



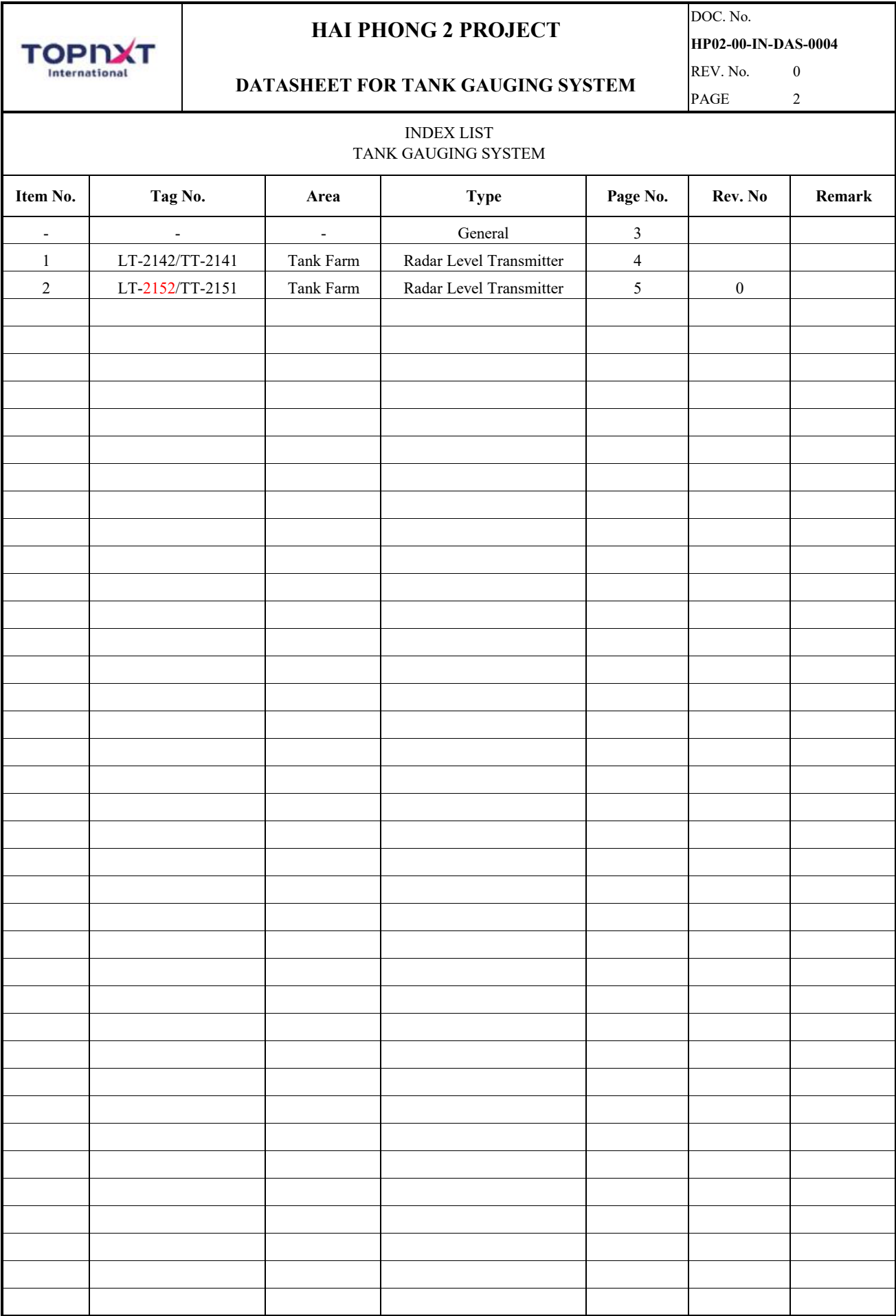



## DATASHEET FOR TANK GAUGING SYSTEM


**HP02-00-IN-DAS-0004**

0	8-Nov-23	Approval for Construction		D.T.T	L.V.D	N.T.S
A	16-Oct-23	Issue for Review		D.T.T	L.V.D	N.T.S
REV. NO.	DATE	DESCRIPTION		PREP'N	CHECK	REVIEW
REV. NO.	DISCIPLINE	PREPARATION	CHECK	REVIEW		APPROVAL
0	INSTRUMENT					
		D.T.T	L.V.D	N.T.S		V.L.T

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	<p style="text-align: center;"><b>HAI PHONG 2 PROJECT</b></p> <p style="text-align: center;"><b>DATASHEET FOR TANK GAUGING SYSTEM</b></p>	<p>DOC. No. <b>HP02-00-IN-DAS-0004</b></p> <p>REV. No.        0</p> <p>PAGE             3</p>
<p><b>Tank Gauging System - Custody / Inventory Service Requirement</b></p> <p>I. Measurement type: Radar Level Transmitters &amp; Multi-spot Temperature Elements.</p> <p>1. <b>New</b> TGS system shall be used to the existing TGS system comply with the project specification &amp; other statutory requirements. Refer below:</p> <ul style="list-style-type: none"> <li>- Existing number of tank: 04.</li> <li>- New number of tank: 02. (see detail in datasheet)</li> <li>- Existing number tank spare for future: 08 (shall be used to 02 new tank)</li> <li>- Level transmitter shall have built in I.S. barriers.</li> <li>- Transmitters shall be grouped to provide the loop power as well the connection to the <b>Tank Hub via Foundation Fieldbus</b></li> <li>- <b>Available main power supply: 220VAC 50Hz</b></li> <li>- <b>Tank Computer: Rosemount Tank Master WinOPI</b></li> <li>- The Multi-spot Temperature element (with water bottom sensor where required) shall be suitable for Zone 0 hazardous area classification.</li> <li>- Multi-spot Temperature element shall be supplied complete with all accessories and cable link to Level Transmitter.</li> </ul> <p>a) Model : By vendor / <b>RTD</b>, Pt 100 ohm (at 0 deg C).</p> <p>b) EEx ia IIC T2-T6</p> <p>c) Head mounted junction box (Exe IIC T6 /IP65).</p> <p>d) Anchor weight suitable for fitting in to the scheduled pipe for each tag.</p> <p>e) 10 spots</p> <p>f) Measurable range: -50 to 200 deg C.</p> <p>g) Material of sheath: SS316.</p> <p>h) Accuracy: +/- 0.25 deg C.</p> <ul style="list-style-type: none"> <li>- Tank side monitor:</li> </ul> <p>a) Ex ia IIB T4 / IP66.</p> <ul style="list-style-type: none"> <li>- Power Isolator: EEx 'ed' IIB T6 / IP66.</li> </ul> <p>2. All electronics of Tank gauging transmitters shall be possible to be removed for maintenance if required with out removing the antenna</p> <p>3. Surge Protection for Lightning, Surge &amp; Transient Protection</p> <p>4. All new Tank Gauging equipments must be compatible with existing Tank Master Inventory software. No need to equip new PC and software, just modify and upgrade existing software.</p> <p>5. Conduct install new TGS including installation field equipment, calibration, setting up tank data into Tank Computer Rosemount: Tank Master WinOPI.</p> <p>6. Radar level gauge needs to be equipped with "low loss mode" and "drip off" technology</p>		
<p><i>Notes</i></p>		

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No.	Item	Description	Requirement				Remark	Rev.
<b>A Process Data</b>			<i>Min</i>	<i>Normal</i>	<i>Max</i>	<i>Unit</i>		
1		Design Temperature	20	40	70	<sup>0</sup> C		
2		Design Pressure	-5	5	55	mBarg		
3		Viscosity	0.33	-	0.45	Cp		
4		Density	670	-	920	Kg/m <sup>3</sup>		
5		Ambient Temperature	10	-	45	<sup>0</sup> C		
6		Relative Humidity			85	%		
<b>B Tank Data</b>								
1		Fluid Name	Hydrocacbon Solvent		Fluid Phase	Liquid		
2		Level Liquid	350	-	16450	mm		
3		Level Nozzle Size/Rating	8" - ANSI 150# - RF		Nozzle High	17600mm		
4		Temp. Nozzle Size/Rating	2" - ANSI 150# - RF		Nozzle High	17600mm		
5		Equipment High	17500 mm					
6		Agitation Type	No		Foaming	No		
7		Internal Floating	No					
<b>C Element</b>								
1	<i>Level</i>	Type	None-Contact Radar Level Gauge					0
2		Level Measuring Principle	FMCW (Fequency Modulated Continuous Ware)					0
3		Beam Angle	B.V		Oper. Frequency	10Ghz		0
4		Material	316L SS					
5		Level From Face      Max. (mm)	350		Min (mm)	16450		
6	<i>Temp. Sensor</i>	Type	RTD, Pt100		Points	10		0
7		Cable entry	B.V		Enclousre	IP 65		
8		Electrical Protection Class	Ex [ia] IIB T4, IP67					
9		Flange connection	2" ANSI#150 RF					
10		Thermal well type	Flexible		Material	316 L		
11		Insert length	B.V		Overall Length	B.V		
<b>D Transmitter</b>								
1	<i>Housing</i>	Transmitter Housing	Aluminium		Cable Entry	1/2 NPT-F		
2		Remote Gauge Transmitter	Remote		Cable Entry	1/2 NPT-F		
3		Number of cable entry	B.V		Enclosure	IP 65		
4	<i>Transmitter</i>	Ground reading indicator	milimeter/percent					
5		Output	Foundation Fieldbus and/or TRL/2 bus					0
6		Power supply	9 - 17 VDC 2-wire loop powerby Tank Hub					0
7		Water bottom sensor	No					0
8		Accuracy	+/- 0.5 mm					0
9		Area Classification	Zone 1 - IIB T4					
10		Electrical Protection Class	Ex [ia] IIB T4, IP67					
11		Main Panel location	None-Hazardous		Enclosure	B.V		
12		Computer/printer/software	No (No need to equip new PC and software, just modify and upgrade existing software)					0
<b>E Purchase and service</b>								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Site Calibration					
4		Sil level						
<b>F General</b>								
1		Tag-Name	LT-2142/TT-2141					
2		P&ID	HP02-00-PR-PID-0014					
3		Service	TK-208					
Notes B.V: By Vendor                      V.T.A : Vendor To Advise								

