

SERVICE FLUID	CRUDE OIL				
DESIGN / FABRICATION CODE	API-650 12TH EDITION, MARCH 2013, ADDENDUM 2, JANUARY 2016				
TANK SIZE	ID 30m X HT 10.8m	No. OF UNITS	6	TYPE	FLAT BOTTOM + CONICAL ROOF/CYLINDRICAL+ VERTICAL + INTERNAL COIL
DESCRIPTION		UNIT		DESIGN DATA	
				SHELL	INTERNAL COIL
SHELL CAPACITY (OPERATING / GROSS)		m3			
OPERATING PRESSURE		mmWC (g)		+65 / -10	7 (kg/cm2(g))
OPERATING TEMPERATURE		°C		9-50	120
DESIGN PRESSURE (INT/ EXT)		mmWC (g)		150 @ top / -75	15 (kg/cm2(g))
DESIGN TEMPERATURE		°C		60	150
HYDROSTATIC TEST PRESSURE		mmWC (g)		FULL OF WATER	19.5 kg/cm2(g)
TEST PRESSURE POSITION				VERTICAL	VERTICAL
CONTENTS OF FLUID				CRUDE OIL	HOT OIL
DENSITY OF FLUID		kg/m3		812	823
CORROSION ALLOWANCE(SHELL/ROOF/BOTTOM)		mm		3 / 1.0 / 3 (INT.)	0 / 3 (INT. / EXT.)
RADIOGRAPHY				SPOT + ALL "T" JOINTS	NIL
JOINT EFFICIENCY				0.85	0.7
DP TEST				YES	YES

GENERAL NOTES:
1. WIND ANALYSIS - API-650 CL. 5.11
2. BASIC WIND SPEED 44 m/sec. IS 875 PART-3
3. SEISMIC ANALYSIS - API 650 - APPENDIX E & IS 1893 PART-4

ITEMS	MATERIAL	ITEMS	MATERIAL
SHELL / ROOF / BOTTOM PLATE	IS:2062 Gr.B	NAME PLATE	SS304
CURB ANGLE	IS:2062 Gr.B	NAME PLATE BRACKET	IS:2062
NOZZLE FLANGE	SA 105	ANCHOR CHAIRS	IS:2062
NOZZLE PIPE UP TO 250NB	SA 106 Gr. B	RAFTER ASSEMBLY	IS:2062
NOZZLE PIPE ABOVE 250NB	IS:2062 Gr.B	INTERNAL COIL	SA 106 Gr. B
PIPE FITTINGS	SA 234 Gr. WPB	COIL NOZZLE	SA 106 Gr.B
R.F. PAD	IS:2062 Gr.B	COIL FLANGE	SA 105
FASTENERS	A 193 Gr. B7 / A 194 Gr. 2H (HDG)	INSULATION CLEAT	NA
GASKET (FINISH 125 - 250 AARH)	STYLE-54 NON ETALLIC(3mm)	SUMP	IS:2062 Gr.B
PLATFORM & HAND RAILS	IS:2062 (HDG) + IS:1239(GI)		

RINGS & STIFFENERS	IS:2062	ANCHOR BOLTS	SA 36
PAD FOR EXTERNAL ATTACHMENT	IS:2062		
LIFTING LUGS	NA		
EARTHING LUGS (2 Nos.)	SA 36		

GENERAL NOTES: -
1. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
2. ALL FLANGES (EXCEPT MANHOLES AS PER API 650) SHALL BE AS PER ASME B16.5 FOR SIZE UP TO NPS 24.
3. CONTRACTOR TO PROVIDE INTERNAL COIL SIZING AFTER DETAILED ENGINEERING FOR COMPANY APPROVAL.
4. ALL NOZZLE \leq 50 NB SHALL BE STIFFENED WITH 2 GUSSETS 6t x 40WIDE @ 90 DEG. APART AND NOZZLE $>$ 50 NB SHALL BE PROVIDED WITH REINFORCEMENT PAD (2 X O.D OF PIPE) & PNEUMATIC TEST ON RF PAD AT 1.5 KG/CM ² .
5. ALL C.S. EXTERNAL UNMACHINED SURFACES SHALL BE PREPARED & CAMOUFLAGE PAINTED AS PER SPECIFICATION NO. 1019-PI-SPC-103. & THE INTERNAL SURFACE COATING SHALL INCLUDE THE TOTAL TANK FLOOR, SHELL, ROOF WITH STRUCTURE AND INTERNAL PIPING (EXCEPT HEATING COILS. THE COATING SHALL BE APPLIED TO A MIN. DEPTH OF 15MILs (150micron) UTILIZING A HIGH BUILT EPOXY COATING MATERIAL SUCH AS DEVOE-253 OR EQUIVALENT.
6. SPARES- (A) 400% GASKET PER FLANGED JOINT (B) 10% OF BOLTS & NUTS (EACH SIZE) OR MIN. 4 NOS.
7. NO PRICE ESCALATION WILL BE ALLOWED FOR ADDITION OF 2 NOZZLES EQUIVALENT TO SIZE 250 NB.
8. PROJECTION OF NOZZLE SHALL BE MEASURED FROM OUTER SURFACE OF SHELL/ROOF UPTO FLANGE CONTACT FACE.
9.VENDOR TO PROVIDE HAND RAILINGS, STAIRCASE, PLATFORMS, ROOFWALK WAY ETC. HOT DIP GALVANISED & AS PER QPS STD.
10.VENDOR TO PROVIDE SHELL DEVELOPMENT DRAWING.
11. VENDOR TO FOLLOW MECHANICAL STANDARD FOR STORAGE TANK AS APPLICABLE.
12.CLEATS/SUPPORTS FOR FIRE WATER SPRINKLER SYSTEM SHALL BE PROVIDED ON ROOF & SHELL.
13. DIP HATCH SHALL BE NON-SPARKING AND SELF CLOSING TYPE. IT SHALL BE AWAY FROM ROOF WALKWAY.
14. BREATHER VALVE WITH FLAME ARRESTER SHALL BE NON FLAMEBLE & IN VENDOR SCOPE OF SUPPLY.
15. ARRANGEMENT FOR MONITORING OF INTERNAL CP TO BE PROVIDED BY CONTRACTOR.