

**DRAFT 12/22/03**

**National Compact Stellarator Experiment (NCSX)**

**PVVS Fabrication**

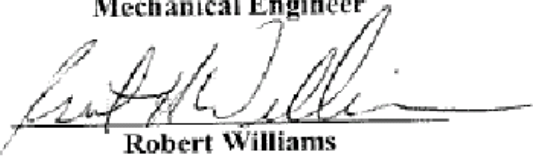
**3.2.1 MIT and QA Plans for the PVVS  
In Reference to Section 3.2.1 of NCSX-SOW-121-01-01**



**Jason Gass  
Mechanical Engineer**

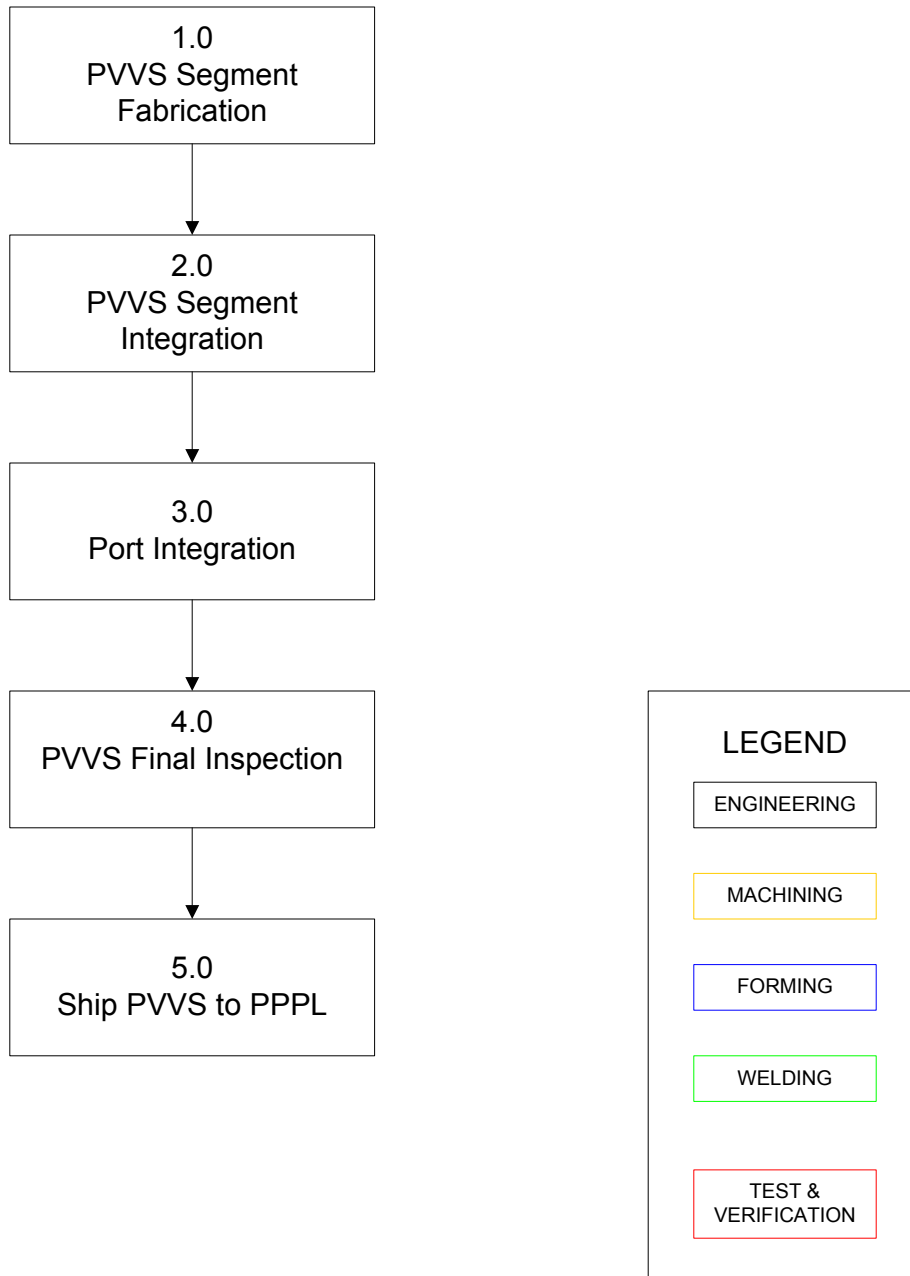


**Jeffrey Budd  
Mechanical Engineer**

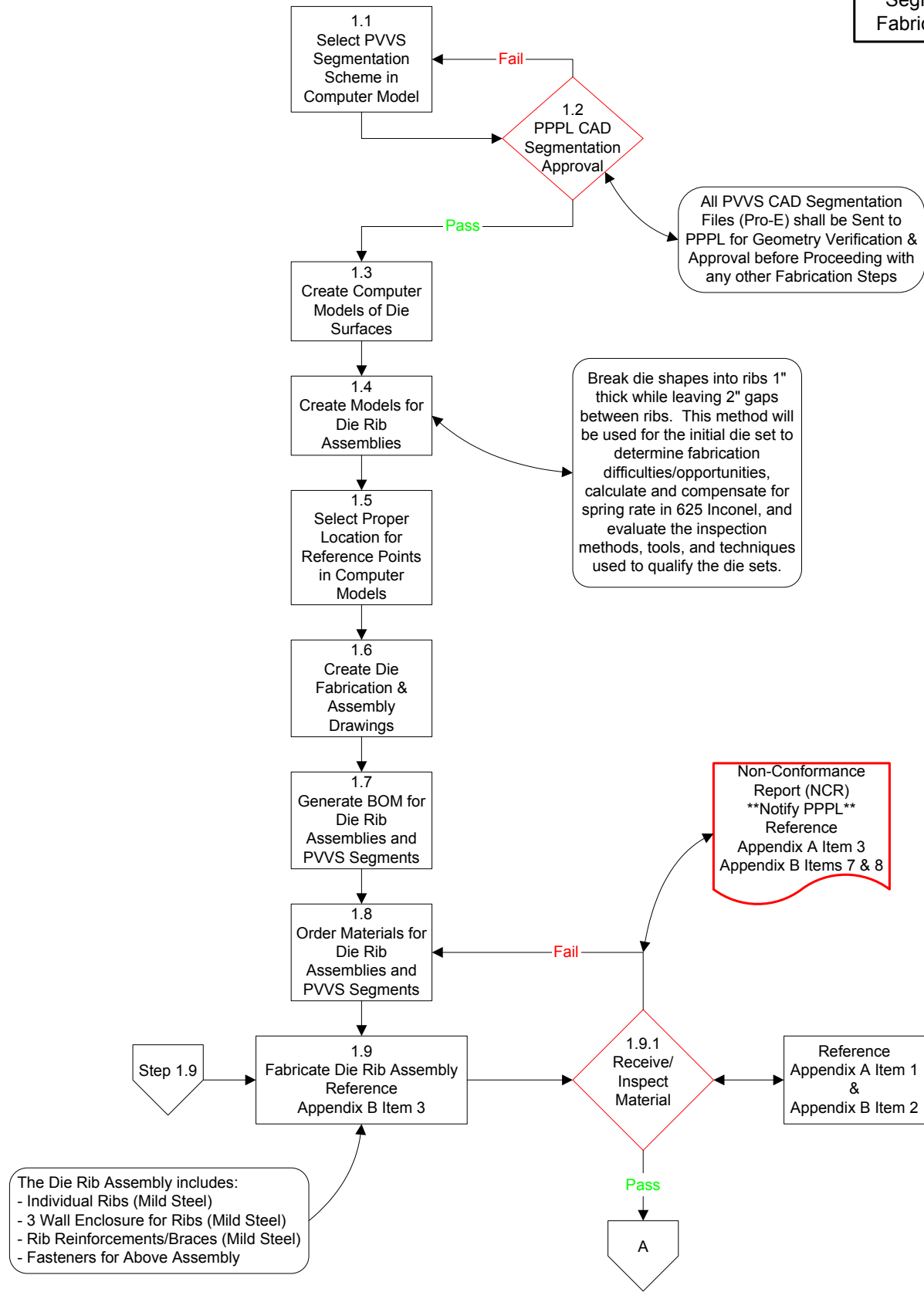


**Robert Williams  
Operations Manager  
Rohwedder, Inc.**

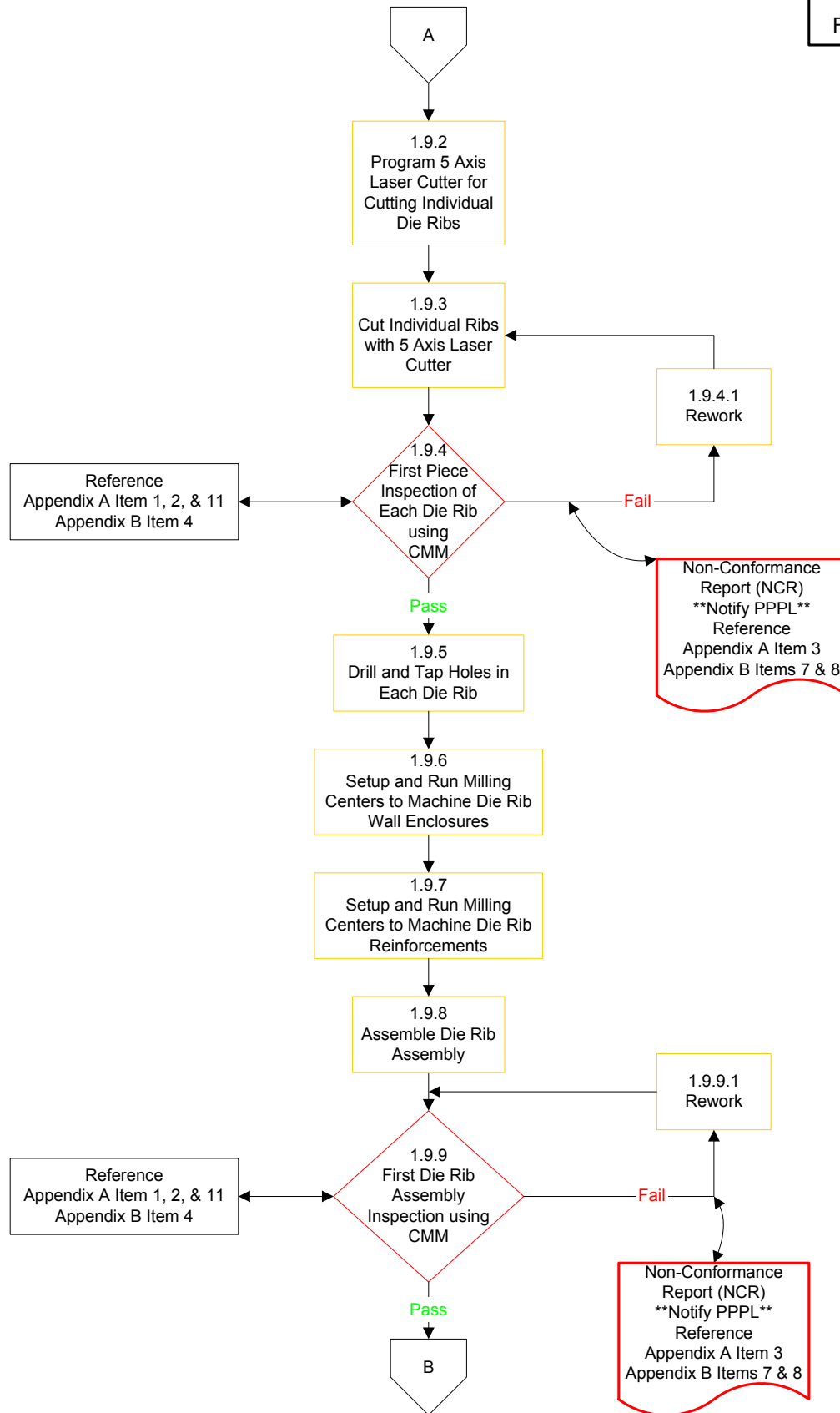
### 3.2.1 MIT and QA Plans for the PVVS



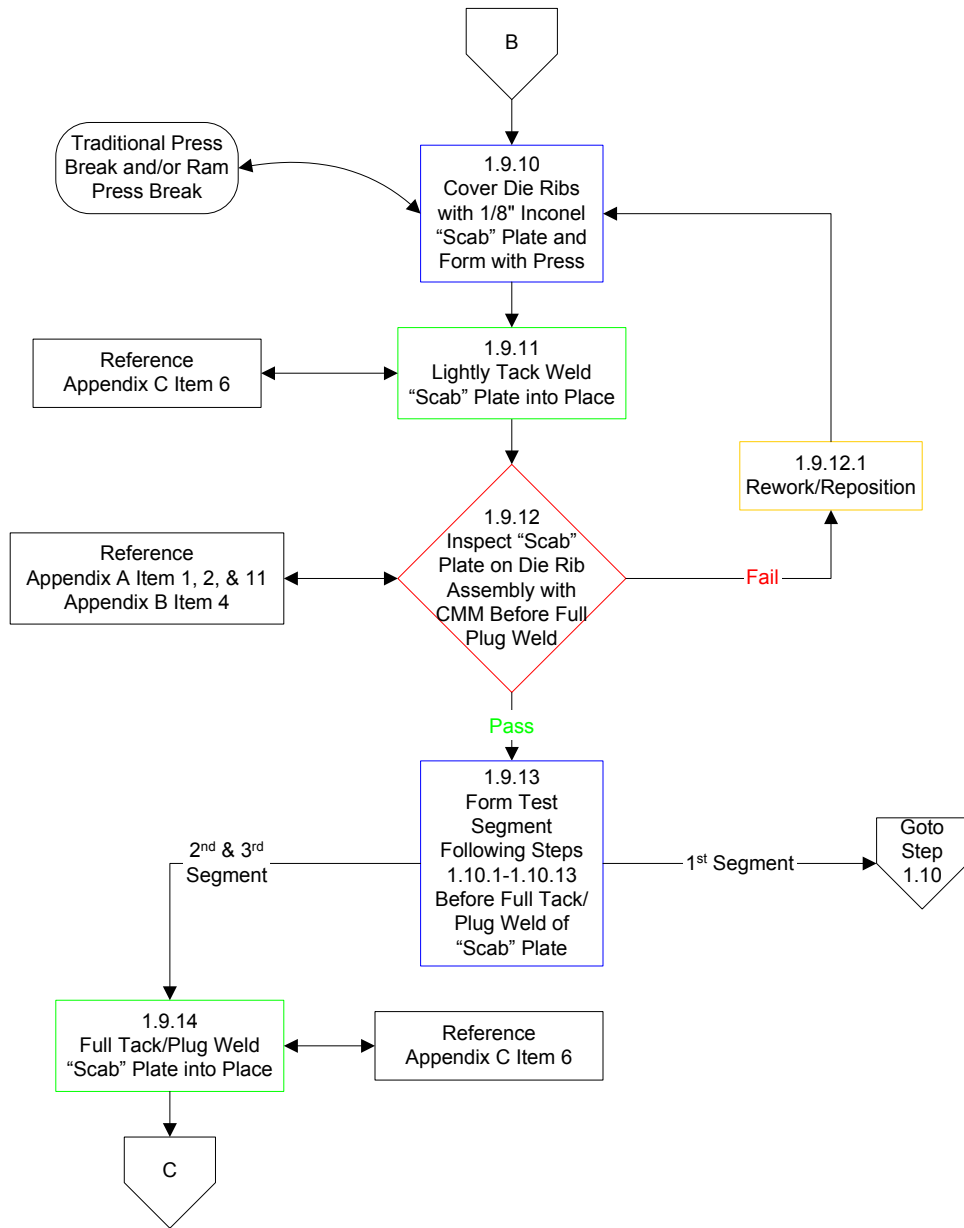
1.0  
PVVS  
Segment  
Fabrication



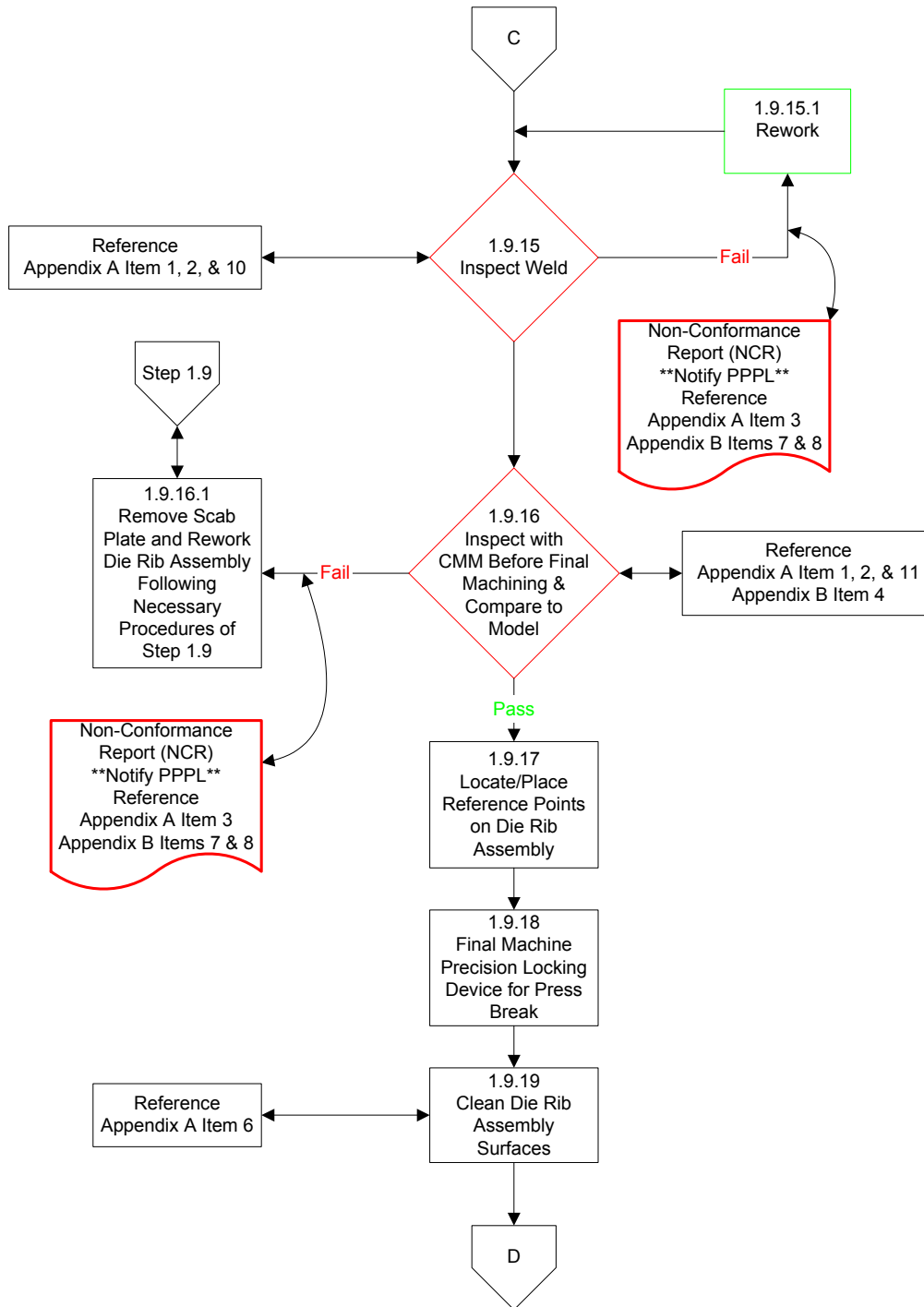
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Segment  
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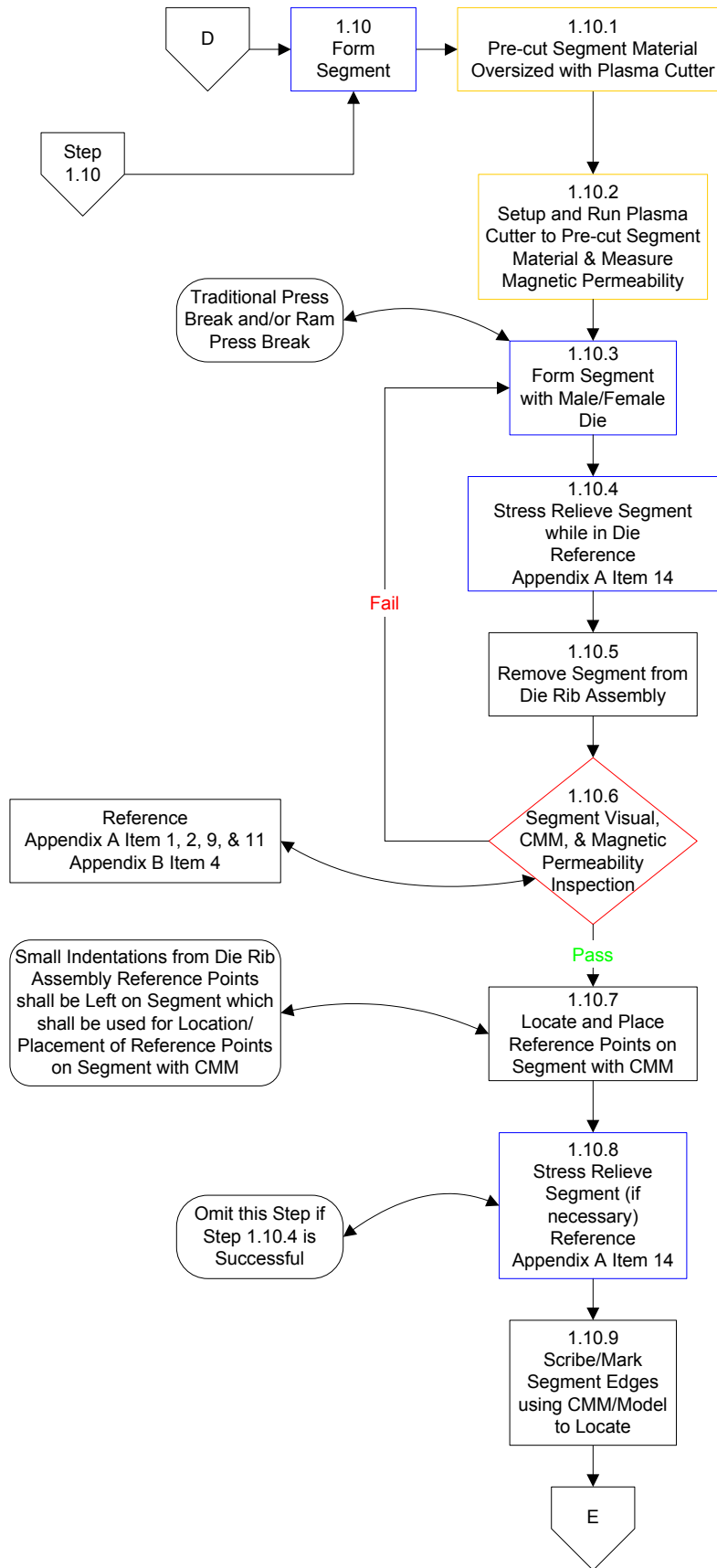
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PVVS  
Segment  
Fabrication



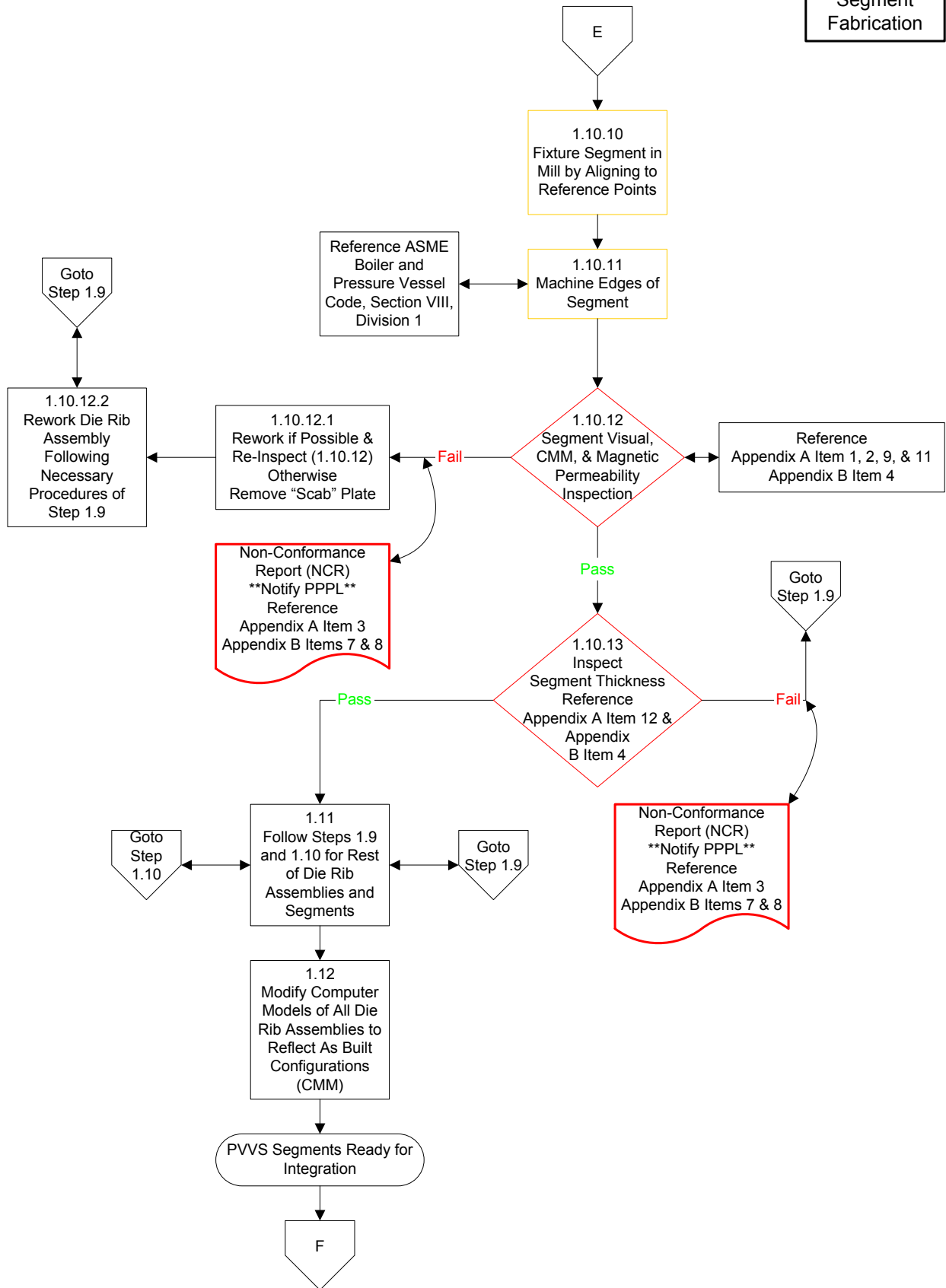
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PVVS  
Segment  
Fabrication



1.0  
PVVS  
Segment  
Fabrication

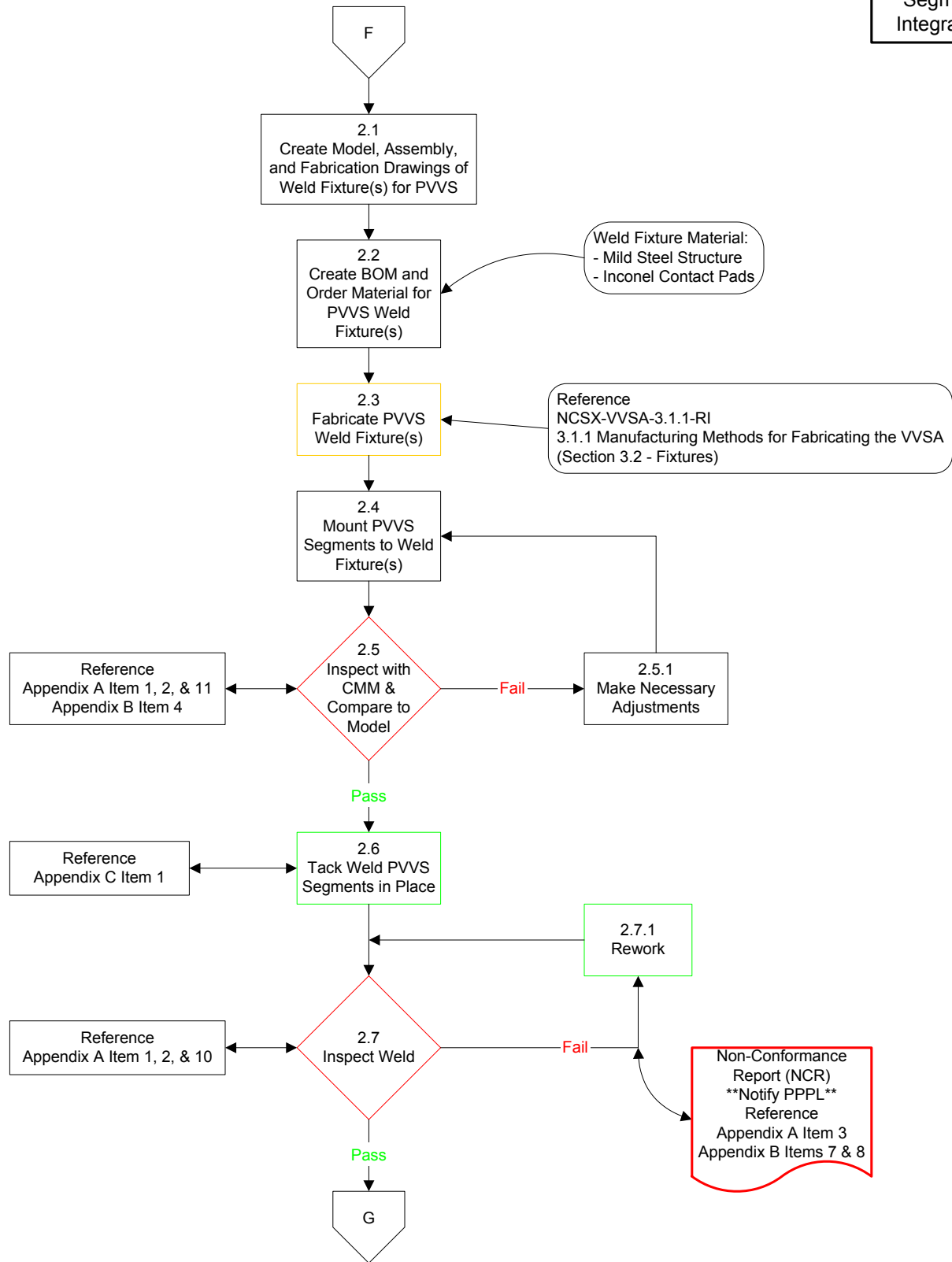


1.0  
PVVS  
Segment  
Fabrication

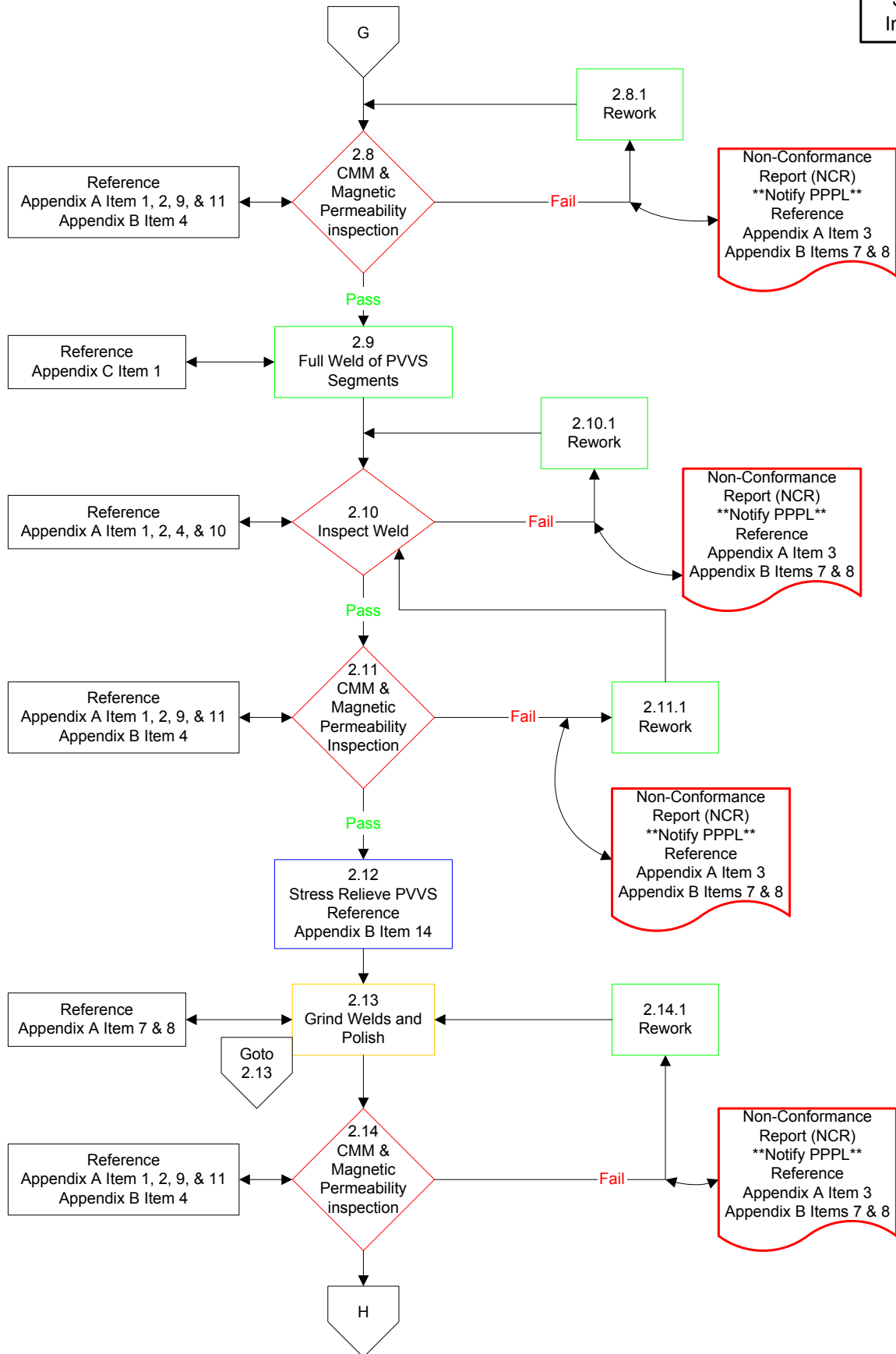




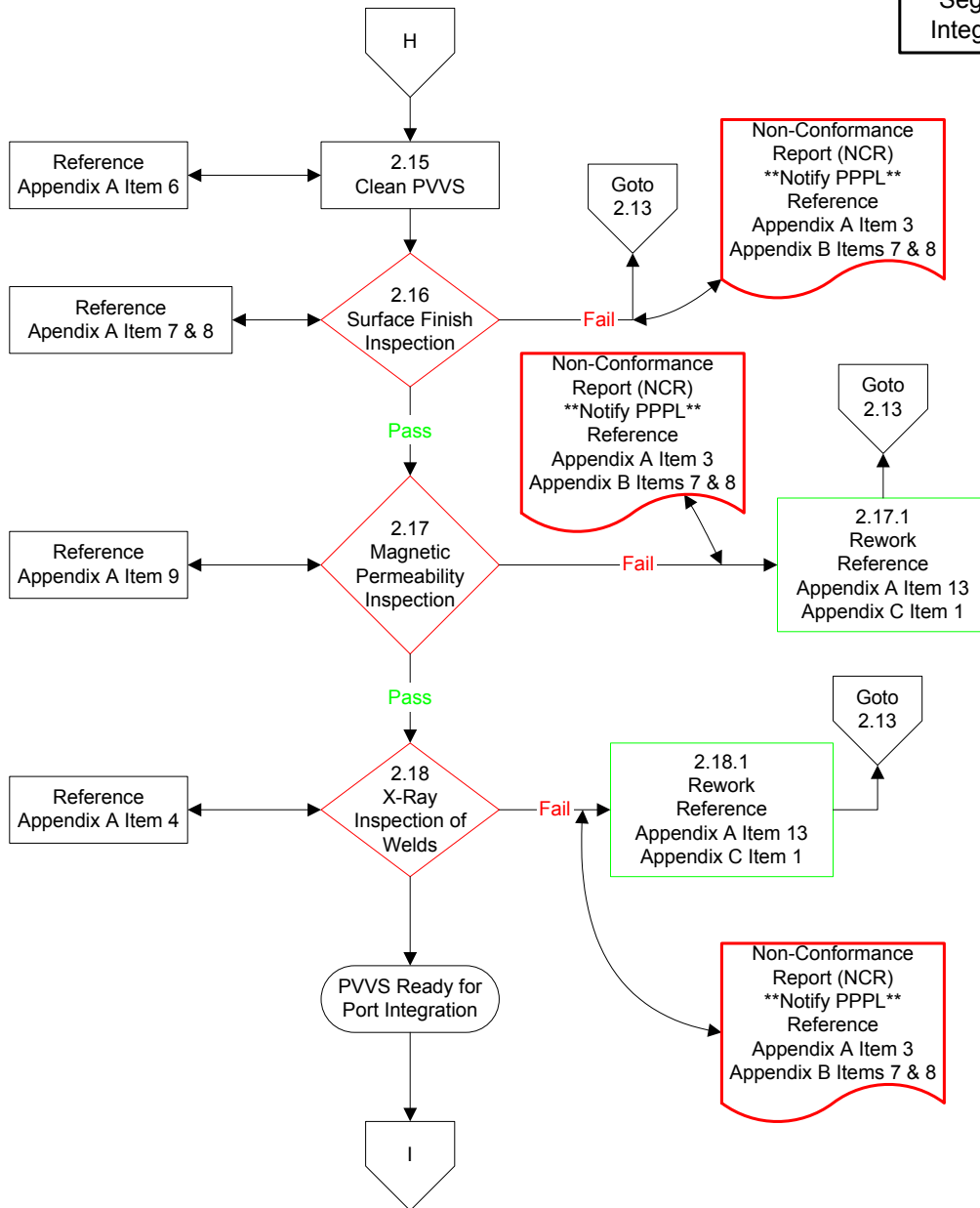
2.0  
PVVS  
Segment  
Integration



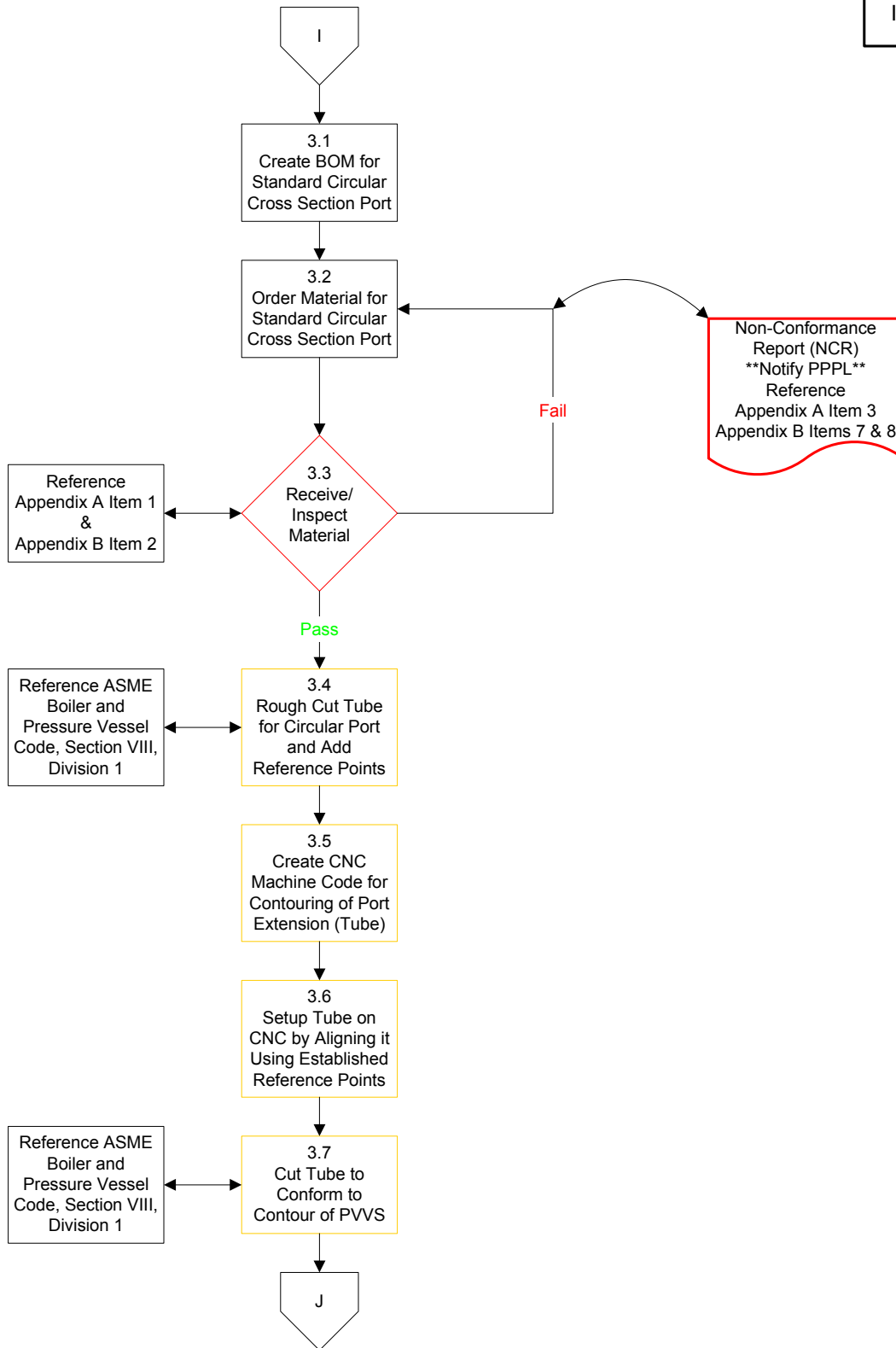
2.0  
PVVS  
Segment  
Integration



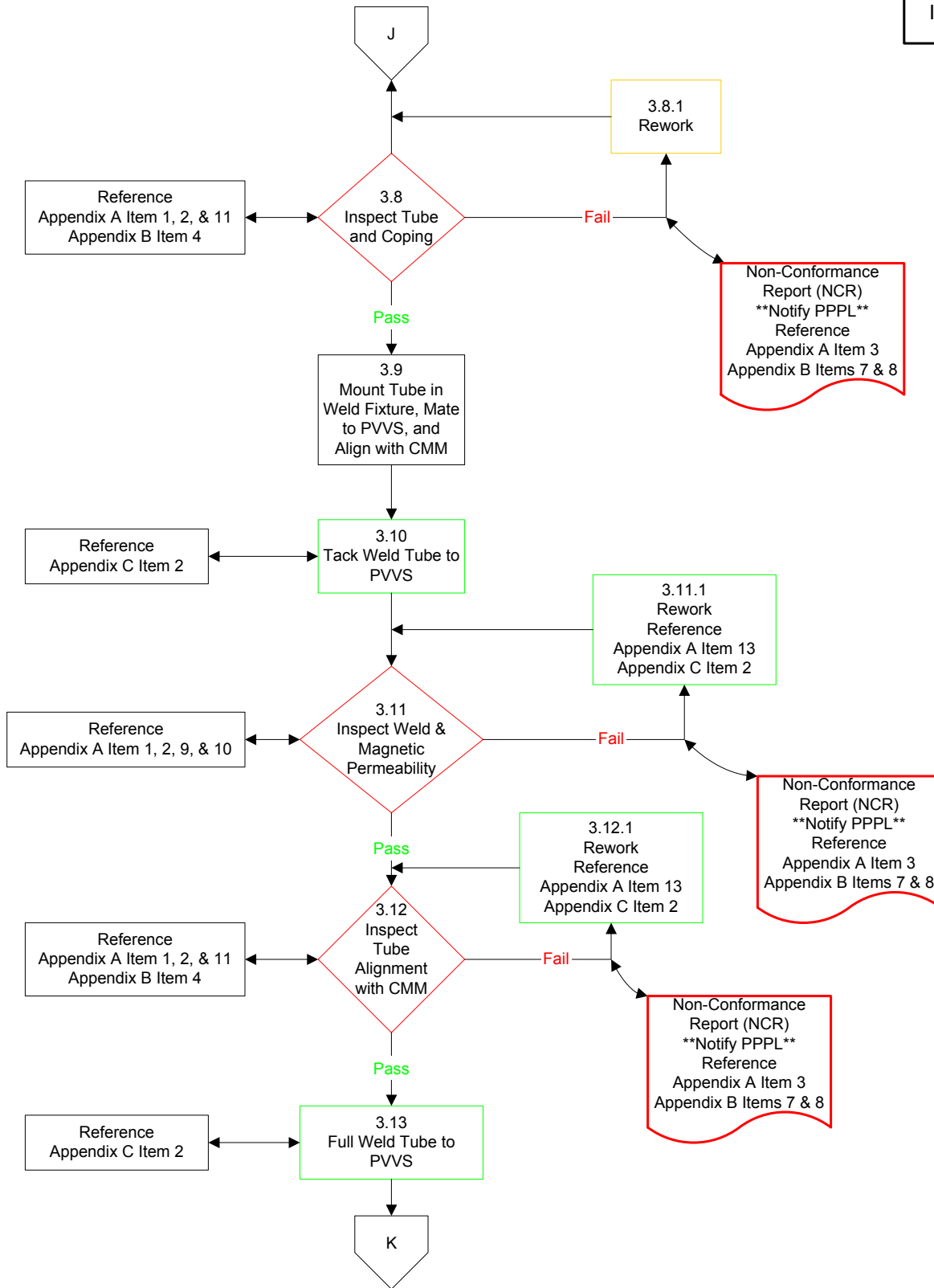
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PVVS  
Segment  
Integration



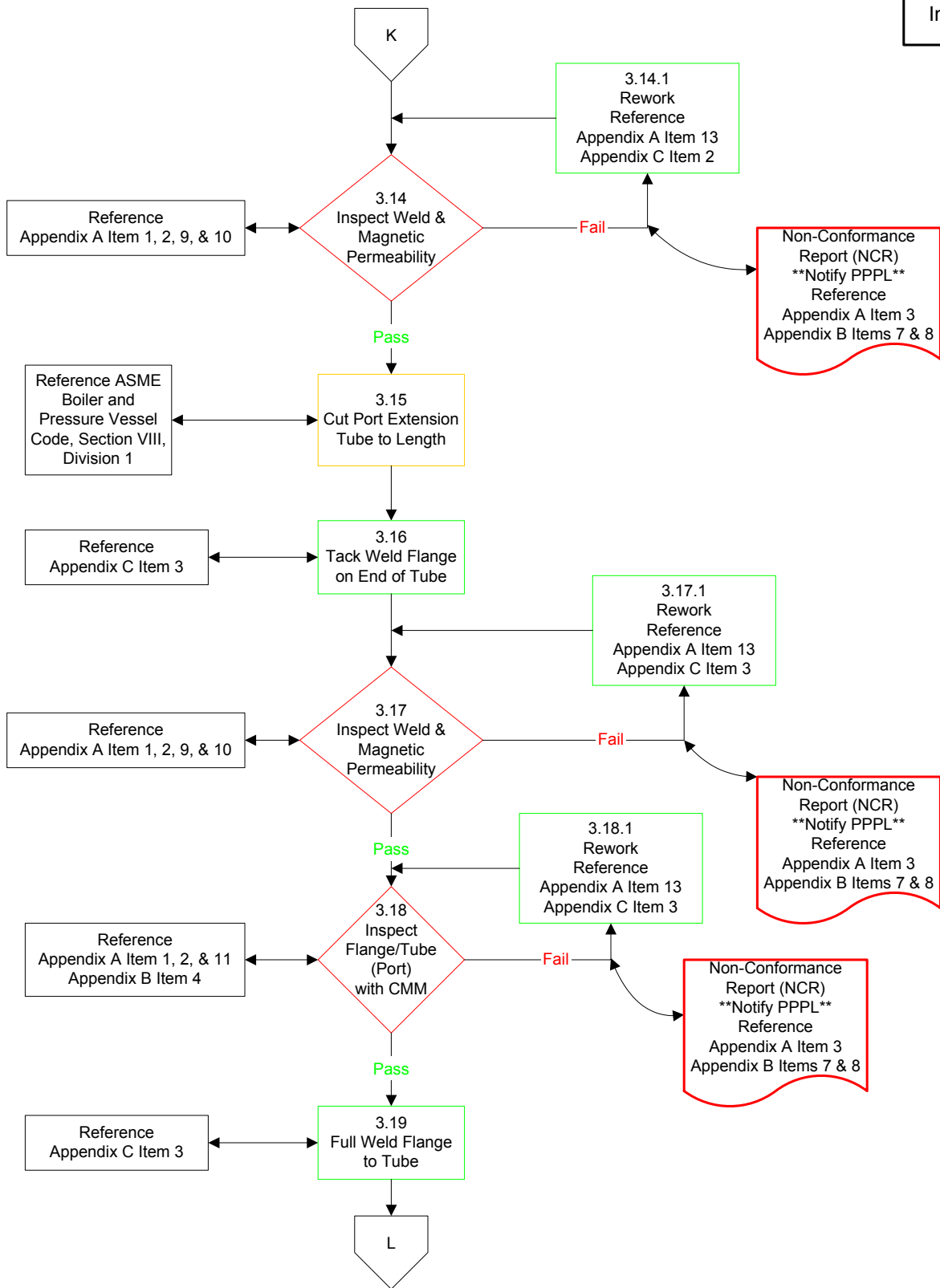
3.0  
Port  
Integration



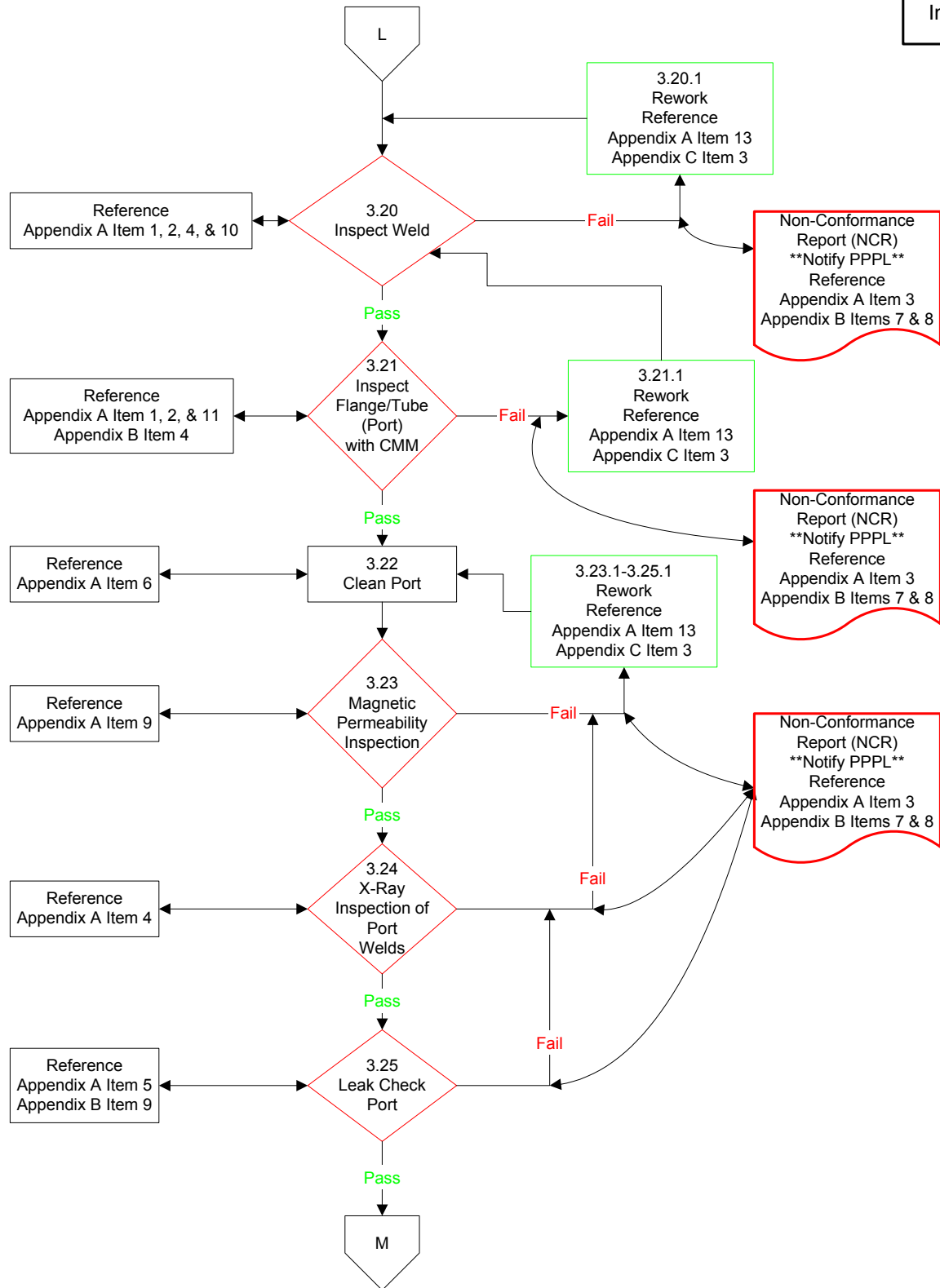
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Port  
Integration



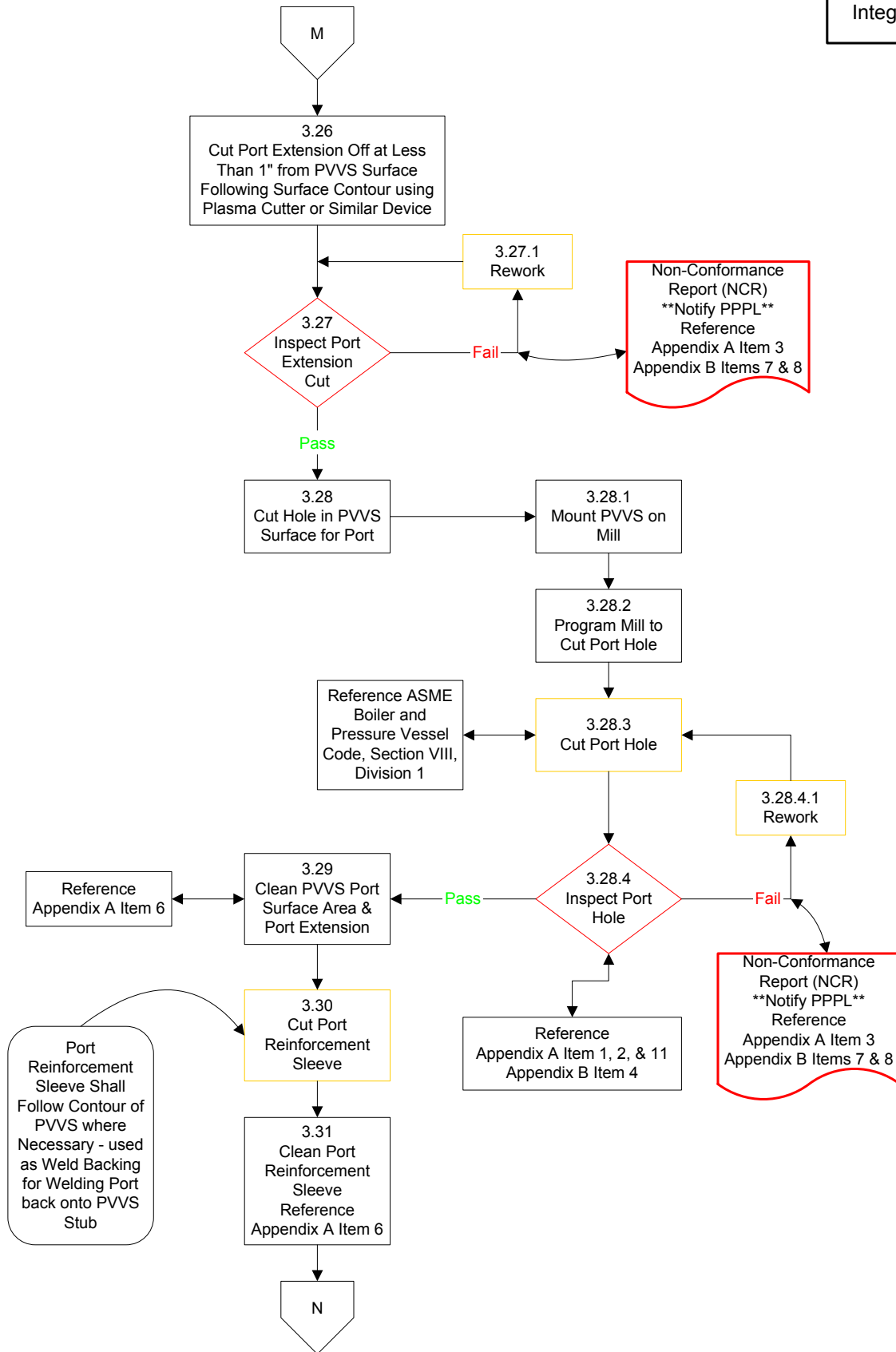
3.0  
Port  
Integration



3.0  
Port  
Integration

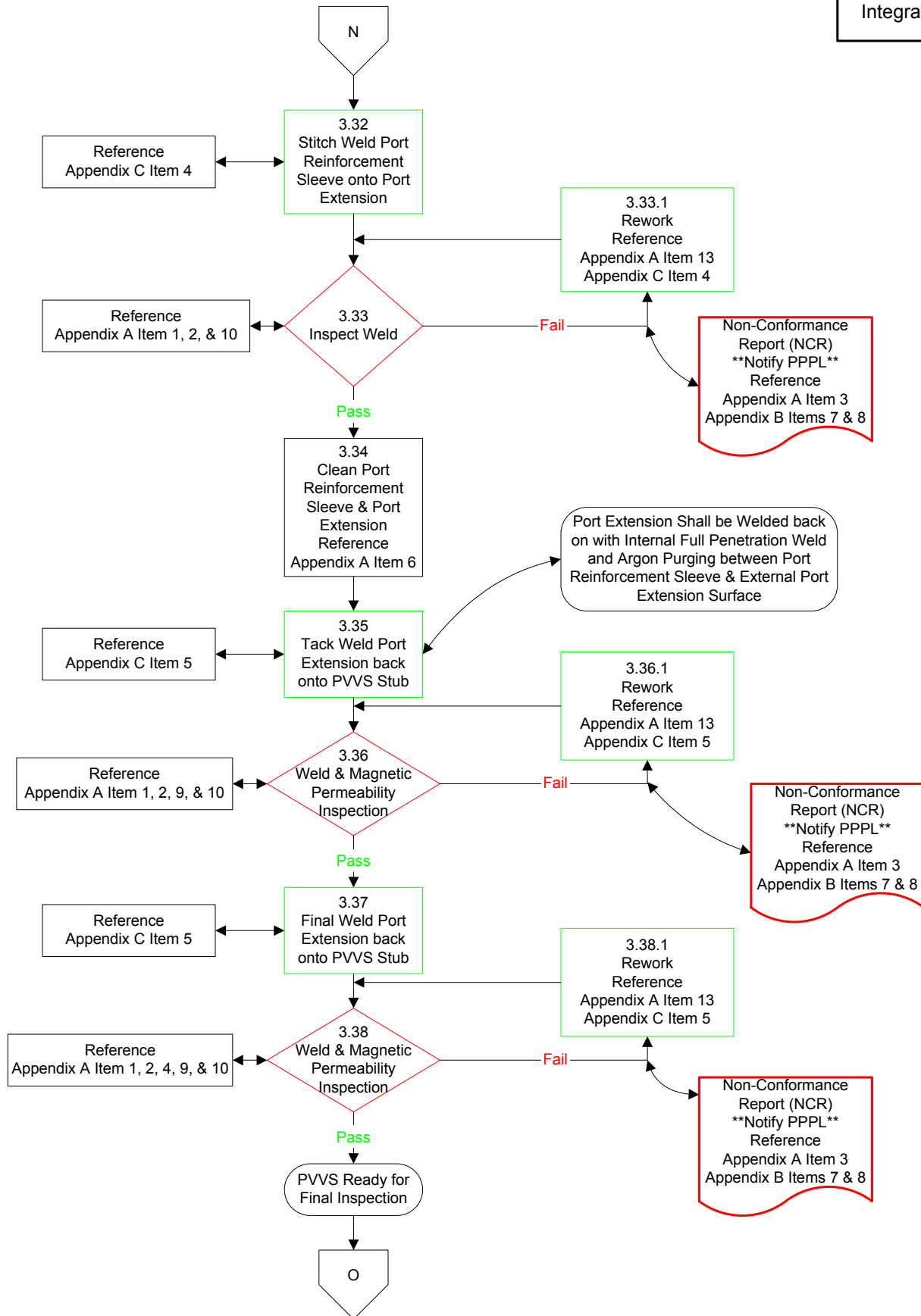


3.0  
Port  
Integration

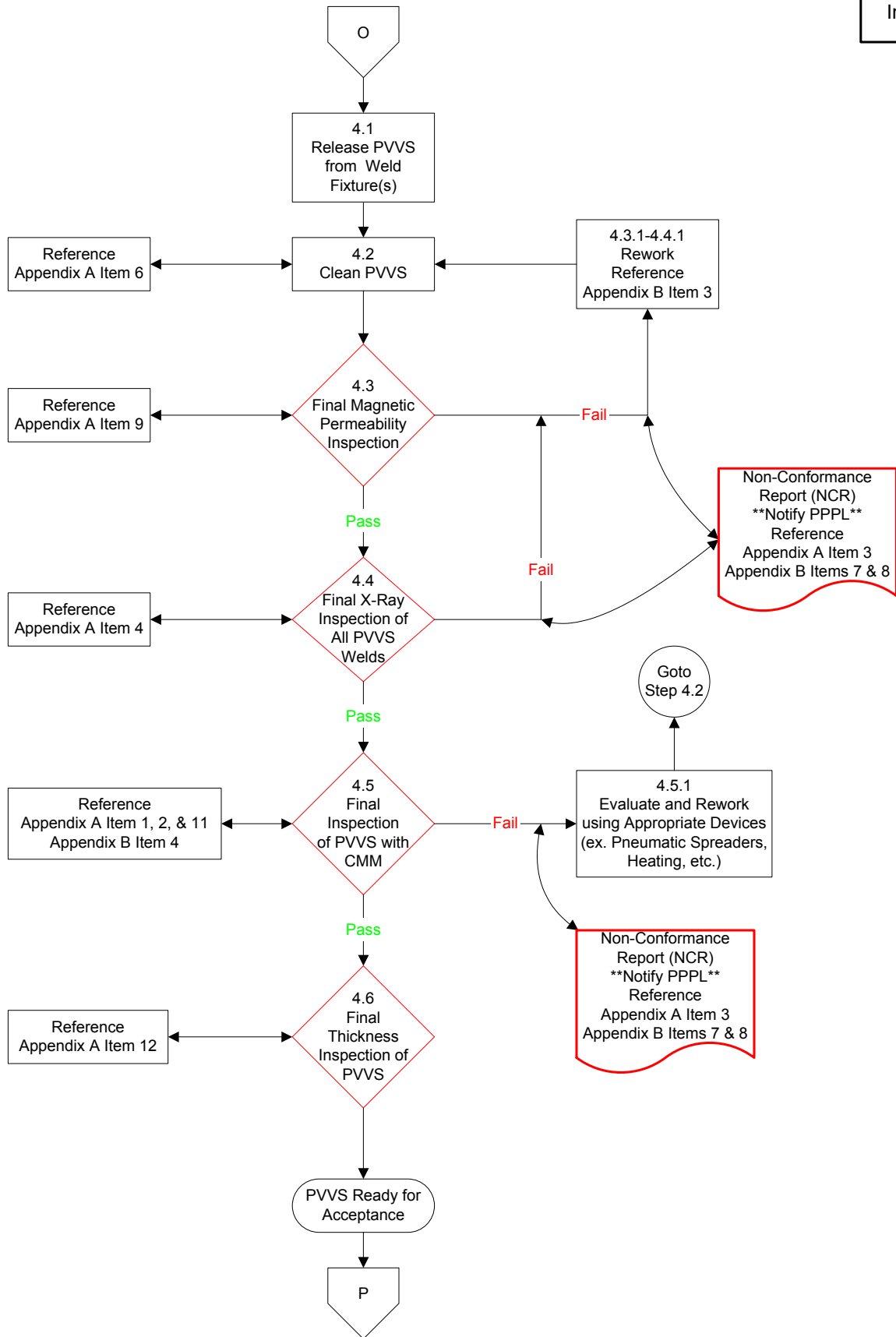




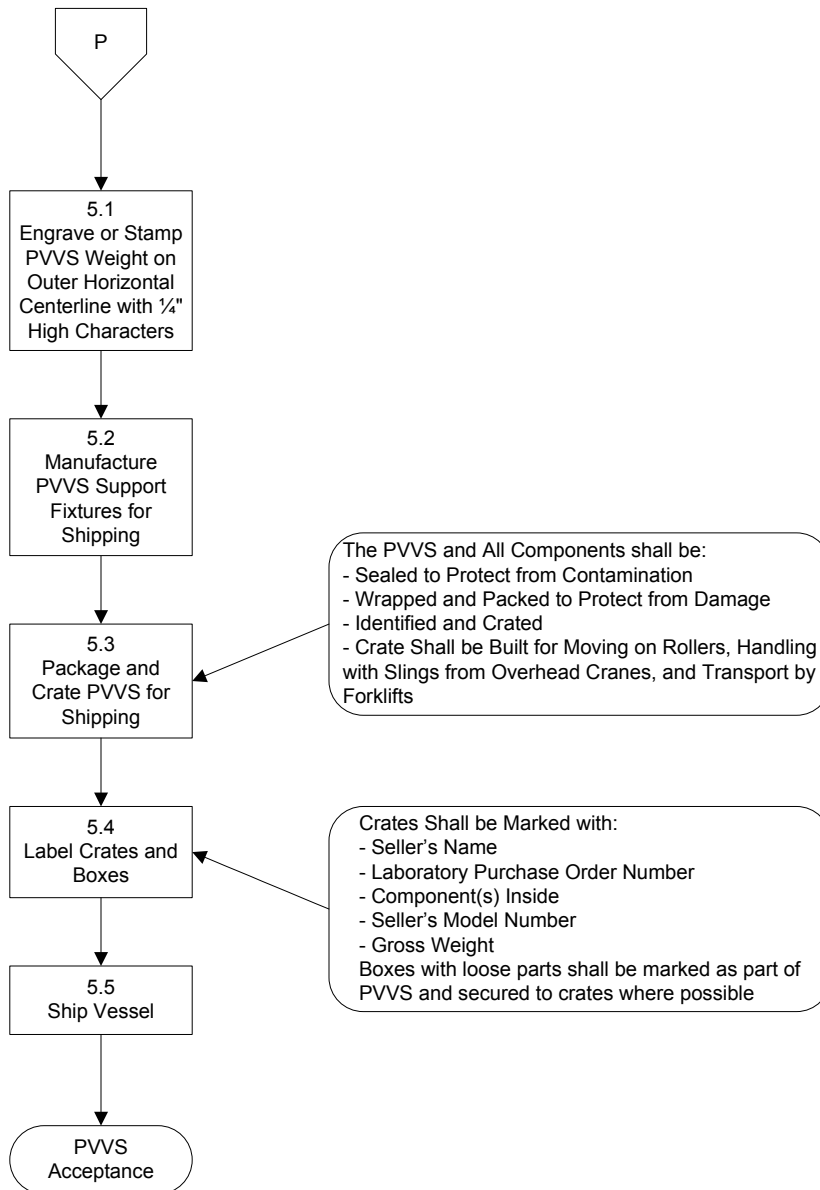
3.0  
Port  
Integration



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