TANK TYPE	MOUNT	LOCATION
COPV	BOSS	POLAR

NORTHROP GRUMMAN

This composite overwrapped pressure vessel (COPV) Helium tank is 16.6" (422 mm) in diameter and 26.1" (663 mm) in length. The tank is constructed of a CP Titanium center cylinder welded to two CP Titanium end domes and overwrapped with T1000 carbon fiber. Mounting is provided by two polar bosses located on the tank centerline axis.

Part Number 80459-1

SIZE:16.6" DIA X 26.1" LONG
SIZE: 422 mm DIA X 663 mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000612
Qual Test Procedure	see 80446-1
Qualification Test Report	see 80446-1
Stress Report	see 80446-1
Cleaning	*3955*

Notes:
1: This tank is a derivative of 80446-1.

TANK CHARACTERISTICS

Operating Pressure, psig	4,500	Total Volume, in^3	4,105
Proof Pressure, psig	5,625	Prop Mass, lbm	N/A
Cryo Proof, psig	N/A	Max Design Wt, lbs	22.40
Burst Pressure, psig	6,750	Minimum Wall, inch	0.032
Actual Burst, psig	7,919		

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	310.26	Total Volume, l	67
Proof Pressure, bar	387.82	Prop Volume, kg	N/A
Cryo Proof, bar	N/A	Max Design Wt, kg	10.16
Burst Pressure, bar	465.39	Minimum Wall, MM	0.813
Actual Burst, bar	545.99		

FORGINGS

HEMI P/N	QTY	SUPPLIER	Die No
80-436061-1	2		

ROLLED AND SEAM WELDED CYLINDER

P/N	QTY	SIZE
80-374100-1	1	15.42 in ID X 15.0 in LONG

TUBE TYPE AND SIZE (in.)

Ti 3AL-2.5V	SIZE
80-400002-1	0.375 O.D. x 0.05 Wall
Note: 1 port only	

TUBE SIZE (mm)

80-400002-1	9.525 x 1.27 mm
Note: 1 port only	

QUALIFCATION TESTS

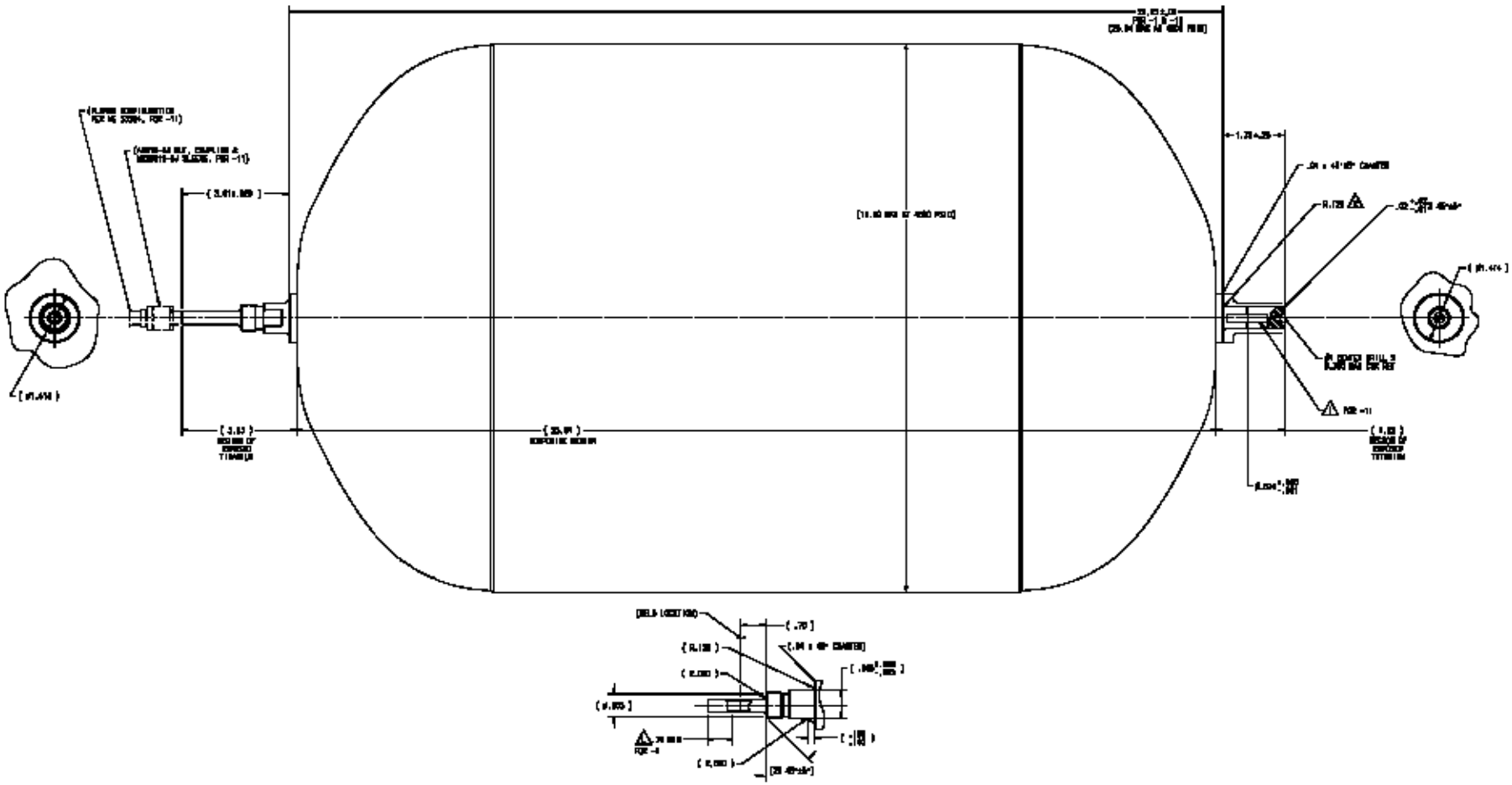
Qual was performed on 80446-1

ACCEPTANCE Test

Examination of Product
Volume Determination and Proof & MEOP Pressure Test
External Leakage
Examination of Product
Cleanliness Verification
Data Review

VACUUM RATED

YES

6033 East Bandini Boulevard
Commerce, California 90040

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