

SAMPLE TANK STRAPPING TABLE

TANK NO: SRT-T-25-021**Product: Gasoline**(Liquid Head Calculated for a density of the stored product of 750 kg/m³ @ 15 °C)**CLIENT NAME****March 2017**

DOCUMENT REFERENCE	Cert. No: IETQ-CLIENT-2017/007
PREPARED	MOHAMED RAUB
APPROVED	SANJAY BOSE
CONTROLLED COPY?	YES
CIRCULATION	IET ADMINISTRATION & CLIENT.

Tank No: SRT-T-25-021	
CLIENT NAME	
LOCATION	
GENERAL INFORMATION	
Capacity	34,372,634 Liters in 2070.0 cm
Owner / Client	CLIENT NAME
Location	LOCATION
Tank type	Vertical Cylindrical Tank
Roof type	External Floating Roof
Bottom type	Cone up
Total shell height	2300.0 cm
Nominal Tank Diameter	4600.0 cm
Liquid density in service	750 kg/m ³ @ 15° C
Young's Modulus E	2E+11 N/m ²
Certification temperature	15 degrees centigrade
Temperature correction factor	multiply volume by factor $F_o = [1 + \alpha \cdot (T_l - T_s)] \cdot [1 + 2 \cdot \alpha \cdot (T_t - T_s)]$. (In case of difference between observed tank temp. and reference temp. of capacity table (15 deg. C).
Floating roof weight	246,666 Kg
Inaccurate Zone in calibration table due to floating roof	Operating Position: 70.0 cm to 150.0 cm (above dip plate) Maintenance Position: 170.0 cm to 250.0 cm (above dip plate)
Volume of Bottom under dip plate	3164 liters.
Bottom Deadstock Volume	243,320 Liters in 20.6 cm (No transaction should be made below this point.)
Product Storage	Gasoline
Method of Calibration & Calculation	API MPMS 2.2A & 2.2 C (Calibration of Upright cylindrical tanks by Optical Triangulation Method)
Manufactured & Erected By	Quality International Co. Ltd. FZC - HFZ
Calibrated by	Inside Exploration Technologies WLL Doha –Qatar, P.O. Box: 201763
Calibration Equipment	1. Leica Builder 306 total station. 2. CYGNUS 2 UTG machine. 3. Freemans Nylon coated Steel tape. 4. Richer Steel Dipping Tape. 5. Digital thermometer.
Date of Calibration	
Date of Issue	

Tank No: SRT-T-25-021				
CLIENT NAME				
LOCATION				
DEADWOODS				
Description	Applicable Range (cm)		litres	litres/cm
Clean out door	0.0	122.0	163.0	1.3360656
Pipe	18.0	2070.0	-257.0	-0.1252437
Water Draw off	20.0	32.0	-163.0	-13.5833333
Roof Drain	23.0	46.0	-324.0	-14.0869565
Pipe	27.0	2070.0	-178.0	-0.0871268
Product Draw off	36.0	54.0	-65.0	-3.6111111
Shell Manway	42.0	104.0	170.0	2.7419355
Tank Mixers	44.0	106.0	150.0	2.4193548
Roof Drain	46.0	2070.0	-1460.0	-0.7213439
Pipe	52.0	2070.0	-48.0	-0.0237859

Tank No : SRT-T-25-021								CLIENT NAME
								LOCATION
Course No.	Course Height (cm)	Cumulative Height (cm)	External mean Circumference (m)	Plate Thickness (m)	Thickness Correction	Internal mean Circumference (m)	Liquid Head Stress to Internal Circumferences (m)	Corrected Internal mean Circumference (m)
1	230.0	230.0	144.660	0.0230	0.144514	144.5155	0.006315	144.5218
2	230.0	460.0	144.670	0.0205	0.128806	144.5412	0.007394	144.5486
3	230.0	690.0	144.699	0.0181	0.113726	144.5853	0.008378	144.5937
4	230.0	920.0	144.720	0.0156	0.098018	144.6220	0.009723	144.6317
5	230.0	1150.0	144.745	0.0133	0.083567	144.6614	0.011408	144.6728
6	230.0	1380.0	144.730	0.0115	0.072257	144.6577	0.013191	144.6709
7	230.0	1610.0	144.735	0.0115	0.072257	144.6627	0.013192	144.6759
8	230.0	1840.0	144.745	0.0110	0.069115	144.6759	0.013794	144.6897
9	230.0	2070.0	144.755	0.0110	0.069115	144.6859	0.013796	144.6997
Course No.	Course Height (cm)	Cumulative Height (cm)	Open Capacity (Lit/cm)	Tilt Correction (factor)	Temp. Correction (factor)	Liquid Head Correction in-service (Lit/cm)	Corrected Open Capacity (Lit/cm)	Final Volume of Course (Lit)
1	230.0	230.0	16621.267	1.0000	0.99994	4.76578	16625.035	3724365.739
2	230.0	460.0	16627.429	1.0000	0.99994	5.54114	16631.972	7549499.052
3	230.0	690.0	16637.798	1.0000	0.99994	6.35177	16643.151	11377203.507
4	230.0	920.0	16646.556	1.0000	0.99994	7.48505	16653.042	15207182.924
5	230.0	1150.0	16656.027	1.0000	0.99994	8.95828	16663.985	19039679.295
6	230.0	1380.0	16655.588	1.0000	0.99994	9.18163	16663.769	22872126.032
7	230.0	1610.0	16656.739	1.0000	0.99994	9.18322	16664.922	26704837.964
8	230.0	1840.0	16659.904	1.0000	0.99994	10.02282	16668.926	30538470.826
9	230.0	2070.0	16662.207	1.0000	0.99994	10.02628	16671.233	34372634.228

Liquid Head Calculated for a density of the stored product of 0.750 kg/l @ 15 °C

Tank No: SRT-T-25-021													CLIENT NAME LOCATION
INTERPOLATION MM TABLE (ROUNDING THE DECIMAL TO THE NEAREST LITRE/MM)													
RING NO.	APPLICABLE RANGE IN CM			MILLIMETERS									
				1	2	3	4	5	6	7	8	9	10
1	21.0	TO	23.0	1,661	3,323	4,984	6,645	8,306	9,968	11,629	13,290	14,951	16,613
	23.0	TO	27.0	1,660	3,320	4,980	6,639	8,299	9,959	11,619	13,279	14,939	16,599
	27.0	TO	32.0	1,660	3,320	4,980	6,639	8,299	9,959	11,619	13,279	14,939	16,598
	32.0	TO	36.0	1,662	3,324	4,986	6,648	8,310	9,971	11,633	13,295	14,957	16,619
	36.0	TO	42.0	1,661	3,322	4,983	6,643	8,304	9,965	11,626	13,287	14,948	16,608
	42.0	TO	44.0	1,661	3,322	4,983	6,644	8,306	9,967	11,628	13,289	14,950	16,611
	44.0	TO	46.0	1,661	3,323	4,984	6,645	8,307	9,968	11,630	13,291	14,952	16,614
	46.0	TO	52.0	1,663	3,325	4,988	6,651	8,313	9,976	11,639	13,302	14,964	16,627
	52.0	TO	54.0	1,663	3,325	4,988	6,651	8,313	9,976	11,639	13,302	14,964	16,627
	54.0	TO	104.0	1,663	3,326	4,989	6,652	8,315	9,978	11,641	13,304	14,968	16,631
	104.0	TO	106.0	1,663	3,326	4,988	6,651	8,314	9,977	11,639	13,302	14,965	16,628
	106.0	TO	122.0	1,663	3,325	4,988	6,650	8,313	9,975	11,638	13,300	14,963	16,625
	122.0	TO	230.0	1,662	3,325	4,987	6,650	8,312	9,974	11,637	13,299	14,962	16,624
2	230.0	TO	460.0	1,663	3,326	4,989	6,652	8,316	9,979	11,642	13,305	14,968	16,631
3	460.0	TO	690.0	1,664	3,328	4,993	6,657	8,321	9,985	11,650	13,314	14,978	16,642
4	690.0	TO	920.0	1,665	3,330	4,996	6,661	8,326	9,991	11,656	13,322	14,987	16,652
5	920.0	TO	1150.0	1,666	3,333	4,999	6,665	8,332	9,998	11,664	13,330	14,997	16,663
6	1150.0	TO	1380.0	1,666	3,333	4,999	6,665	8,331	9,998	11,664	13,330	14,997	16,663
7	1380.0	TO	1610.0	1,666	3,333	4,999	6,666	8,332	9,998	11,665	13,331	14,998	16,664
8	1610.0	TO	1840.0	1,667	3,334	5,000	6,667	8,334	10,001	11,668	13,334	15,001	16,668
9	1840.0	TO	2070.0	1,667	3,334	5,001	6,668	8,335	10,002	11,669	13,336	15,003	16,670

Liquid Head Calculated for a density of the stored product of 0.750 kg/l @ 15 °C

Volume reflect a steel temperature of 15 °C

Nominal Size – 46.0 M Diameter x 23.0 M Height

Design Liquid Level – 2068.5 cm

Tank No: SRT-T-25-021							CLIENT NAME LOCATION
							METER 0
CM	Liters	CM	Liters	CM	Liters	CM	Liters
0	3,164	25	316,393	50	731,667	75	1,147,416
1	6,705	26	332,992	51	748,294	76	1,164,047
2	10,246	27	349,591	52	764,921	77	1,180,678
3	13,787	28	366,188	53	781,547	78	1,197,308
4	23,268	29	382,786	54	798,174	79	1,213,939
5	32,749	30	399,385	55	814,805	80	1,230,569
6	42,230	31	415,983	56	831,436	81	1,247,200
7	51,711	32	432,582	57	848,066	82	1,263,831
8	64,920	33	449,201	58	864,697	83	1,280,461
9	78,129	34	465,820	59	881,327	84	1,297,092
10	91,338	35	482,439	60	897,958	85	1,313,722
11	104,547	36	499,058	61	914,588	86	1,330,353
12	117,379	37	515,667	62	931,219	87	1,346,983
13	130,210	38	532,275	63	947,850	88	1,363,614
14	143,042	39	548,884	64	964,480	89	1,380,245
15	155,874	40	565,492	65	981,111	90	1,396,875
16	171,430	41	582,101	66	997,741	91	1,413,506
17	186,870	42	598,709	67	1,014,372	92	1,430,136
18	202,310	43	615,320	68	1,031,002	93	1,446,767
19	217,750	44	631,931	69	1,047,633	94	1,463,397
20	233,189	45	648,545	70	1,064,264	95	1,480,028
21	249,962	46	665,159	71	1,080,894	96	1,496,659
22	266,575	47	681,786	72	1,097,525	97	1,513,289
23	283,188	48	698,413	73	1,114,155	98	1,529,920
24	299,794	49	715,040	74	1,130,786	99	1,546,550

Liquid Head Calculated for a density of the stored product of 0.750 kg/l @ 15 °C

Volume reflect a steel temperature of 15 °C

Nominal Size – 46.0 M Diameter x 23.0 M Height

Design Liquid Level – 2068.5 cm

Cert. No: IETQ-CLIENT-2017/007

Tank No: SRT-T-25-021							CLIENT NAME LOCATION
							METER 1
CM	Liters	CM	Liters	CM	Liters	CM	Liters
100	1,563,181	125	1,978,837	150	2,394,439	175	2,810,041
101	1,579,811	126	1,995,461	151	2,411,063	176	2,826,665
102	1,596,442	127	2,012,085	152	2,427,687	177	2,843,289
103	1,613,073	128	2,028,709	153	2,444,311	178	2,859,913
104	1,629,703	129	2,045,333	154	2,460,935	179	2,876,537
105	1,646,331	130	2,061,958	155	2,477,559	180	2,893,161
106	1,662,959	131	2,078,582	156	2,494,184	181	2,909,785
107	1,679,584	132	2,095,206	157	2,510,808	182	2,926,410
108	1,696,209	133	2,111,830	158	2,527,432	183	2,943,034
109	1,712,835	134	2,128,454	159	2,544,056	184	2,959,658
110	1,729,460	135	2,145,078	160	2,560,680	185	2,976,282
111	1,746,086	136	2,161,702	161	2,577,304	186	2,992,906
112	1,762,711	137	2,178,326	162	2,593,928	187	3,009,530
113	1,779,336	138	2,194,950	163	2,610,552	188	3,026,154
114	1,795,962	139	2,211,574	164	2,627,176	189	3,042,778
115	1,812,587	140	2,228,198	165	2,643,800	190	3,059,402
116	1,829,213	141	2,244,822	166	2,660,424	191	3,076,026
117	1,845,838	142	2,261,446	167	2,677,048	192	3,092,650
118	1,862,464	143	2,278,071	168	2,693,672	193	3,109,274
119	1,879,089	144	2,294,695	169	2,710,297	194	3,125,898
120	1,895,714	145	2,311,319	170	2,726,921	195	3,142,523
121	1,912,340	146	2,327,943	171	2,743,545	196	3,159,147
122	1,928,965	147	2,344,567	172	2,760,169	197	3,175,771
123	1,945,589	148	2,361,191	173	2,776,793	198	3,192,395
124	1,962,213	149	2,377,815	174	2,793,417	199	3,209,019

Liquid Head Calculated for a density of the stored product of 0.750 kg/l @ 15 °C

Volume reflect a steel temperature of 15 °C

Nominal Size – 46.0 M Diameter x 23.0 M Height

Design Liquid Level – 2068.5 cm

Tank No: SRT-T-25-021							CLIENT NAME LOCATION
							METER 2
CM	Liters	CM	Liters	CM	Liters	CM	Liters
200	3,225,643	225	3,641,245	250	4,056,986	275	4,472,762
201	3,242,267	226	3,657,869	251	4,073,617	276	4,489,393
202	3,258,891	227	3,674,493	252	4,090,248	277	4,506,024
203	3,275,515	228	3,691,117	253	4,106,879	278	4,522,655
204	3,292,139	229	3,707,741	254	4,123,510	279	4,539,286
205	3,308,763	230	3,724,365	255	4,140,141	280	4,555,917
206	3,325,387	231	3,740,997	256	4,156,772	281	4,572,548
207	3,342,011	232	3,757,628	257	4,173,403	282	4,589,179
208	3,358,636	233	3,774,259	258	4,190,034	283	4,605,810
209	3,375,260	234	3,790,890	259	4,206,665	284	4,622,441
210	3,391,884	235	3,807,521	260	4,223,296	285	4,639,072
211	3,408,508	236	3,824,152	261	4,239,927	286	4,655,703
212	3,425,132	237	3,840,783	262	4,256,558	287	4,672,334
213	3,441,756	238	3,857,414	263	4,273,189	288	4,688,965
214	3,458,380	239	3,874,045	264	4,289,820	289	4,705,596
215	3,475,004	240	3,890,676	265	4,306,451	290	4,722,227
216	3,491,628	241	3,907,307	266	4,323,083	291	4,738,858
217	3,508,252	242	3,923,938	267	4,339,714	292	4,755,489
218	3,524,876	243	3,940,569	268	4,356,345	293	4,772,120
219	3,541,500	244	3,957,200	269	4,372,976	294	4,788,751
220	3,558,125	245	3,973,831	270	4,389,607	295	4,805,382
221	3,574,749	246	3,990,462	271	4,406,238	296	4,822,013
222	3,591,373	247	4,007,093	272	4,422,869	297	4,838,644
223	3,607,997	248	4,023,724	273	4,439,500	298	4,855,275
224	3,624,621	249	4,040,355	274	4,456,131	299	4,871,906

Liquid Head Calculated for a density of the stored product of 0.750 kg/l @ 15 °C

Volume reflect a steel temperature of 15 °C

Nominal Size – 46.0 M Diameter x 23.0 M Height

Design Liquid Level – 2068.5 cm

Cert. No: IETQ-CLIENT-2017/007

Tank No: SRT-T-25-021							CLIENT NAME LOCATION
							METER 3
CM	Liters	CM	Liters	CM	Liters	CM	Liters
300	4,888,537	325	5,304,312	350	5,720,088	375	6,135,863
301	4,905,168	326	5,320,943	351	5,736,719	376	6,152,494
302	4,921,799	327	5,337,574	352	5,753,350	377	6,169,125
303	4,938,430	328	5,354,205	353	5,769,981	378	6,185,756
304	4,955,061	329	5,370,836	354	5,786,612	379	6,202,387
305	4,971,692	330	5,387,467	355	5,803,243	380	6,219,018
306	4,988,323	331	5,404,098	356	5,819,874	381	6,235,649
307	5,004,954	332	5,420,729	357	5,836,505	382	6,252,280
308	5,021,585	333	5,437,360	358	5,853,136	383	6,268,911
309	5,038,216	334	5,453,991	359	5,869,767	384	6,285,542
310	5,054,847	335	5,470,622	360	5,886,398	385	6,302,173
311	5,071,478	336	5,487,254	361	5,903,029	386	6,318,804
312	5,088,109	337	5,503,885	362	5,919,660	387	6,335,435
313	5,104,740	338	5,520,516	363	5,936,291	388	6,352,066
314	5,121,371	339	5,537,147	364	5,952,922	389	6,368,697
315	5,138,002	340	5,553,778	365	5,969,553	390	6,385,328
316	5,154,633	341	5,570,409	366	5,986,184	391	6,401,959
317	5,171,264	342	5,587,040	367	6,002,815	392	6,418,590
318	5,187,895	343	5,603,671	368	6,019,446	393	6,435,221
319	5,204,526	344	5,620,302	369	6,036,077	394	6,451,852
320	5,221,157	345	5,636,933	370	6,052,708	395	6,468,483
321	5,237,788	346	5,653,564	371	6,069,339	396	6,485,114
322	5,254,419	347	5,670,195	372	6,085,970	397	6,501,745
323	5,271,050	348	5,686,826	373	6,102,601	398	6,518,376
324	5,287,681	349	5,703,457	374	6,119,232	399	6,535,007

Liquid Head Calculated for a density of the stored product of 0.750 kg/l @ 15 °C

Volume reflect a steel temperature of 15 °C

Nominal Size – 46.0 M Diameter x 23.0 M Height

Design Liquid Level – 2068.5 cm

Tank No: SRT-T-25-021							CLIENT NAME LOCATION
							METER 20
CM	Liters	CM	Liters	CM	Liters	CM	Liters
2000	33,205,715	2025	33,622,472	2050	34,039,229		
2001	33,222,385	2026	33,639,142	2051	34,055,899		
2002	33,239,055	2027	33,655,812	2052	34,072,569		
2003	33,255,726	2028	33,672,483	2053	34,089,239		
2004	33,272,396	2029	33,689,153	2054	34,105,910		
2005	33,289,066	2030	33,705,823	2055	34,122,580		
2006	33,305,736	2031	33,722,493	2056	34,139,250		
2007	33,322,407	2032	33,739,164	2057	34,155,921		
2008	33,339,077	2033	33,755,834	2058	34,172,591		
2009	33,355,747	2034	33,772,504	2059	34,189,261		
2010	33,372,418	2035	33,789,174	2060	34,205,931		
2011	33,389,088	2036	33,805,845	2061	34,222,602		
2012	33,405,758	2037	33,822,515	2062	34,239,272		
2013	33,422,428	2038	33,839,185	2063	34,255,942		
2014	33,439,099	2039	33,855,856	2064	34,272,612		
2015	33,455,769	2040	33,872,526	2065	34,289,283		
2016	33,472,439	2041	33,889,196	2066	34,305,953		
2017	33,489,110	2042	33,905,866	2067	34,322,623		
2018	33,505,780	2043	33,922,537	2068	34,339,294		
2019	33,522,450	2044	33,939,207	2069	34,355,964		
2020	33,539,120	2045	33,955,877	2070	34,372,634		
2021	33,555,791	2046	33,972,548				
2022	33,572,461	2047	33,989,218				
2023	33,589,131	2048	34,005,888				
2024	33,605,801	2049	34,022,558				

Liquid Head Calculated for a density of the stored product of 0.750 kg/l @ 15 °C

Volume reflect a steel temperature of 15 °C

Nominal Size – 46.0 M Diameter x 23.0 M Height

Design Liquid Level – 2068.5 cm

Tank No: SRT-T-25-021

CLIENT NAME
LOCATION

DENSITY CORRECTION TABLE FOR FLOATING ROOF

Based on height of liquid in the tank, allowance has to be made for the displacement of the floating roof. Distance between 2 roof positions - maintenance and operation - is 100.0 cm.

Zone 1: For liquid heights below 170.0 cm (maintenance position) or below 70.0 cm (operating position) The roof is resting on its supports and the liquid is not touching the surface of the roof. No correction has to be applied to the values calculated from the main tables.

Zone 2: For liquid level between 170.0 and 250.0 cm (maintenance position) or between 70.0 cm and 150.0 cm (operating position) The roof is partially immersed in the liquid and resting partially on the supports. THE VOLUME IN THIS ZONE CANNOT BE ACCURATELY DETERMINED. THIS IS CALLED THE PARTIAL FLOATATION ZONE.

Zone 3: For liquid heights above 250.0 cm (maintenance position) or above 150.0 cm (operating position) The roof is freely floating. From the values calculated from the main table, the volume correction obtained from the table below should be deducted against density of the product.

WEIGHT OF THE FLOATING ROOF AS GIVEN = 246,666 KG.

DENS:	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009
0.70	352,380	351,877	351,376	350,876	350,378	349,881	349,385	348,891	348,398	347,907
0.71	347,417	346,928	346,441	345,955	345,471	344,987	344,506	344,025	343,546	343,068
0.72	342,592	342,117	341,643	341,170	340,699	340,229	339,760	339,293	338,827	338,362
0.73	337,899	337,436	336,975	336,516	336,057	335,600	335,144	334,689	334,236	333,783
0.74	333,332	332,883	332,434	331,987	331,540	331,095	330,651	330,209	329,767	329,327
0.75	328,888	328,450	328,013	327,578	327,143	326,710	326,278	325,847	325,417	324,988
0.76	324,561	324,134	323,709	323,284	322,861	322,439	322,018	321,598	321,180	320,762
0.77	320,345	319,930	319,516	319,102	318,690	318,279	317,869	317,459	317,051	316,644
0.78	316,238	315,834	315,430	315,027	314,625	314,224	313,824	313,426	313,028	312,631
0.79	312,235	311,841	311,447	311,054	310,662	310,272	309,882	309,493	309,105	308,718
0.80	308,333	307,948	307,564	307,181	306,799	306,417	306,037	305,658	305,280	304,902
0.81	304,526	304,150	303,776	303,402	303,029	302,658	302,287	301,917	301,548	301,179
0.82	300,812	300,446	300,080	299,716	299,352	298,989	298,627	298,266	297,906	297,546
0.83	297,188	296,830	296,474	296,118	295,763	295,408	295,055	294,703	294,351	294,000
0.84	293,650	293,301	292,952	292,605	292,258	291,912	291,567	291,223	290,880	290,537
0.85	290,195	289,854	289,514	289,175	288,836	288,498	288,161	287,825	287,490	287,155

Tank No: SRT-T-25-021										CLIENT NAME
										LOCATION
DENSITY CORRECTION TABLE FOR FLOATING ROOF										
WEIGHT OF THE FLOATING ROOF AS GIVEN = 246,666 KG.										
DENS:	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009
0.86	286,821	286,488	286,155	285,824	285,493	285,163	284,834	284,505	284,177	283,850
0.87	283,524	283,199	282,874	282,550	282,227	281,904	281,582	281,261	280,941	280,621
0.88	280,302	279,984	279,667	279,350	279,034	278,719	278,404	278,090	277,777	277,465
0.89	277,153	276,842	276,531	276,222	275,913	275,604	275,297	274,990	274,684	274,378
0.90	274,073	273,769	273,466	273,163	272,861	272,559	272,258	271,958	271,659	271,360
0.91	271,062	270,764	270,467	270,171	269,875	269,580	269,286	268,992	268,699	268,407
0.92	268,115	267,824	267,534	267,244	266,955	266,666	266,378	266,091	265,804	265,518
0.93	265,232	264,947	264,663	264,379	264,096	263,814	263,532	263,251	262,970	262,690
0.94	262,411	262,132	261,854	261,576	261,299	261,022	260,746	260,471	260,196	259,922
0.95	259,648	259,375	259,103	258,831	258,560	258,289	258,019	257,749	257,480	257,212
0.96	256,944	256,676	256,410	256,143	255,878	255,612	255,348	255,084	254,820	254,557
0.97	254,295	254,033	253,772	253,511	253,251	252,991	252,732	252,473	252,215	251,957
0.98	251,700	251,443	251,187	250,932	250,677	250,422	250,168	249,915	249,662	249,410
0.99	249,158	248,906	248,655	248,405	248,155	247,906	247,657	247,408	247,160	246,913
1.00	246,666	246,420	246,174	245,928	245,683	245,439	245,195	244,951	244,708	244,466

Tank No: SRT-T-25-021**CLIENT NAME****LOCATION****CALIBRATION CERTIFICATE : IETQ-CLIENT-2017/007**

Tank No: SRT-T-25-021, having capacity of 34,372,634 liters in 2070.0 cm , mounted in client name, location was calibrated by Inside Exploration Technologies WLL for standardization, measures and quality control in December 2016

The upright cylindrical tank consists of 10 butt welded courses.

The top enclosure of the tank is a External Floating Roof.

The tank was calibrated by geometrical method according to API MPMS 2.2 A "Method for measurement and Calibration of upright cylindrical tanks" and API MPMS 2.2 C "Method for measurement and Calibration of upright cylindrical tanks by Optical Triangulation Method"

In case of difference between observed tank temperature and reference temperature of capacity table (15 deg. C), the mentioned volumes should be corrected temperature correction factor $F_o = [1 + \alpha(T_l - T_s)] * [1 + 2 * \alpha(T_t - T_s)]$.

where: (α)= coefficient linear expansion of tank shell metal, (T_s)= reference temper. of capacity table, (T_l)= liquid temper., (T_t)= tank temperature.

Liquid Head Calculated for a density of the stored product of 0.750 kg/l @ 15 °C. As density is directly proportional to volume, any deviation in product density will reflect in the volume calculation.

The Calibration report and the calibration tables are included in this certificate.

Reviewed & Approved By:

Technical In-Charge | Tank Survey &
Calibration Division