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|------------------|--------------|-----------------|
| TANK TYPE | MOUNT | LOCATION |
| COPV | POLAR | POLAR |

This composite overwrapped pressure vessel (COPV) Helium tank is 16.7" (424 mm) in diameter and 29.6" (752 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 80465-1

SIZE: 16.7" DIA X 29.6" LONG

SIZE: 424 mm DIA X 752 mm LONG

ISO 9001 & AS 9100 REGISTERED

| APPLICABLE DOCUMENTS | |
|----------------------------|-------------|
| Acceptance Test Procedure | 50-000617 |
| Qual Test Procedure | see 80436-1 |
| Qualification Test Report | see 80436-1 |
| Stress Analysis | see 80436-1 |
| Stress and Dynamics Report | 54-000220 |
| Cleaning | 3956 |

| TANK CHARACTERISTICS | | | |
|--------------------------|-------|-------------------------------|-------|
| Operating Pressure, psig | 4,800 | Total Volume, in ³ | 4,967 |
| Proof Pressure, psig | 6,000 | Max Design Wt, lbs | 28.00 |
| Cryo Proof, psig | N/A | Minimum Wall, inch | 0.018 |
| Burst Pressure, psig | 7,200 | | |
| Actual Burst, psig | 8,297 | | |

| QUALIFICATION TESTS |
|-------------------------------|
| Qual was performed on 80436-1 |

| ACCEPTANCE TESTS |
|------------------------------------|
| Examination of Product Preliminary |
| Volumetric Measurement @ Ambient |
| Proof Pressure Test @ Ambient |
| Volumetric Measurement @ Ambient |
| Volumetric Capacity @ MEOP |
| External Leak Test |
| Weld Quality Inspection |
| Examination of Product Final |
| Final Clean |

| TANK CHARACTERISTICS (Metrics) | | | |
|--------------------------------|--------|-------------------|-------|
| Operating Pressure, bar | 330.94 | Total Volume, l | 81 |
| Proof Pressure, bar | 413.68 | Max Design Wt, kg | 12.70 |
| Cryo Proof, bar | N/A | Minimum Wall, MM | 0.457 |
| Burst Pressure, bar | 496.41 | | |
| Actual Burst, bar | 572.05 | | |

| VACUUM RATED |
|--------------|
| YES |

- Notes:**
1. Fracture Critical
 2. Derivative of 80436-1.

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

| ROLLED AND SEAM WELDED CYLINDER | | |
|---------------------------------|-----|-----------------------------|
| P/N | QTY | SIZE |
| 80-436100-1 | 1 | 15.87 in ID X 16.75 in LONG |

| TUBE TYPE AND SIZE (in.) | |
|--------------------------|-------------------------|
| Ti 3AL-2.5V | SIZE |
| 80-400002-1 | 0.375 O.D. x 0.050 Wall |

| TUBE SIZE (mm) | |
|----------------|-------------------------|
| 80-400002-1 | 9.525 O.D. x 1.270 Wall |



80-438070-1 BOTTLE ASSY
1 REQD FOR -11

