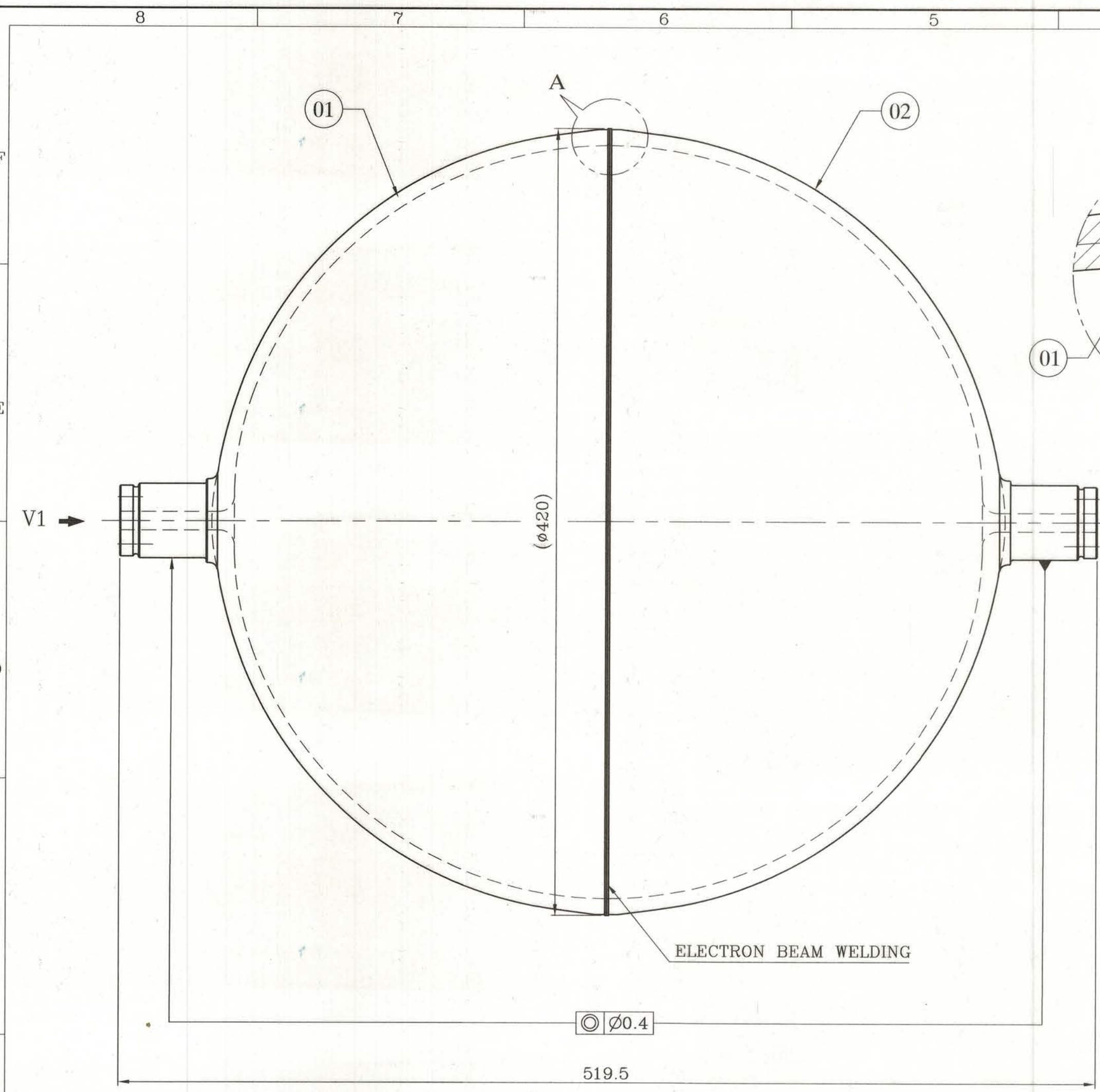


SRQA LPSC		CC RELEASE	
CHD.	<i>[Signature]</i>	CHD.	<i>[Signature]</i>
APPD.	<i>[Signature]</i>	APPD.	<i>[Signature]</i>



DETAIL - A  
SCALE - 4:1

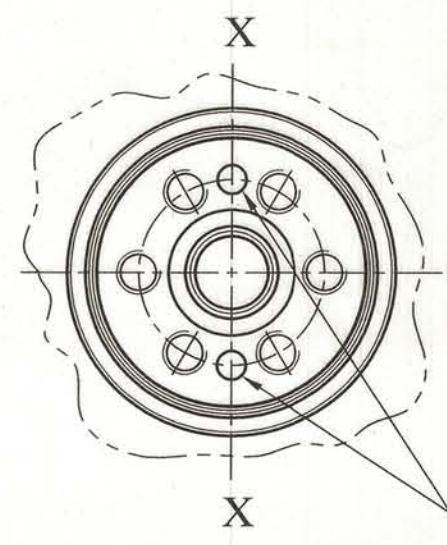
**SPECIFICATIONS**

<b>GENERAL</b>	
VOLUME	: 34 <sup>-0.5</sup> LITRE
	: AT AMBIENT PRESSURE & TEMPERATURE
SHAPE	: SPHERICAL
MATERIAL	: Ti6Al4V (ANNEALED)
OPERATING MEDIUM	: HELIUM GAS
OPERATING PRESSURE	: 320 <sup>+10</sup> bar(abs.)
PROOF PRESSURE	: 495bar(abs.)
BURST PRESSURE	: >660bar(abs.)

<b>WELDING</b>	
TYPE OF WELD	: ELECTRON BEAM WELDING (EBW)
	: 100% PENETRATION
WELD CATEGORY	: B3 (LEAK TIGHTNESS)
RADIOGRAPHY	: 100%

<b>PROOF PRESSURE TEST</b>	
PROOF PRESSURE	: 495bar(abs.)
DILATION VOLUME AT PPT	: 1.25±0.12L
HOLD DURATION	: 15 MINUTES
MEDIUM	: DI/DM WATER

<b>LEAK TEST</b>	
PRESSURE	: 10 <sup>-6</sup> Torr
MEDIUM	: HELIUM GAS
LEAK RATE	: <10 <sup>-7</sup> scc/sec



- NOTE :**
- HOLES FOR CENTERING PIN MUST BE LOCATED IN THE PLANE 'XX' ON EITHER SIDE.
  - CLEANING AND DEGREASING BY IPA ONLY.
  - HEIGHT OF MARKING LETTER : 3mm
  - DEPTH OF MARKING : 0.2mm

HOLES FOR CENTERING PIN  
(SEE NOTE-1)

MACHINING FINISH IN MICRONS	DO NOT SCALE THE DRAWING
~ - >25	ASK IF IN DOUBT.
∇ - 25-8	UNLESS OTHERWISE SHOWN
∇∇ - 8-1.6	ALL DIMENSIONS ARE IN mm.
∇∇∇ - 1.6-0.025	
∇∇∇∇ - <0.025	
IS : 2102 MEDIUM GRADE	
DIA & LENGTH UP TO & INCL. SHORTER SIDE	Concentricity
6 - ±0.1	Perpendicularity
6-30 - ±0.2	Angularity
30-120 - ±0.3	Parallelism
120-315 - ±0.5	
315-1000 - ±0.8	
1000-2000 - ±1.2	
2000-4000 - ±2.0	
4000&ABOVE - ±3.0	

MATERIAL <b>Ti6Al4V ANNEALED</b>	SURFACE TREATMENT
Mechanical properties	—
General tolerance	SURFACE FINISH
<b>IS 2102 MEDIUM GRADE &amp; CLASS 'K'</b>	—
Thread tolerance	MARKING
Thread chamfer & under cut.	BY ENGRAVING
Radii not specified	
Chamfers not specified	

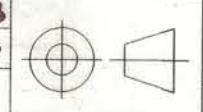
QUANTITY	1 No.
MASS	18.4±0.2 Kg

DGN.	<i>[Signature]</i>
D.CHD.	<i>[Signature]</i>
DRN.	ABIN.R 23.08.23
CHD.	URS 8/2023
APPD.	<i>[Signature]</i>
SIGN.	DATE

TITLE	
<b>HIGH PRESSURE GAS BOTTLE (ø400)</b>	
GOVERNMENT OF INDIA INDIAN SPACE RESEARCH ORGANISATION LIQUID PROPULSION SYSTEMS CENTRE VALIAMALA TRIVANDRUM-695547	
DRG.No.	PU410-3111 0001
SCALE	1:2 & NOTED

03	195/PS4 Dt:30.03.2021
02	134/PS4 Dt:22.12.2011
01	i) WELDING JOINT ii) THICKNESS iii) END BOSS 18.10.85
INDEX	MODIFICATION ORDER No. & DATE
PROJECT	
<b>ESES/PS4</b>	
REV NO.	03
FORMAT	A2
SHEET 1 OF 1	

NO.OF ASSY.	1	PU410-0310 0000
QTY.		NEXT ASSEMBLY



ASSEMBLY

# HIGH PRESSURE GAS BOTTLE

DRG. NO.

PU410-3111 0001

FORMAT	QTY. PER ASSY.	QTY. PER SUB. ASSY.	TITLE	PART NO.	DRAWING NO. OR STANDARD NO.	REVISION NO.	CALCULATED MASS IN Kg.	MATERIAL	CHARACTERISTICS	SURFACE TREATMENT	OBSERVATION	SOURCE
A201			HIGH PRESSURE GAS BOTTLE (φ400)		PU410-3111 0001	03	18.4±0.2	Ti6Al4V	ANNEALED			
A1	01		HEMISPHERE (MALE)	01	PU410-3111 0200	03	9.15	Ti6Al4V	ANNEALED			
A1	01		HEMISPHERE (FEMALE)	02	PU410-3111 0300	03	9.25	Ti6Al4V	ANNEALED			
A3	02		Ti6Al4V FORGING FOR φ400 GAS BOTTLE		PU410-3111 0021	02	45	Ti6Al4V	ANNEALED			
A2			MACHINED RINGS FOR EBW TRIAL AND TEST SPECIMENS		PU410-3111 0131	01	--	Ti6Al4V	ANNEALED			



03	195/PS4	30.03.21										
02	134/PS4	22.12.11										
01	END BOSS	18.10.85										
	THICKNESS											
	WELDING JOINT											
INDEX	AMENEDMENT NO.	DATE	INDEX	AMENEDMENT NO.	DATE	INDEX	AMENEDMENT NO.	DATE	SRQA LPSC	LPSC CC RELEASE	PROJECT	
									CHD.	CHD.	DGN.	
									APPD.	APPD.	DRN.	
											CHD.	
											APPD.	
											SIGN	
											DATE	



GOVERNMENT OF INDIA  
INDIAN SPACE RESEARCH ORGANISATION  
LIQUID PROPULSION SYSTEMS CENTRE  
VALIAMALA TRIVANDRUM-695547

PROJECT  
ESES/PS4  
REV No. 03

DRG. NO.  
PU410-3111 0001

SHEET  
1/1