

Procedure Number	TGT-PROC-15-002
Title	Tritium Cell Examination, Assembly, and Testing
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Rev	0
Active Date	9/1/2015
Expiration Date	9/1/2017
Description:  Procedure for examination, assembly, and testing the tritium cell(s) for PS-TGT-12-001. Results shall be marked on the procedure and filed for each cell assembly. Activities are:	
<ul style="list-style-type: none"><li>• Receipt Inspection of parts<ul style="list-style-type: none"><li>○ Dimensional inspection</li><li>○ Visual surface inspection</li></ul></li><li>• Thickness measurements</li><li>• Torque record</li><li>• Leak/pressure testing</li></ul>	

# Tritium Cell Examination, Assembly and Testing Report

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Examiner	
Date	
Cell assembly number	
Assembly Tech	

Parameter	Data
Entrance window number	
Main body number	
Surface finish	
General condition free of nicks scratches dents etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are external dimensions within tolerance	<input type="checkbox"/> Yes <input type="checkbox"/> No
Tapped holes run free	<input type="checkbox"/> Yes <input type="checkbox"/> No
MagnaMike Calibrated Prior to start	<input type="checkbox"/> Yes <input type="checkbox"/> No
Components cleaned per procedure TGT-PROC-001	<input type="checkbox"/> Yes <input type="checkbox"/> No
Heat/lot cell main body	
Heat/lot cell entrance window	
Heat/lot ¼-28 hardware	
Heat/lot 8-32 screws	
Heat/lot 4-40 screws	
Weld exam performed	<input type="checkbox"/> VT <input type="checkbox"/> RT
Helium leak detector calibrated	<input type="checkbox"/> Yes <input type="checkbox"/> No

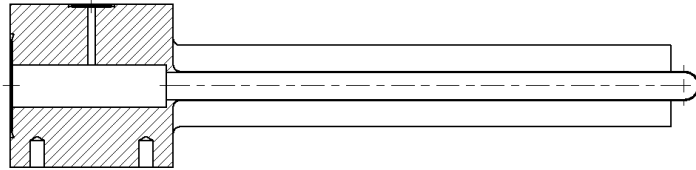
Perform the measurements and checks given on the following pages:

- Dimensional checks and thicknesses of thin sections
- Assembly torque data
- Reverse He leak tests of cell assembly
- Valve leak through test.

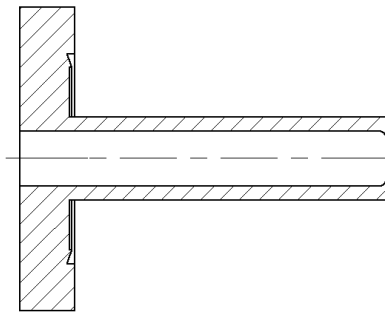
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Reference Drawing: TGT-103-1000-0101

Record on figure below dimensions for wall thickness using MagnaMike. Measure at several locations along each sidewall and record average of 10 measurements at exit.



Record thickness of entrance window on figure below. Record average of 10 measurements for thin section.



Torque

Fastener	Torque	Check
¼-28 (CF on entrance window)	140 in-lbf	
8-32	50 in-lbf	
4-40	10 in-lbf	

Pressure and Leak Testing:

Cell to be pressure/leak tested in reverse mode using He leak detector and PIG.

Required Test Pressure: 400 psi			
Test date:	Start time:	Actual gauge pressure:	
Required Duration: 30 min	Finnish time:		
<b>TEST EQUIPMENT</b>			
Type/Number:	Range:	Cal date:	Cal due date (attach cert if needed)
<b>Test Results</b>			
Bottle connected	Cell pressure:	Leak Rate	
Valve closed	Cell pressure:	Leak Rate	

Examiner:	
Design Authority:	
Examination Result (pass/fail)	