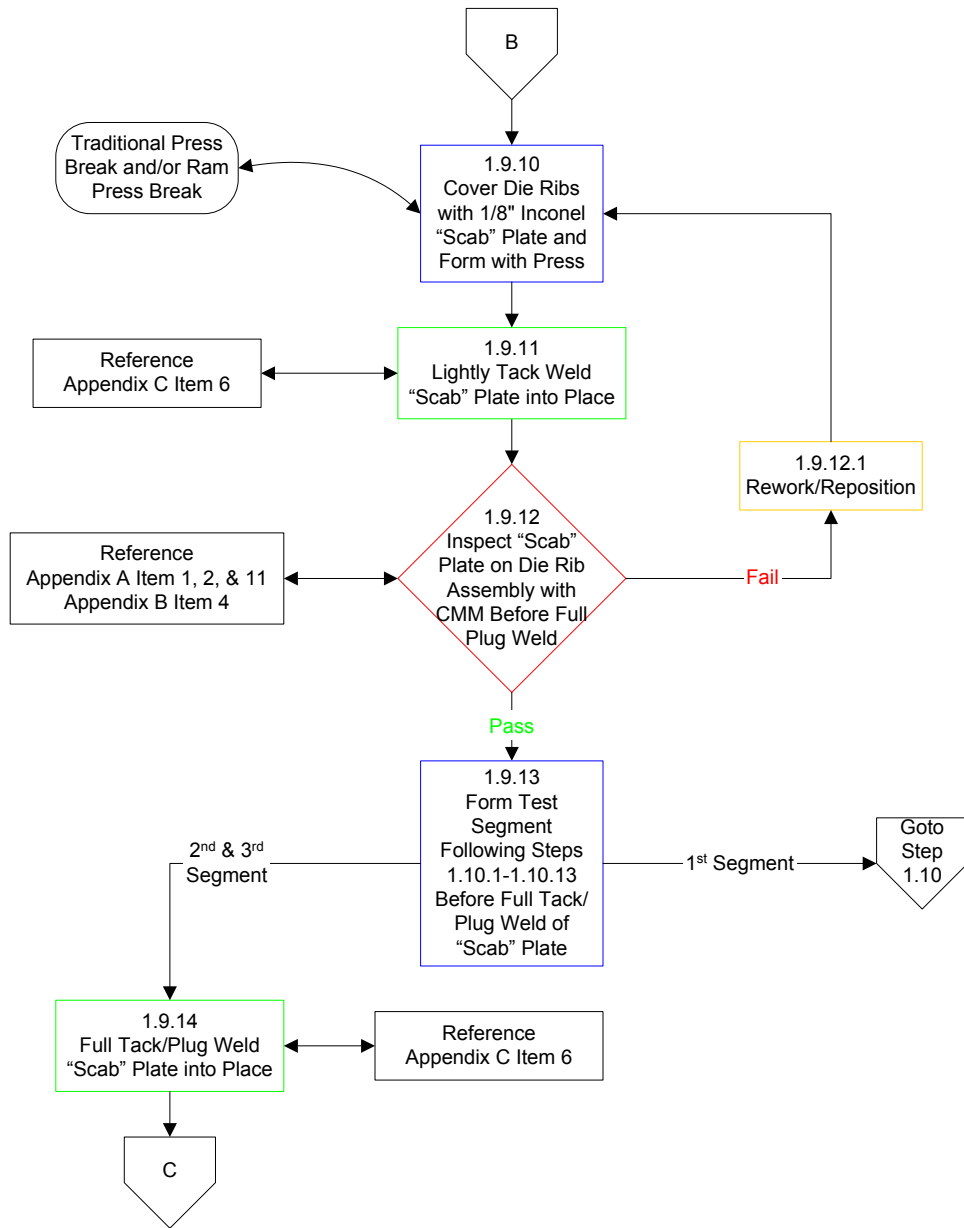
1.0
PVVS
Segment
Fabrication



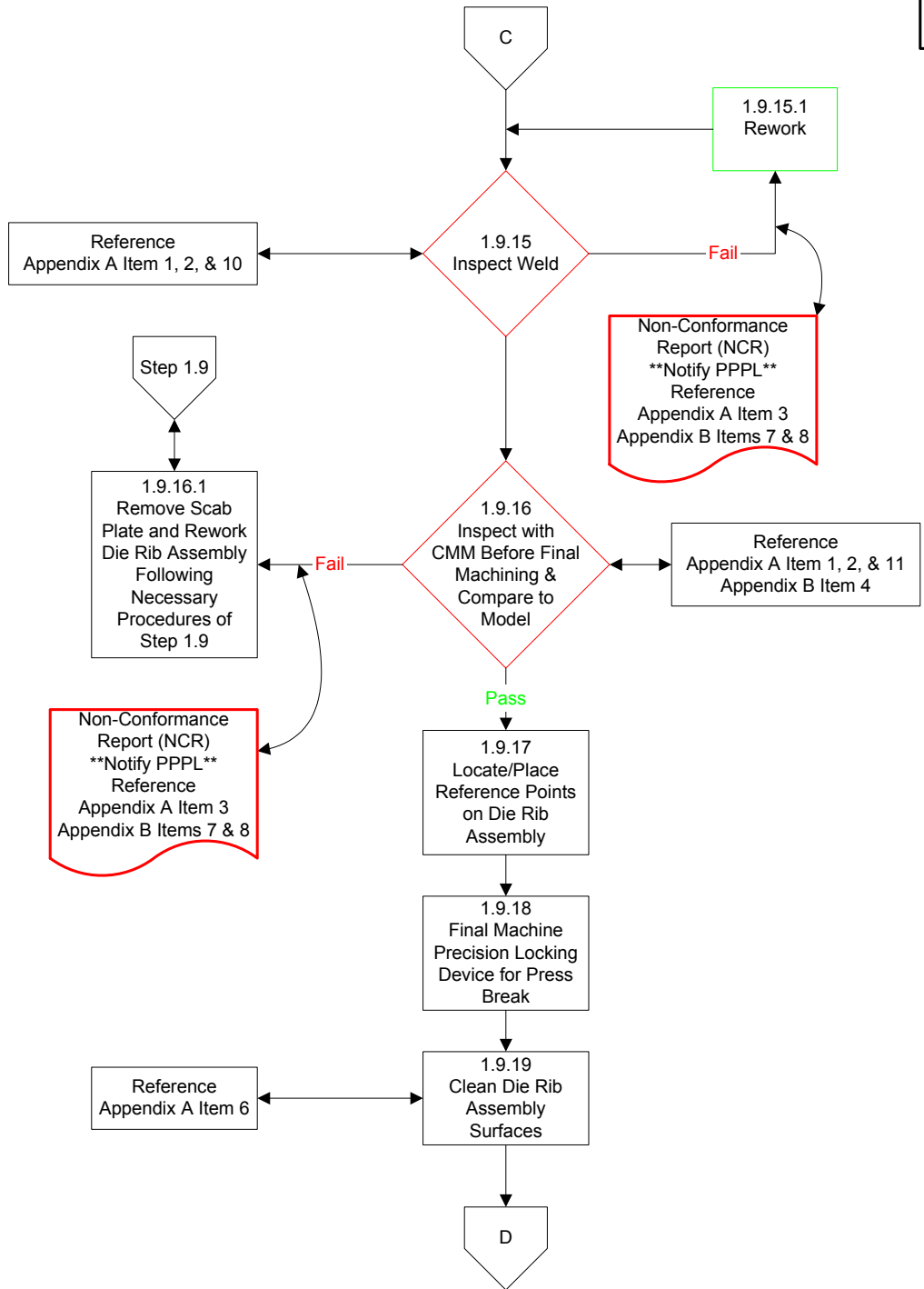
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PVVS
Segment
Fabrication



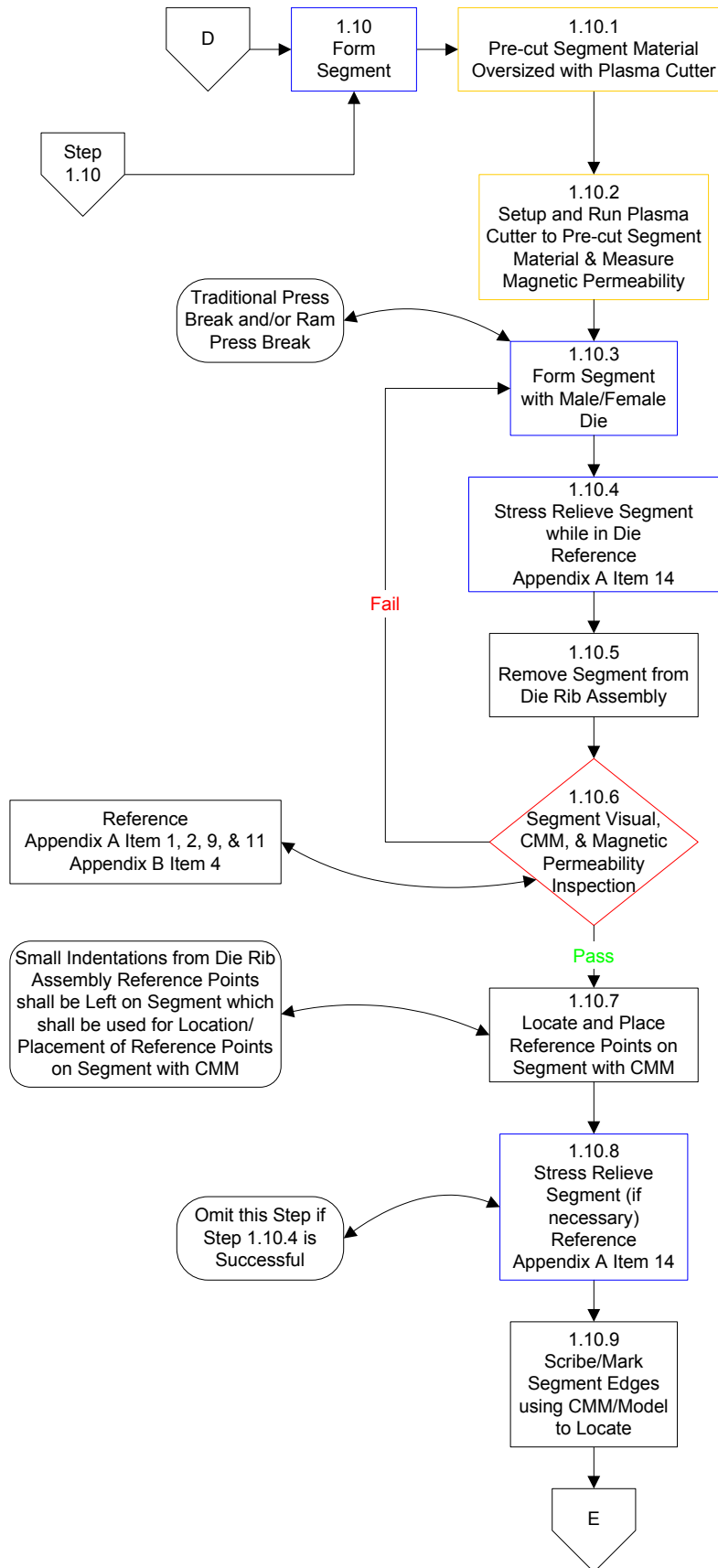
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PVVS
Segment
Fabrication



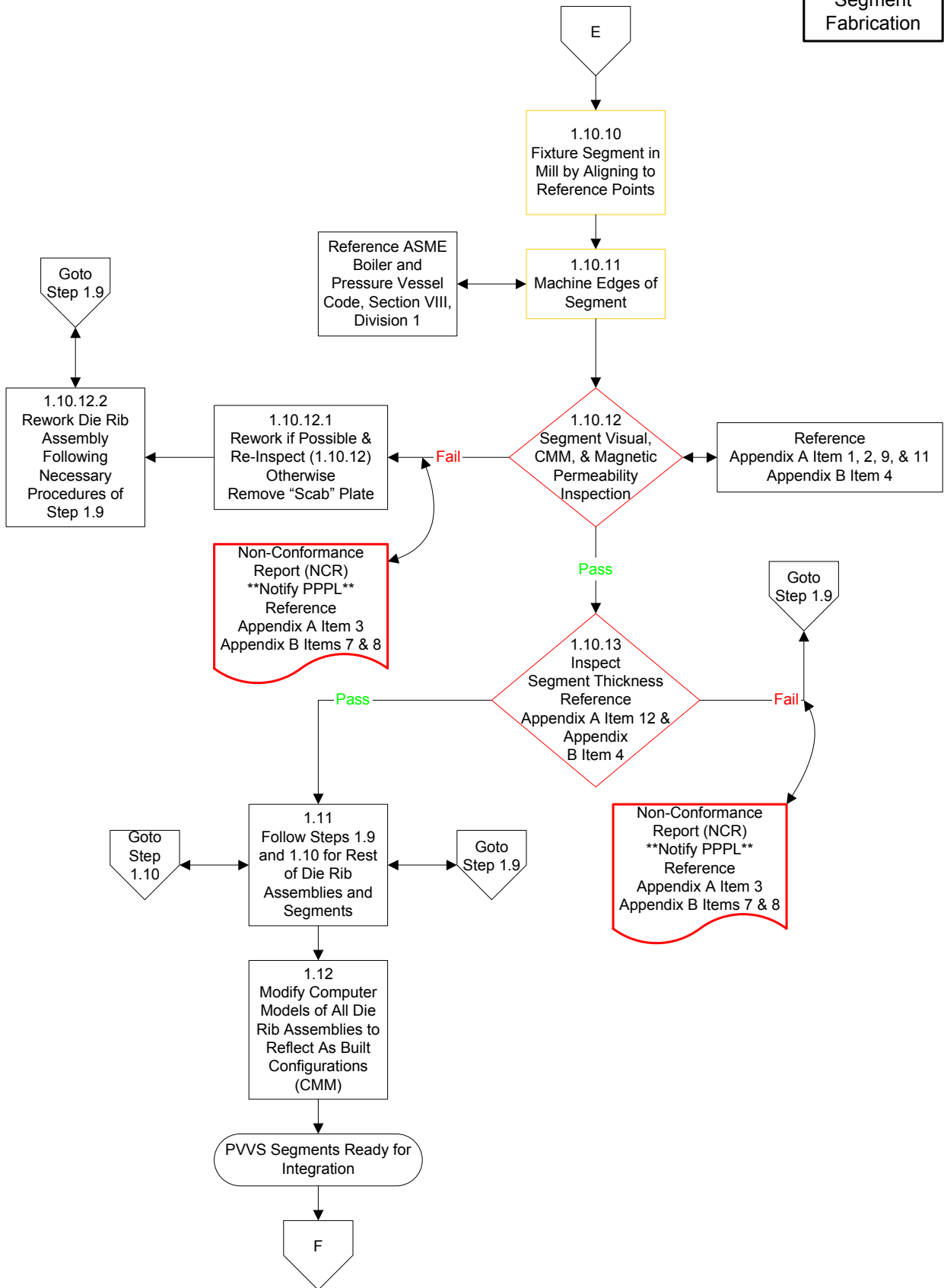
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Segment
Fabrication



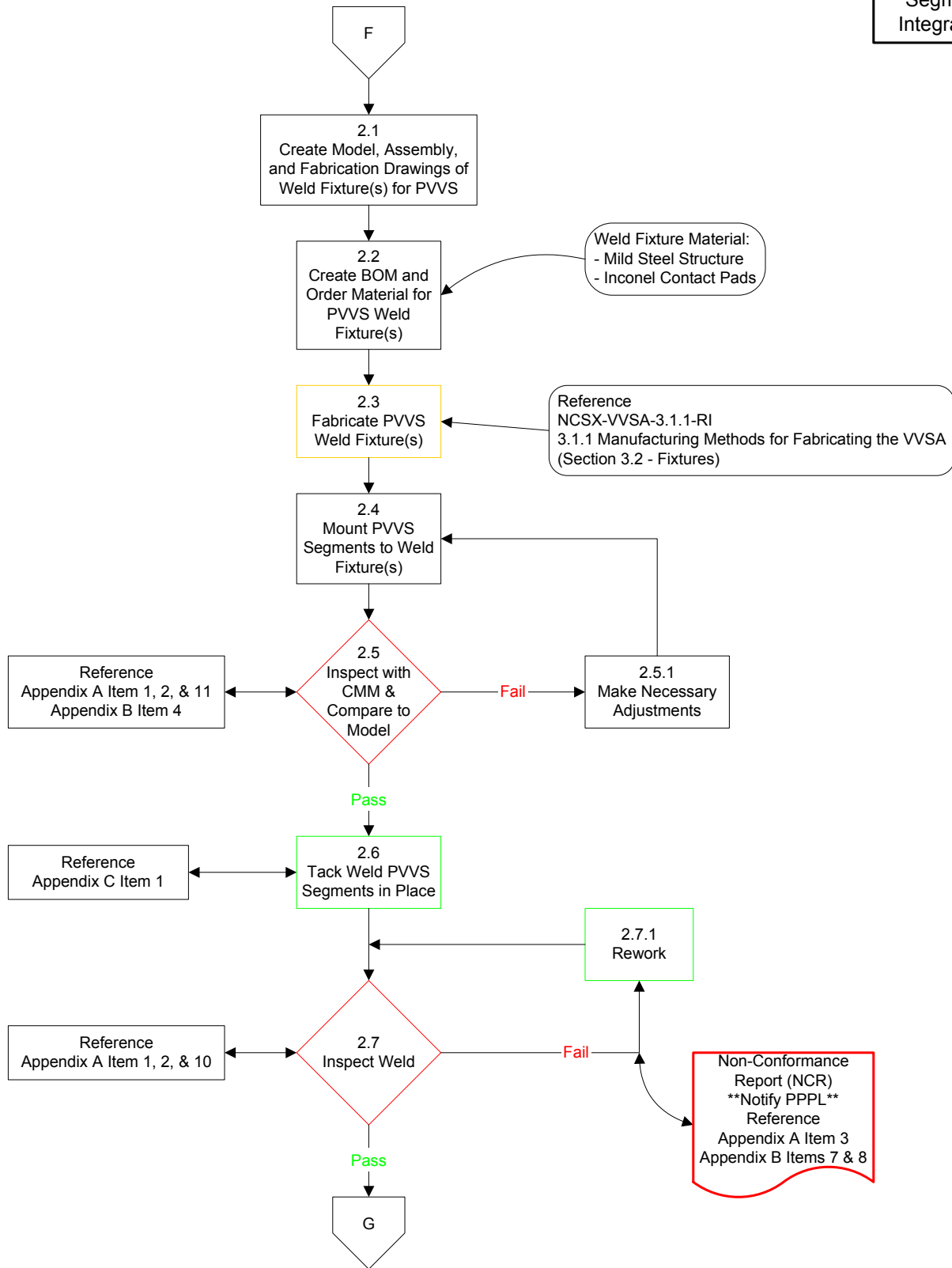
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Segment
Fabrication



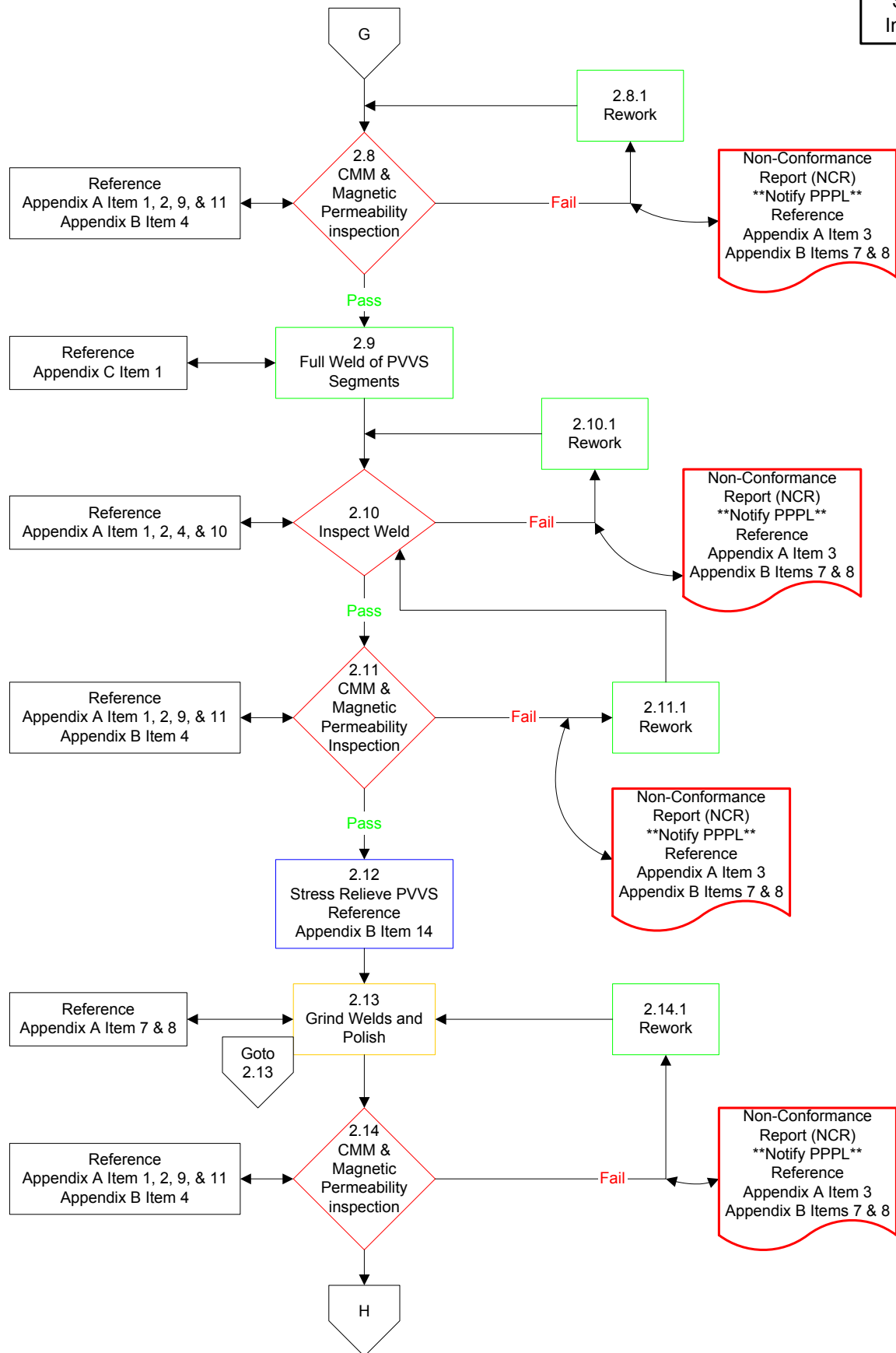
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Segment
Fabrication



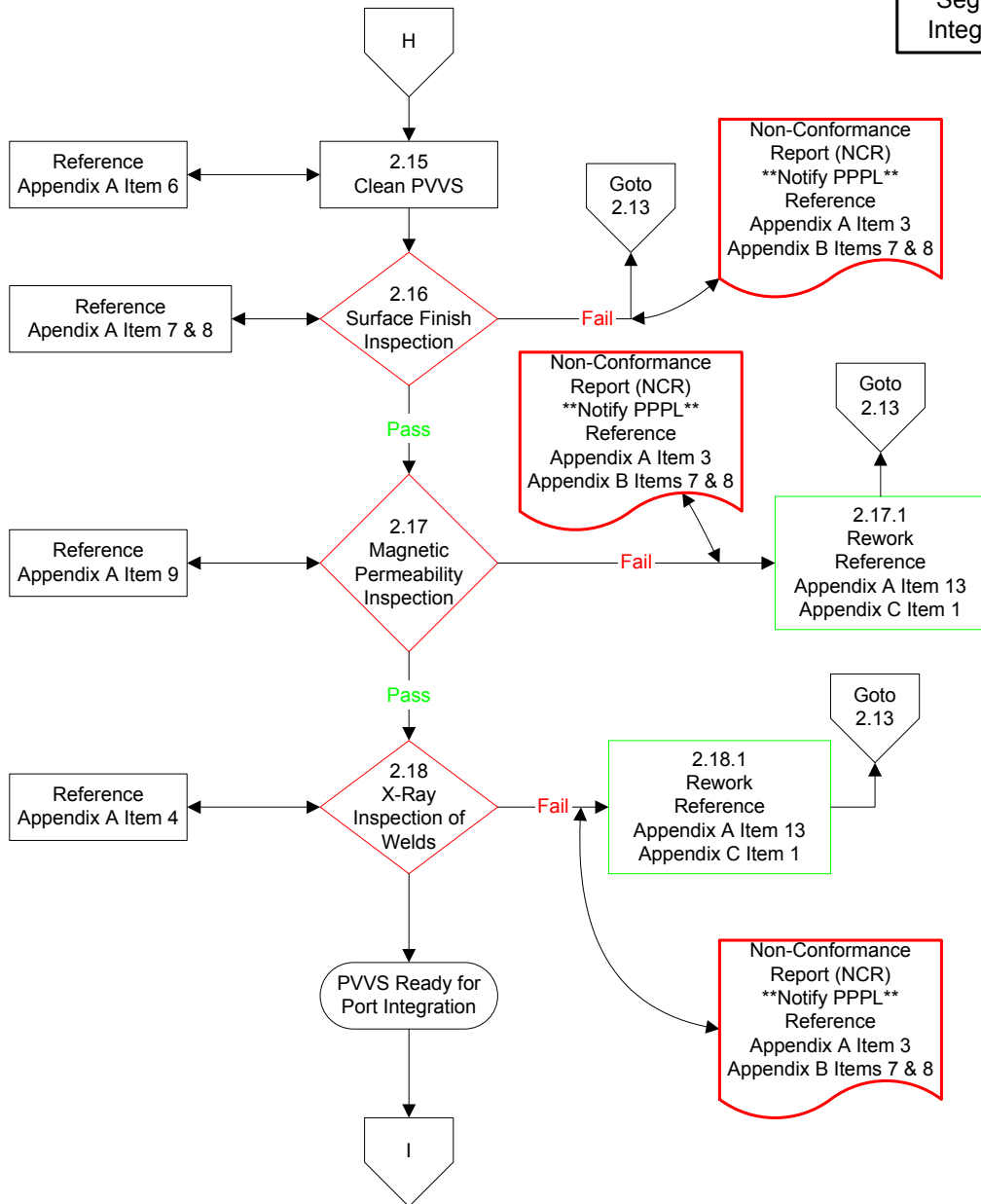
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PVVS
Segment
Integration



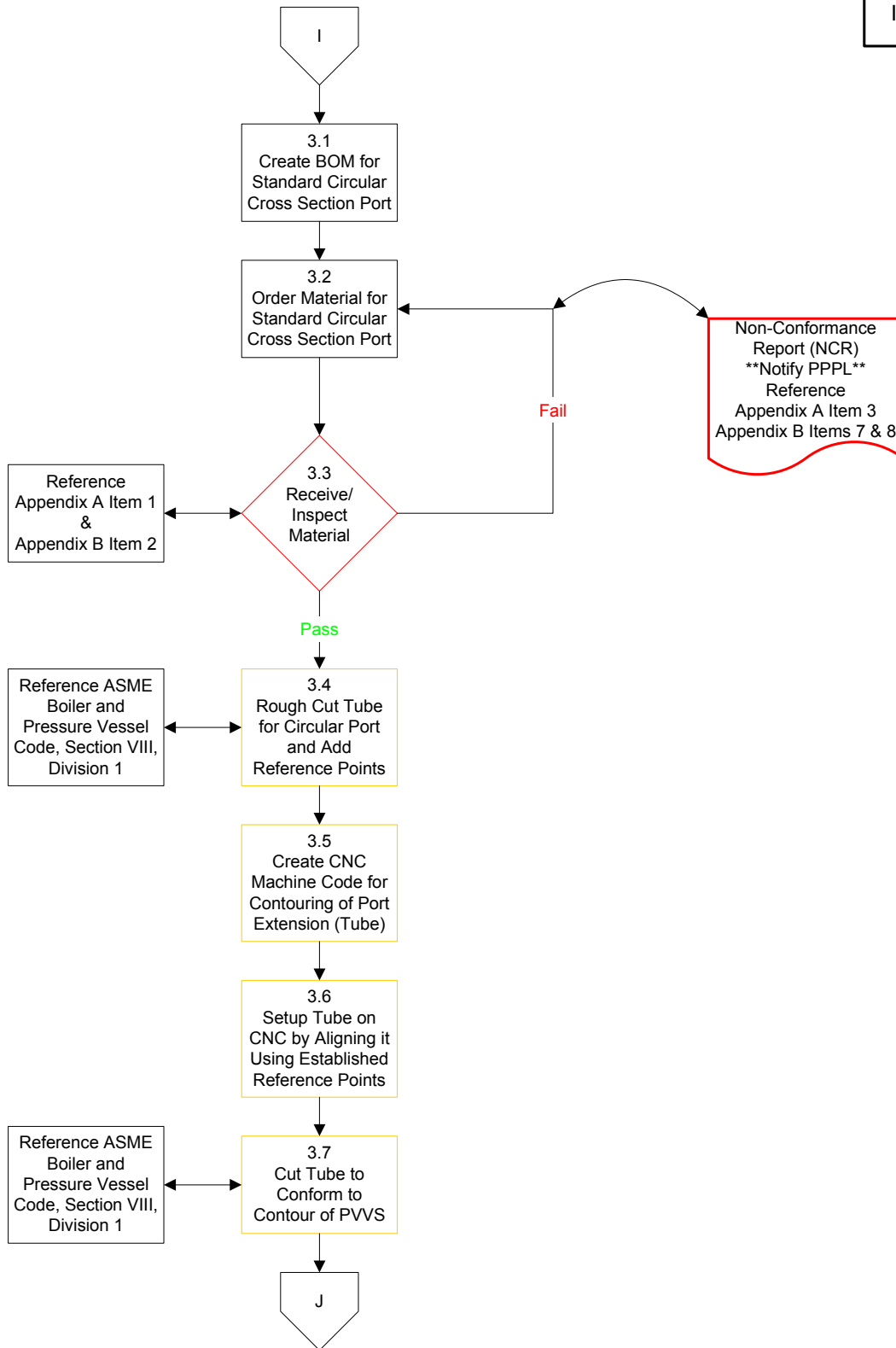
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PVVS
Segment
Integration



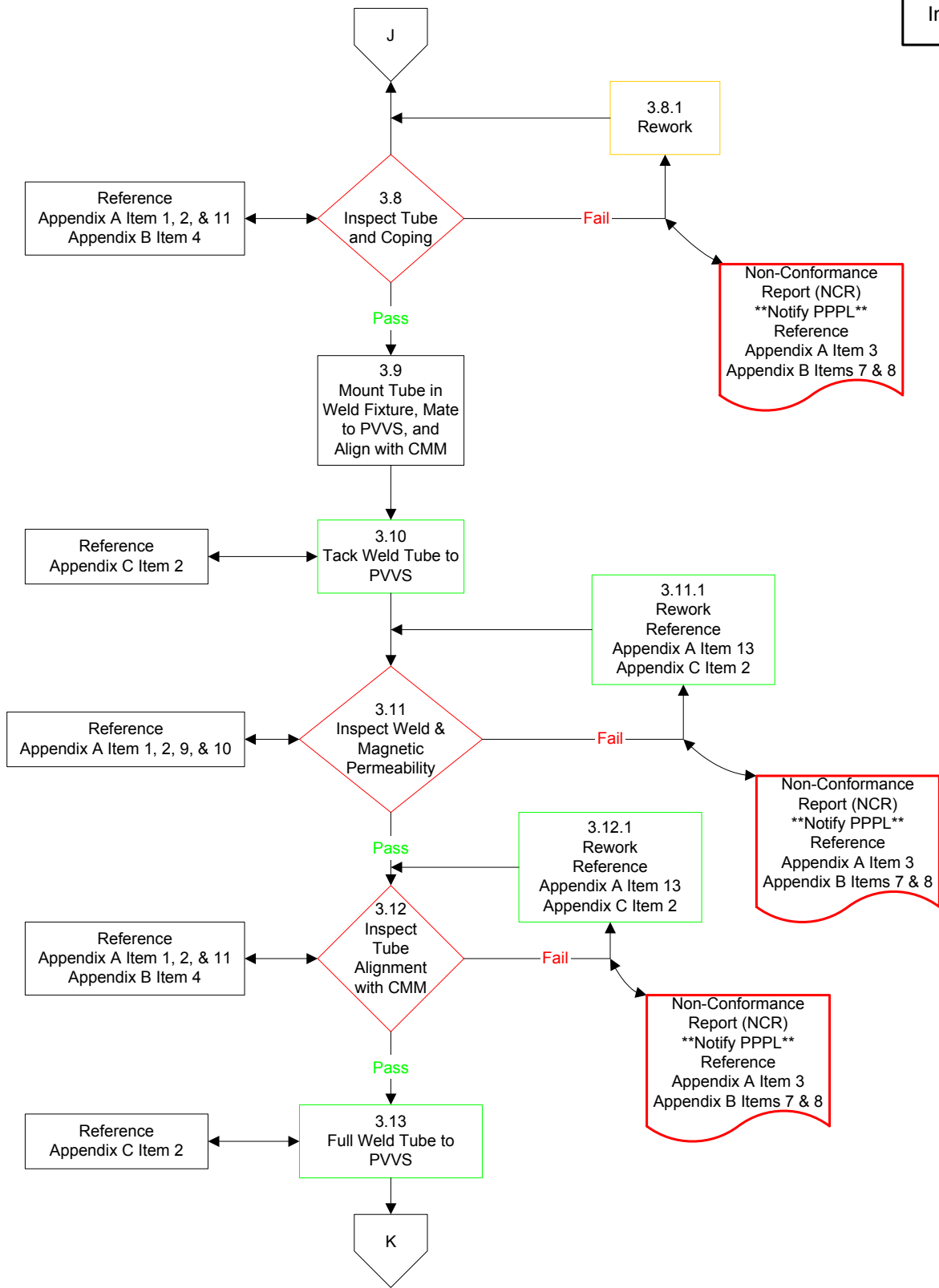
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PVVS
Segment
Integration



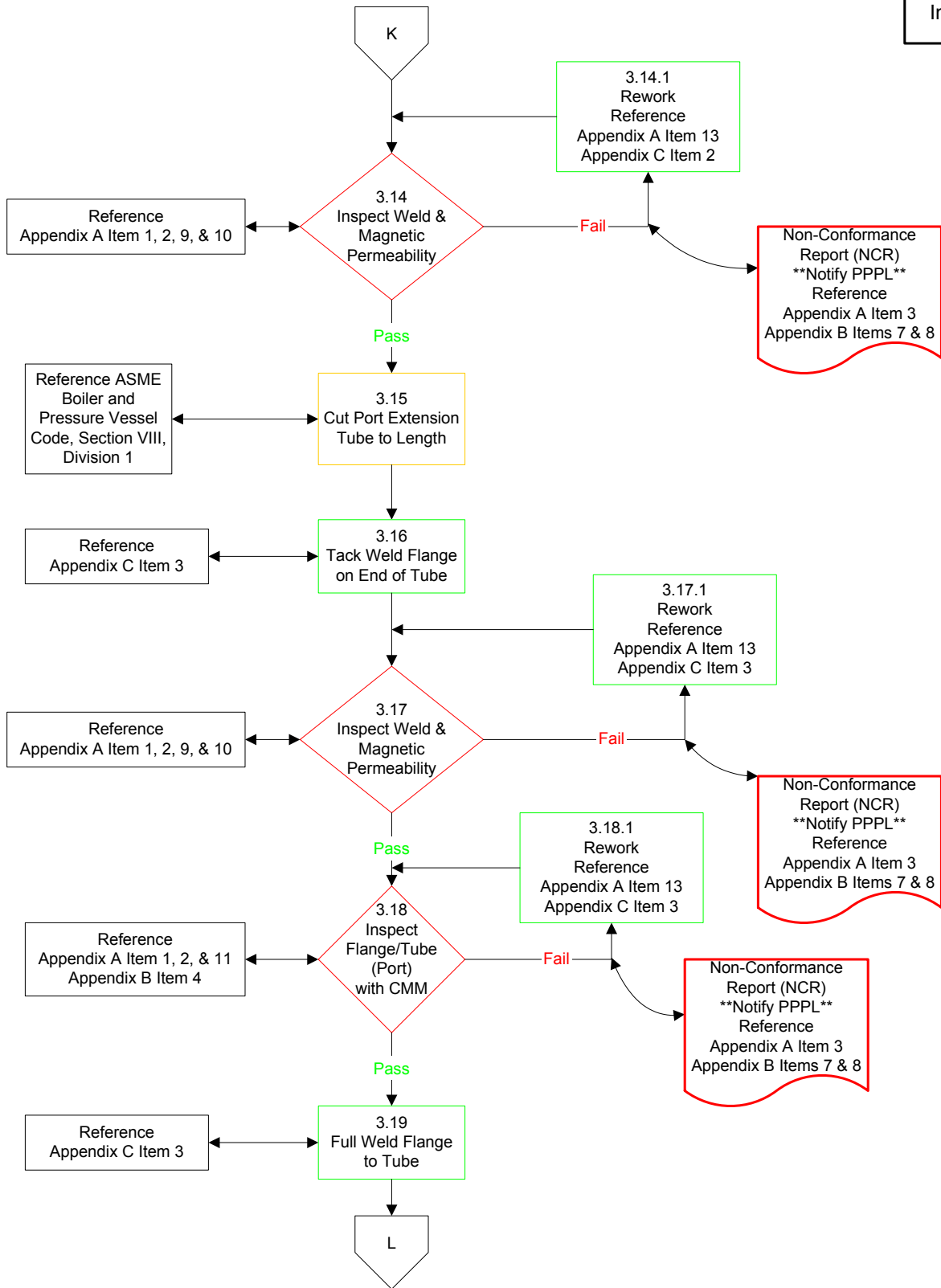
3.0
Port
Integration



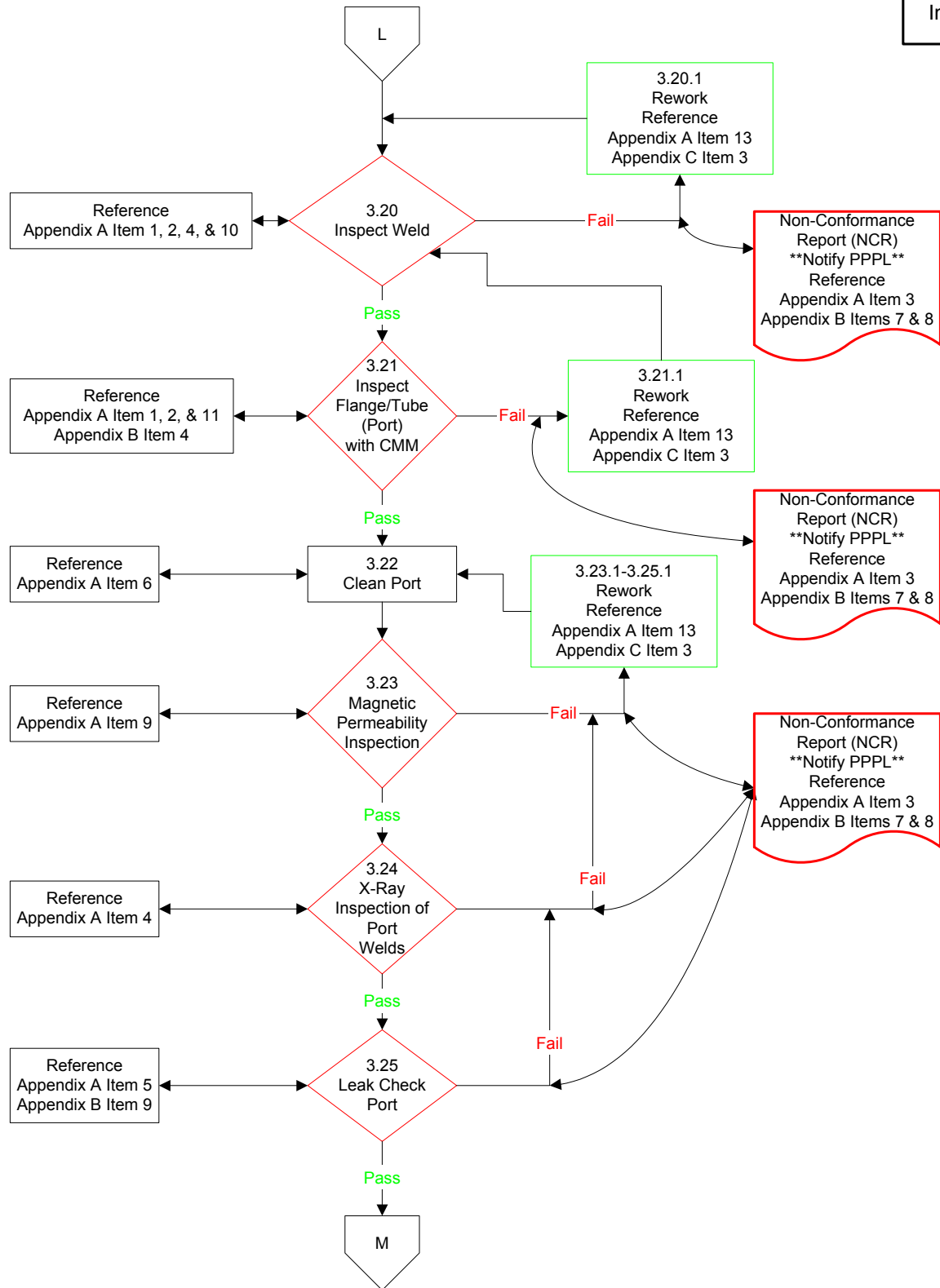
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Port
Integration



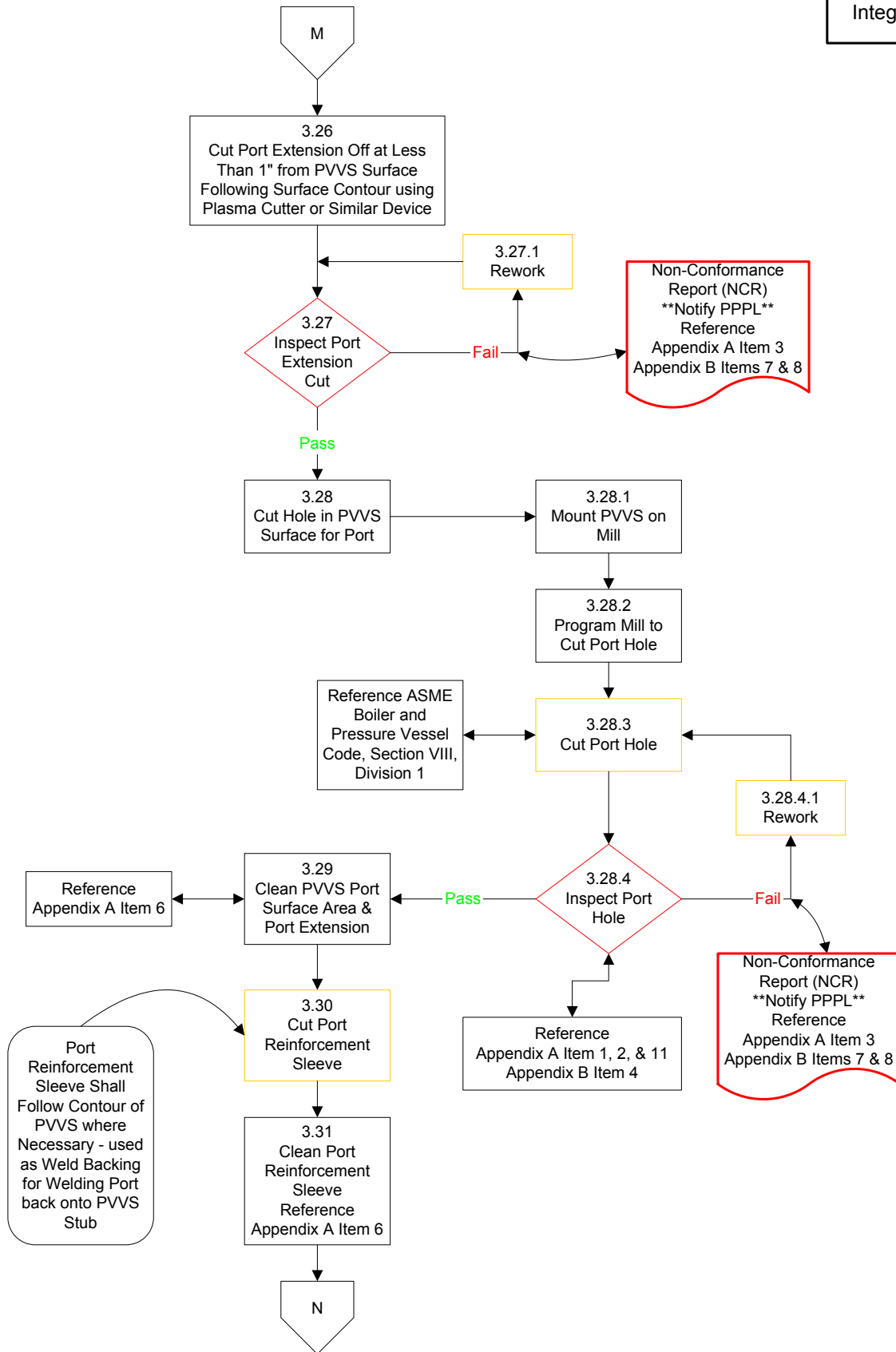
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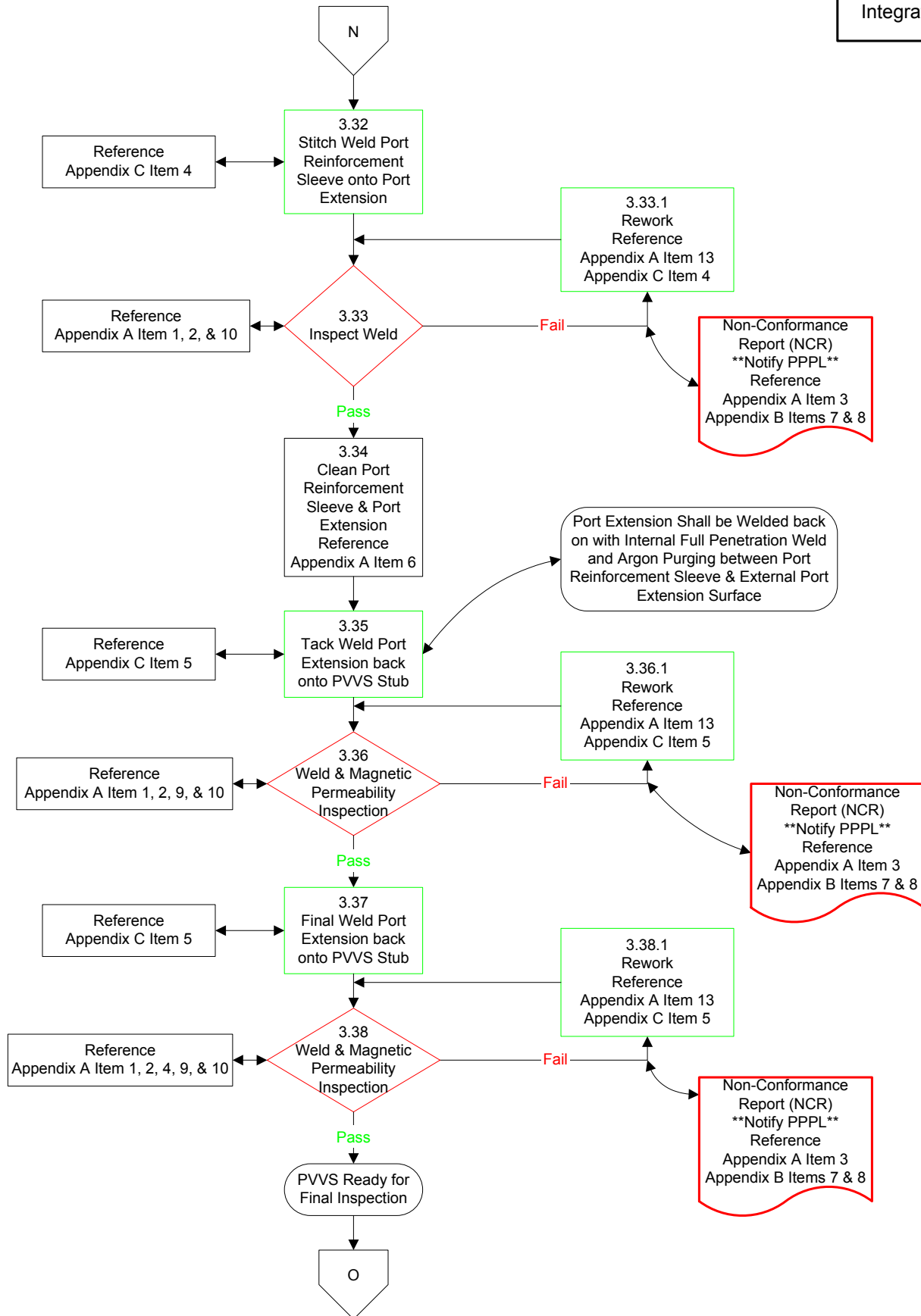
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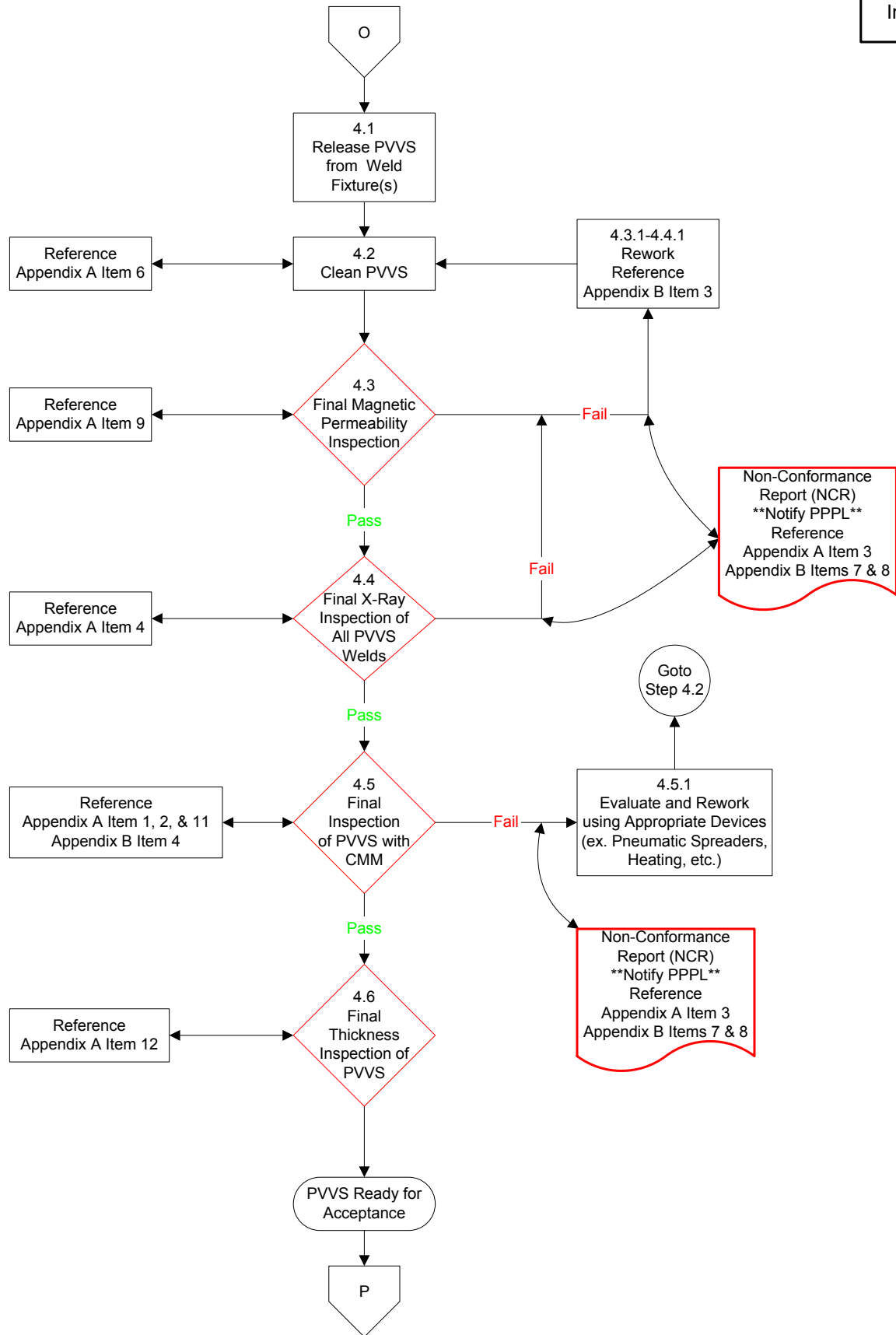
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Port
Integration



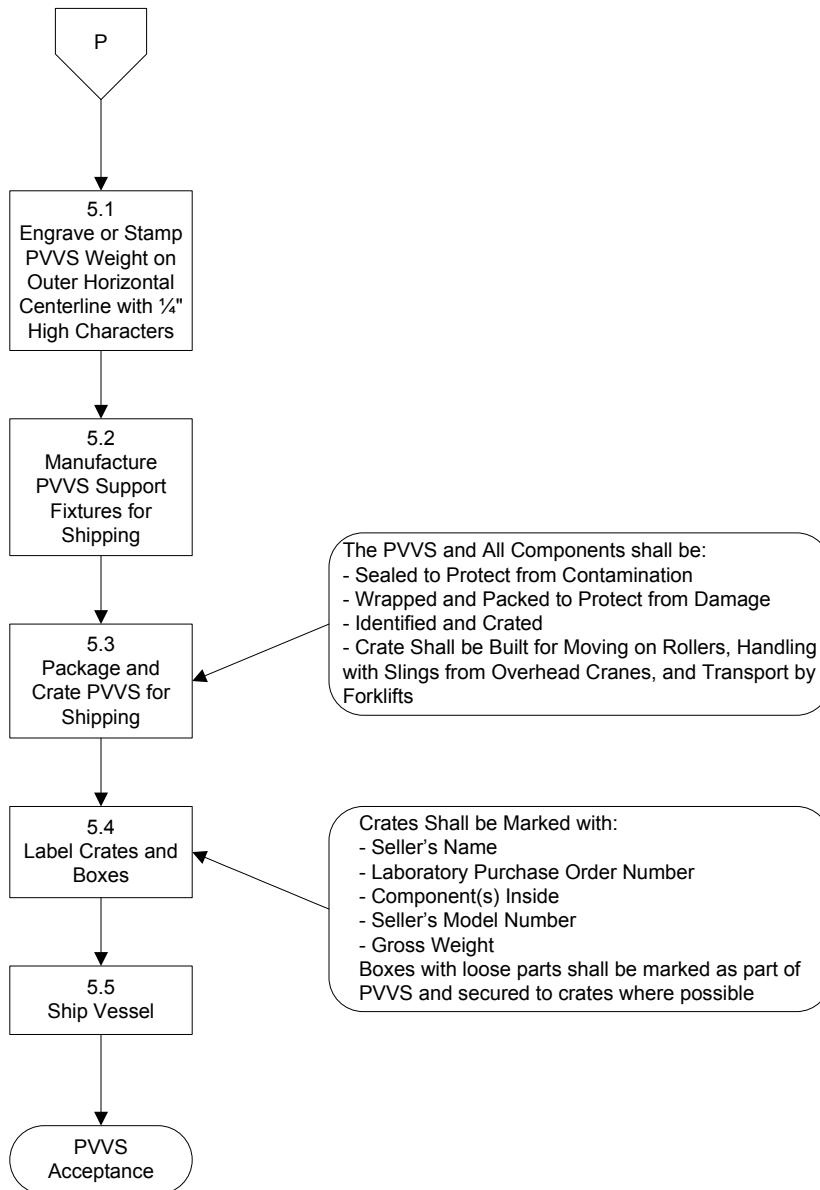
3.0
Port
Integration



4.0
PVVS Final
Inspection



5.0
Ship PVVS to
PPPL



Note:
 Several Steps from 3.1.3 Preliminary MIT and QA Plans for the VVSA were Not Applicable in this Document (3.2.1 MIT and QA Plans for the PVVS) and were Intentionally Omitted.

Appendix A: Procedures

- 1) 03-8083-P01 - Inspection & Test and Inspection & Test Status Procedure
- 2) 03-8083-P02 - Procedure for Control of Inspection, Measuring, and Test Equipment
- 3) 03-8083-P03 - Nonconformance & Corrective Action Procedure
- 4) 03-8083-P04 - Radiographic Examination Procedure
- 5) 03-8083-P05 - Helium Leak Detection Procedure
- 6) 03-8083-P06 - Cleaning Procedure
- 7) 03-8083-P07 - Interior Surface Finish Procedure
- 8) 03-8083-P08 - External Surface Finish Procedure
- 9) 03-8083-P09 - Magnetic Permeability Procedure
- 10) 03-8083-P10 - Weld Inspection Procedure
- 11) 03-8083-P11 - CMM Dimension & Tolerance Verification
- 12) 03-8083-P12 - Thickness Inspection Procedure
- 13) 03-8083-P13 - Weld Repair Procedure
- 14) 03-8083-P14 - Stress Relief Procedure

Appendix B: Forms

- 1) F025 - Document Control Log (Drawing Transmittal)
- 2) F029 - Incoming Inspection Report
- 3) F031 - Route Cards
- 4) F034 - Dimensional Inspection Report
- 5) F039 - Calibration Record
- 6) F040 - Calibration Identifier Form
- 7) F043 - Nonconformance Report
- 8) F044 - Nonconformance Record
- 9) F056 - Helium Leak Test Report
- 10) F099 - General Test Report

Appendix C: Weld Procedure Specification & PQR List

- 1) 03-8083-WPS01 - PVVS Segment Tack & Final Weld
- 2) 03-8083-WPS02 - Port Extension Tube to Segment Tack & Final Weld
- 3) 03-8083-WPS03 - Flange to Tube Tack & Final Weld
- 4) 03-8083-WPS04 - Reinforcement Sleeve Stitch Weld
- 5) 03-8083-WPS05 - Port Tube to PVVS Stub Tack & Final Weld
- 6) 03-8083-WPS06 - Scab Plate Tack & Final Weld