

Welding and Brazing Final Visual Inspection

(See [ES&H Manual Welding and Brazing Program Supplement](#) for more information.)

FINAL VISUAL INSPECTION – INFORMATION

Group: SNS PPU		Component: Helium Vessel – Probe End Head Weldments		Date: 9/25/20
Drawing #: 1042211700-M8U-8200-A025		Rev#:	PQR #: On File	WPS/BPS #: On File
Welder/Brazer #: Vendors Welder (On File)		Process: GTAW		B31.3 Fluid Service: N/A
ACCEPTANCE CRITERIA	<input type="checkbox"/> ASME B31.3 Chapter VI [Table 341.3.2]	<input type="checkbox"/> AWS D1.1 Chapter VI [Table 6.1]	<input checked="" type="checkbox"/> Other Code(s): ASME Section VIII- Div. 1	
# of Welds or Brazes Examined: All welds on the Header - SN: AB, AC, AD, AE		# of Mechanical Joints Examined: N/A		

FINAL VISUAL INSPECTION – CHECKLIST

	Accept	Reject	N/A
1. Mechanical joints have been properly assembled	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Mechanical joints have been properly erected including alignment supports and cold spring	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Welds/Brazes were sufficiently cleaned as not to impair visual inspection and are uniquely identified	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Geometry or profile conforms to WPS/BPS, drawing details or Code requirements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Weld joint was properly identified to welder/brazer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. All flux/slag removed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WELDING ONLY:			
7. Weld has no visible cracks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Thorough fusion (weld and base metals) and complete penetration if required exist	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Surface porosity or exposed slag inclusion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Surface finish	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Concave root surface (suck up) or lack of weld joint break down	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Internal and external reinforcement within allowable limits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Any fillet weld undersize (AWS only) within limits and undercutting depths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS:

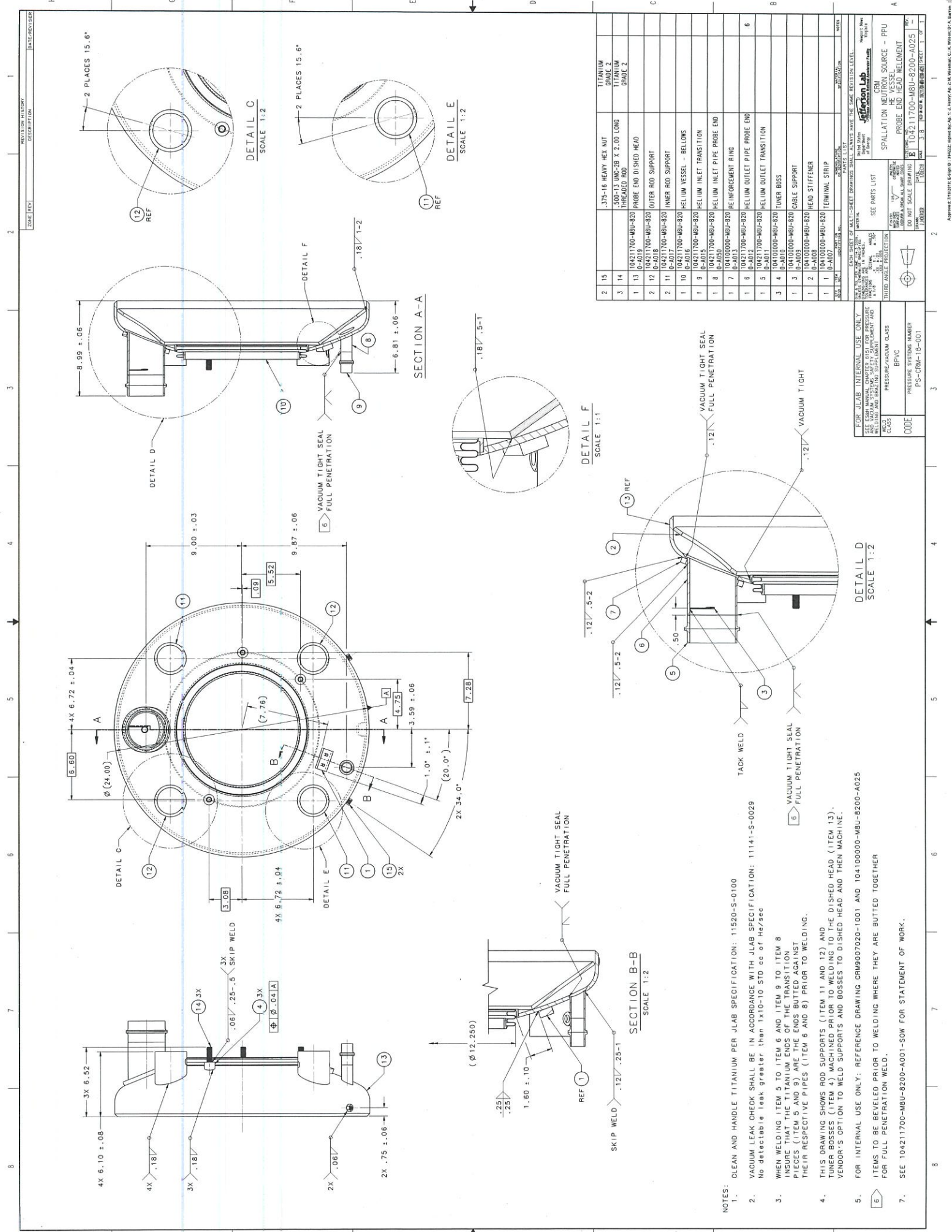
SIGNATURE

Jenord Alston
EXAMINER / INSPECTOR

Jenord Alston
CWI 09114931
QC1 EXP. 11/1/2021

DATE **9/25/20**

ISSUING AUTHORITY	TECHNICAL POINT-OF-CONTACT	APPROVAL DATE	REVIEW DATE	REV.	Page
ESH&Q Division	Jenord Alston	02/06/2017	02/06/2022	1.1	1 of 2



- NOTES:
1. CLEAN AND HANDLE TITANIUM PER JLAB SPECIFICATION: 11520-S-0100
 2. VACUUM LEAK CHECK SHALL BE IN ACCORDANCE WITH JLAB SPECIFICATION: 11141-S-0029
No detectable leak greater than 1×10^{-10} STD cc of Hr/cc
 3. WHEN WELDING ITEM 5 TO ITEM 6 AND ITEM 9 TO ITEM 8 INSURE THAT THE TITANIUM ENDS OF THE TRANSITION PIECES (ITEM 5 AND 9) ARE THE ENDS BUTTED AGAINST THEIR RESPECTIVE PIPES (ITEM 6 AND 8) PRIOR TO WELDING.
 4. THIS DRAWING SHOWS ROD SUPPORTS (ITEM 11 AND 12) AND TUNER BOSSES (ITEM 4) MACHINED PRIOR TO WELDING TO THE DISHED HEAD (ITEM 13). VENDOR'S OPTION TO WELD SUPPORTS AND BOSSES TO DISHED HEAD AND THEN MACHINE.
 5. FOR INTERNAL USE ONLY: REFERENCE DRAWING CRW9007020-1001 AND 104100000-WBU-8200-A025
 6. ITEMS TO BE BEVELED PRIOR TO WELDING WHERE THEY ARE BUTTED TOGETHER FOR FULL PENETRATION WELD.
 7. SEE 104211700-WBU-8200-A001-SOW FOR STATEMENT OF WORK.

ITEM	DESCRIPTION	QTY	UNIT	REMARKS
1	104211700-WBU-820	1	EA	TITANIUM GRADE 2
2	104211700-WBU-820	1	EA	TITANIUM GRADE 2
3	104211700-WBU-820	1	EA	TITANIUM GRADE 2
4	104211700-WBU-820	1	EA	TITANIUM GRADE 2
5	104211700-WBU-820	1	EA	TITANIUM GRADE 2
6	104211700-WBU-820	1	EA	TITANIUM GRADE 2
7	104211700-WBU-820	1	EA	TITANIUM GRADE 2
8	104211700-WBU-820	1	EA	TITANIUM GRADE 2
9	104211700-WBU-820	1	EA	TITANIUM GRADE 2
10	104211700-WBU-820	1	EA	TITANIUM GRADE 2
11	104211700-WBU-820	1	EA	TITANIUM GRADE 2
12	104211700-WBU-820	1	EA	TITANIUM GRADE 2
13	104211700-WBU-820	1	EA	TITANIUM GRADE 2