

HAYAN
PETROLEUM
COMPANY



شركة حيان
للنفط

FIELDS PRODUCTION MANAGEMENT

Date: 08 / 03 /2026

Enquiry No: MWR: 012/INS/FIELD/PROC/26

REQUEST FOR QUOTATION

Control Valves for GTP Stage .3 and Stage 2

item	Description	Unit		Price
		Class	Qty	
1	2" level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-1101 Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no. 1	piece	1	
2	2" level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-1102 Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no.2	Piece	1	
3	2" level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-1103 Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no. 3	Piece	1	
4	2" level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-1401 Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no. 4	Piece	1	
5	3" level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-1404 Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no. 5	Piece	1	

Handwritten signature

6	<p>1" level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-1403 Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no. 6</p>	Piece	1	
7	<p>3" level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-2101-04 Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no. 7</p>	Piece	1	
8	<p>2 " level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-2102-04B Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no. 8</p>	Piece	1	
9	<p>1 " level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-2403-01 Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no. 9</p>	Piece	1	
10	<p>1 " level control valve (body + actuator +positioner) : Manufacturer : SEVERN GLOCON LTD Local tag no. : LV-2401-02 Note : we need complete level control valve with its positioner Siemens positioner sipart PS2,Model no.6DR5210-0EG00-0AA0 With complete air circuit The required technical specifications are in attached file Attachment no. 10</p>	Piece	1	

GENERAL NOTE: In case that during tendering, in spite of stated model number and belonging attachment, some bidder would be still in doubt or wouldn't have enough technical data about particular item it's strongly recommended to ask for additional clarification.





Property of TECHNIP KTI S.p.A. to be returned upon request and used only in reference to contract or proposal of this company reproduction of this print of unauthorized use of patented or patentable features disclosed hereon is prohibited.

General	1	Tag number				LV-1101					
	2	Service				HP/WATER					
	3	P&ID No.		Req. / P.O. No.		30602-110-PID-0021-01					
	4	Line Number				3"-SW-CA301-110-06-N					
	5	Area Classification				IIG					
	6	Ambient Temperature:		Min.	Max.			-5 °C	+52 °C		
	7	Available Pneum. Supply Pressure:		Min.	Max.			3,5 barg	10,0 barg		
	8	Manufacturer		Model							
	9	Weight (kg)		Serial Number							
Process Conditions	10	Process Fluid / PED Group		Phase		SALTY WATER		WATER			
	11	DP@ Shut Off		Corrosive	Toxic						
	12	Design Pressure		Design Temperature		82 barg (2)		100 °C			
	13					Units	@ Min. Flow	@ Norm. Flow	@ Max. Flow		
	14	Flow Rate				kg/h	10895				
	15	Inlet Pressure				barg	78,00				
	16	Pressure Drop				bar	87,00				
	17	Outlet pressure				barg	11,00				
	18	Inlet Temperature				°C	63,00				
	19	Specific Heat Ratio (K)				--					
	20	Molecular Mass				---					
	21	Density (Upstream)				kg/m ³					
	22	Compressibility (Z)				--					
	23	Viscosity				cP	0,444				
	24	Critical Pressure				barg					
	25	Vapour Pressure				barg					
	26	Specific Gravity				--					
Calculated Results	27	Allow. Sound Press. Level		Req. Leakage Class		dBa / --		80	IV		
	28	Flow Coefficient Cv						1,7			
	29	Travel				%		Mfr. Std.			
Body & Trim	30	Sound Pressure Level				dBa		Mfr. Calc. Data			
	31	Body Size	Body Type	1/2"	GLOBE	Positioner	58 Manufacturer				
	32	Body Mat.	Stem Mat.	C.S.	316 St. St.		59 Model				
	33	Rated Cv	Rated Trvl.	3	57%		60 Type		PNEUMATIC (3)		
	34	Characteristics					61 Signal: Inlet		Outlet	0,2-1,0 Barg	0,2-1,0 Barg
	35	Flow Action to		CLOSE			62 Bypass		Gauges	REQUIRED	METRIC
	36	Size Inlet / Outlet (inch)		2" / 2"		63 El. Conn		Conn.			
	37	Rating Inlet / Outlet (lbs)		600# / 600#		64 Electrical certification					
	38	End prep. Inlet/Outlet		RF / RF		65 Tag. No.		LUY-1101			
	39	Bonnet type	Material	STANDARD	C.S.	66 Type		Size (mm)			
	40	Bolting Material				67 Manufacturer					
	41	Lubricator	Isolat. Valve			68 Model		Spec. 00805-OGS-S-000-C01-CVS-630			
	42	Guiding	No. of Ports		1	69 When De-Energ. Valve to					
	43	Trim type	Trim size			70 Power Suppl.		El. certific.			
	44	Plug type		= %		71 Manual Reset					
	45	Trim Material		304 St. St.		72 Tag Open		Tag Close			
	46	Seat Mat.	Packing Mat.	316 St. St.	TEFLON	73 Type					
47	NACE Requirements				74 Manufacturer						
48	Hydrogen Service				75 Model						
Actuator	49	Type		SPRING DIAPHRAGM		76 Electrical certification					
	50	Area (mm ²)				77					
	51	Fail Position		CLOSE		78 Manufacturer					
	52	Handweel				79 Model					
	53	Spring range		Mfr. Std.		80 Set Pressure					
	54	Mounting Orientation				81 Filter		Gauge	REQUIRED	METRIC	
	55	Manufacturer				82					
	56	Model				83 Hydro. Pressure					
	57					84 Leakage					

Notes:

1. ACCORDING TO ATEX/PED NORMATIVE
2. MAX SHUT OFF ΔP 78 bar
3. AIR SUPPLY 3.5-8 barg ACTION / CHARACTERISTICS: DIRECT / LINEAR
4. TUBING MATERIAL / FITTING TYPE & SIZE: SS / SWAGelok / 0.25"
5. STELLITED St.St. FACING FOR VALVE PLUG, SEAT, POSTS & GUIDES WITH SOLID STELLITED SEAT RINGS

1	20.04.08.	NK	ER				FINAL REVISION	Instrument Data Sheet CONTROL VALVE	  Technip KTI
0	10.10.08.	NK	ER	ZK	ZK		ISSUE FOR BIDDING		
B	01.08.08	DSO	EMA	ADB	ADB		REISSUED FOR INQUIRY		
A	26.06.08	DSO	EMA	ADB	ADB		ISSUED FOR INQUIRY		
Rev.	Date	Wrt	Verif	App	Aut		Description	Spec.No. 00805-OGS-000-CVS-601	Sh.: 3 / 25 Rev.: 1

MOD - PRC - Rev. A

of TECHNIP, KTI, S.p.A. to be returned upon request and used only in reference to contract or proposal of this company reproduction of this print or authorized use of patented or patentable features disclosed herein is prohibited.

				LV-1102						
General	1	Tag number		LV-1102						
	2	Service		HP/HC OUT						
	3	P&ID No.	Req. / P.O. No.		30602-110-PID-0021-01					
	4	Line Number		3"-HC-CA301-110-04-N						
	5	Area Classification		IIG						
	6	Ambient Temperature:		Min.	Max.	-5 °C	+52 °C			
	7	Available Pneum. Supply Pressure:		Min.	Max.	3,5 barg	10,0 barg			
	8	Manufacturer	Model							
	9	Weight (kg)	Serial Number							
Process Conditions	10	Process Fluid / PED Group		Phase		HIGH PRESSURE CONDENSATE				
	11	DP@ Shut Off	Corrosive	Toxic						
	12	Design Pressure	Design Temperature		82 barg (2)		100 °C			
	13			Units	@ Min. Flow	@ Norm. Flow	@ Max. Flow			
	14	Flow Rate			kg/h	20158				
	15	Inlet Pressure			barg	78,00				
	16	Pressure Drop			bar	67,00				
	17	Outlet pressure			barg	11,00				
	18	Inlet Temperature			°C	63,00				
	19	Specific Heat Ratio (K)			--					
	20	Molecular Mass			---					
	21	Density (Upstream)			kg/m ³	648,00				
	22	Compressibility (Z)			--					
	23	Viscosity			cP	0,266				
	24	Critical Pressure			barg					
	25	Vapour Pressure			barg					
	26	Specific Gravity			--					
Calculated Results	27	Allow. Sound Press. Level	Req. Leakage Class		dBa / --	80	IV			
	28	Flow Coefficient Cv				3,9				
	29	Travel			%	Mfr.Std.				
	30	Sound Pressure Level			dBa	Mfr. Calc. Data				
Body & Trim	31	Body Size	Body Type	1"	GLOBE					
	32	Body Mat.	Stem Mat.	C.S.	316 St. St.					
	33	Rated Cv	Rated Trvl.	12	31%					
	34	Characteristics								
	35	Flow Action to		CLOSE						
	36	Size Inlet / Outlet (inch)	2"		2"					
	37	Rating Inlet / Outlet (lbs)	800#		800#					
	38	End prep. Inlet/Outlet		RF						
	39	Bonnet type	Material	STANDARD	C.S.					
	40	Bolting Material								
	41	Lubricator	Isolat. Valve							
	42	Guiding	No. of Ports	1						
43	Trim type	Trim size								
44	Plug type	= %								
45	Trim Material	304 St. St.								
46	Seat Mat.	Packing Mat.	316 St. St.	TEFLON						
47	NACE Requirements									
48	Hydrogen Service									
Actuator	49	Type	SPRING DIAPHRAGM							
	50	Area (mm ²)								
	51	Fail Position	CLOSE							
	52	Handweel								
	53	Spring range	Mfr. Std.							
	54	Mounting Orientation								
	55	Manufacturer								
	56	Model								
	57									
					Positioner	58	Manufacturer			
						59	Model			
						60	Type	PNEUMATIC (3)		
						61	Signal: Inlet	Outlet	0,2-1,0 Barg	0,2-1,0 Barg
						62	Bypass	Gauges	REQUIRED	METRIC
						63	El. Conn	Conn.		
						64	Electrical certification			
						65	Tag. No.	LUV-1102		
						66	Type	Size (mm)		
						67	Manufacturer			
						68	Model	Spec. 00805-OGS-S-000-C01-CVS-630		
						69	When De-Energ. Valve to			
						70	Power Suppl.	El.certific.		
						71	Manual Reset			
						72	Tag Open	Tag Close		
						73	Type			
						74	Manufacturer			
						75	Model			
						76	Electrical certification			
						77				
						78	Manufacturer			
						79	Model			
						80	Set Pressure			
						81	Filter	Gauge	REQUIRED	METRIC
						82				
						83	Hydro. Pressure			
						84	Leakage			

Notes:

1. ACCORDING TO ATEX/PED NORMATIVE
2. MAX SHUT OFF ΔP 78 bar
3. AIR SUPPLY 3.5-8 barg ACTION / CHARACTERISTICS: DIRECT / LINEAR
4. TUBING MATERIAL / FITTING TYPE & SIZE: SS / SWAGELOK / 0.25"
5. STELLITED St.St. FACING FOR VALVE PLUG, SEAT, POSTS & GUIDES WITH SOLID STELLITED SEAT RINGS

All rights reserved. All trademarks are the property of their respective owners. All other trademarks are the property of their respective owners. All other trademarks are the property of their respective owners.

General	1	Tag number			LV-1103				
	2	Service			TP/WATER				
	3	P&ID No.	Req. / P.O. No.		30602-110-PID-0021-02				
	4	Line Number			3"-SW-CA301-110-15-N				
	5	Area Classification			II2G				
	6	Ambient Temperature:		Min.	Max.			-5 °C	+52 °C
	7	Available Pneum. Supply Pressure:		Min.	Max.			3,5 barg	10,0 barg
	8	Manufacturer	Model						
	9	Weight (kg)	Serial Number						
Process Conditions	10	Process Fluid / PED Group		Phase		SALTY WATER		WATER	
	11	DP@ Shut Off	Corrosive	Toxic					
	12	Design Pressure		Design Temperature		12 barg (2)		100 °C	
	13				Units	HP Sep Case	MP Sep Case	Jazal Case	
	14	Flow Rate		kg/h		10695	25712	15 m³/h	
	15	Inlet Pressure		barg		78,00	11,00	11,00	
	16	Pressure Drop		bar		67,00	10,00	10,00	
	17	Outlet pressure		barg		11,00	1,00	1,00	
	18	Inlet Temperature		°C		63,00	46,00	20,00	
	19	Specific Heat Ratio (K)		--					
	20	Molecular Mass		---					
	21	Density (Upstream)		kg/m³		997,50	997,60	1000,00	
	22	Compressibility (Z)		--					
	23	Viscosity		cP		0,583	0,583	0,583	
	24	Critical Pressure		barg					
	25	Vapour Pressure		barg					
	26	Specific Gravity		--					
	Calculated Results	27	Allow. Sound Press. Level	Req. Leakage Class		dBa / --	80	IV	
28		Flow Coefficient Cv				10,2	1,7	5,99	
29		Travel				%	Mfr.Std.		
Body & Trim	30	Sound Pressure Level				dBa	Mfr. Calc. Data		
	31	Body Size	Body Type	1½"	GLOBE				
	32	Body Mat.	Stem Mat.	C.S.		316 St. St.			
	33	Rated Cv	Rated Trvl.	27		4 - 58%			
	34	Characteristics					Positioner		
	35	Flow Action to		CLOSE					
	36	Size Inlet / Outlet (inch)		2"		2"			
	37	Rating Inlet / Outlet (lbs)		600#		600#			
	38	End prep. Inlet/Outlet		RF		RF			
	39	Bonnet type	Material	STANDARD		C.S.			
	40	Bolting Material					Solenoid		
	41	Lubricator	Isolat. Valve						
	42	Guiding	No. of Ports		1				
	43	Trim type	Trim size						
	44	Plug type	= %						
	45	Trim Material		304 St. St.					
	46	Seat Mat.	Packing Mat.	316 St. St.		TEFLON			
	47	NACE Requirements					Limit Switches		
48	Hydrogen Service								
Actuator	49	Type		SPRING DIAPHRAGM					
	50	Area (mm²)							
	51	Fail Position		CLOSE					
	52	Handweel					Air Set		
	53	Spring range		Mfr.Std.					
	54	Mounting Orientation							
	55	Manufacturer							
	56	Model							
	57						Tests		
58	Manufacturer		NELES						
59	Model		ND9106HX1						
60	Type		Valve controller, Digital						
61	Signal: Inlet	Outlet	4-20 mA		Pneumatic (3)				
62	Bypass	Gauges	REQUIRED		METRIC				
63	El. Conn	Conn.							
64	Electrical certification		ATEX II GD.EEEx ia IIC T6						
65	Tag. No.		LUY-1103						
66	Type	Size (mm)							
67	Manufacturer								
68	Model		Spec. 00805-OGS-S-000-C01-CVS-630						
69	When De-Energ.Valve to								
70	Power Suppl.	El.certific.							
71	Manual Reset								
72	Tag Open	Tag Close							
73	Type								
74	Manufacturer								
75	Model								
76	Electrical certification								
77									
78	Manufacturer								
79	Model								
80	Set Pressure								
81	Filter	Gauge	REQUIRED		METRIC				
82									
83	Hydro. Pressure								
84	Leakage								

Notes:

1. ACCORDING TO ATEX/PED NORMATIVE
2. MAX SHUT OFF ΔP 78 Bar
3. AIR SUPPLY 3.5-8 barg ACTION / CHARACTERISTICS: DIRECT / LINEAR
4. TUBING MATERIAL / FITTING TYPE & SIZE: SS / SWAGelok / 0.25"
5. STELLITED St.St. FACING FOR VALVE PLUG, SEAT, POSTS & GUIDES WITH SOLID STELLITED SEAT RINGS



Property of TECHNIP KTI S.p.A. to be returned upon request and used only in reference to contract or proposal of this company, reproduction of this print of unauthorized use of patented or patentable features disclosed herein is prohibited.

General	1	Tag number			LV-1401				
	2	Service			MP/WATER				
	3	P&ID No.	Req. / P.O. No.		30602-140-PID-0021-01				
	4	Line Number			3"-SW-AA301-140-10-N				
	5	Area Classification			IIGZ				
	6	Ambient Temperature:		Min.	Max.	-5 °C		+52 °C	
	7	Available Pneum. Supply Pressure:		Min.	Max.	3,5 barg		10,0 barg	
	8	Manufacturer	Model						
	9	Weight (kg)	Serial Number						
Process Conditions	10	Process Fluid / PED Group		Phase	SALTY WATER		WATER		
	11	DP@ Shut Off		Corrosive	Toxic				
	12	Design Pressure		Design Temperature		82 barg (2)		100 °C	
	13			Units	@ Min. Flow	@ Norm. Flow	@ Max. Flow		
	14	Flow Rate		kg/h		25712			
	15	Inlet Pressure		barg		11,00			
	16	Pressure Drop		bar		10,00			
	17	Outlet pressure		barg		1,00			
	18	Inlet Temperature		°C		48,00			
	19	Specific Heat Ratio (K)		--					
	20	Molecular Mass		---					
	21	Density (Upstream)		kg/m ³		972,00			
	22	Compressibility (Z)		--					
	23	Viscosity		cP		0,562			
	24	Critical Pressure		barg					
	25	Vapour Pressure		barg					
	26	Specific Gravity		--					
	Calculated Results	27	Allow. Sound Press. Level		Req. Leakage Class	dBa / --		80 IV	
28		Flow Coefficient Cv				10.209			
29		Travel		%		Mfr. Std.			
30	Sound Pressure Level		dBa		Mfr. Calc. Data				
Body & Trim	31	Body Size	Body Type	1½"	GLOBE				
	32	Body Mat.	Stem Mat.	C.S.	316 St. St.				
	33	Rated Cv	Rated Trvl.	27	38%				
	34	Characteristics							
	35	Flow Action to			CLOSE				
	36	Size Inlet / Outlet (inch)		2"	2"				
	37	Rating Inlet / Outlet (lbs)		150#	150#				
	38	End prep. Inlet/Outlet		RF	RF				
	39	Bonnet type	Material	STANDARD	C.S.				
	40	Bolting Material							
	41	Lubricator	Isolat. Valve						
	42	Guiding	No. of Ports			1			
	43	Trim type	Trim size						
	44	Plug type		= %					
	45	Trim Material		304 St. St.					
	46	Seat Mat.	Packing Mat.	316 St. St.	TEFLON				
	47	NACE Requirements							
	48	Hydrogen Service							
Actuator	49	Type		SPRING DIAPHRAGM					
	50	Area (mm ²)							
	51	Fail Position		CLOSE					
	52	Handweel							
	53	Spring range		Mfr. Std.					
	54	Mounting Orientation							
	55	Manufacturer							
	56	Model							
57									
Positioner	58	Manufacturer							
	59	Model							
	60	Type		PNEUMATIC (3)					
	61	Signal: Inlet	Outlet	0.2-1.0 Barg		0.2-1.0 Barg			
	62	Bypass	Gauges	REQUIRED		METRIC			
	63	El. Conn	Conn.						
	64	Electrical certification							
	65	Tag No.		LUY-1401					
66	Type	Size (mm)							
Solenoid	67	Manufacturer							
	68	Model		Spec. 00805-OGS-S-000-C01-CVS-630					
	69	When De-Energ. Valve to							
	70	Power Suppl.	El. certific.						
71	Manual Reset								
Limit Switches	72	Tag Open	Tag Close						
	73	Type							
	74	Manufacturer							
75	Model								
76	Electrical certification								
77									
Air Set	78	Manufacturer							
	79	Model							
	80	Set Pressure							
81	Filter	Gauge	REQUIRED		METRIC				
82									
Tests	83	Hydro. Pressure							
	84	Leakage							

Notes:

1. ACCORDING TO ATEX/PED NORMATIVE
2. MAX SHUT OFF ΔP 78 bar
3. AIR SUPPLY 3.5-8 barg ACTION / CHARACTERISTICS: DIRECT / LINEAR
4. TUBING MATERIAL / FITTING TYPE & SIZE: SS / SWAGelok / 0.25"
5. HARDENED St.St. FACING FOR VALVE PLUG, SEAT, POSTS & GUIDES

MOD - PRC - Rev. A

1	20.04.09.	NK	ER			FINAL REVISION	Instrument Data Sheet CONTROL VALVE	  Technip KTI
0	10.10.08.	NK	ER	ZK	ZK	ISSUE FOR BIDDING		
B	01.08.08	DSO	EMA	ADB	ADB	REISSUED FOR INQUIRY		
A	26.06.08	DSO	EMA	ADB	ADB	ISSUED FOR INQUIRY		
Rev.	Date	Wrt	Verif	App	Aut	Description		
Spec.No. 00805-OGS-000-CVS-601							Sh.: 11 / 25	Rev.: 1



Property of TECHNIP KTI S.p.A. to be returned upon request and used only in reference to this company reproduction of this print of unauthorized use of patented or patentable features disclosed herein is prohibited.

General	1	Tag number			LV-1404				
	2	Service			LP/CONDENSATE				
	3	P&ID No.	Req. / P.O. No.		30602-140-PID-0021-02-E				
	4	Line Number			4"-MC-AA301-140-01-N				
	5	Area Classification			IIG2				
	6	Ambient Temperature:		Min.	Max.			-5 °C	+52 °C
	7	Available Pneum. Supply Pressure:		Min.	Max.			3,5 barg	10,0 barg
	8	Manufacturer	Model						
	9	Weight (kg)	Serial Number						
Process Conditions	10	Process Fluid / PED Group		Phase	LOW PRESSURE CONDENSATE		HC CONDENSATE		
	11	DP@ Shut Off	Corrosive	Toxic					
	12	Design Pressure		Design Temperature		82 barg (2)		100 °C	
	13			Units	@ Min. Flow	@ Norm. Flow	@ Max. Flow		
	14	Flow Rate		kg/h		34507			
	15	Inlet Pressure		barg		3,00			
	16	Pressure Drop		bar		0,50			
	17	Outlet pressure		barg		2,50			
	18	Inlet Temperature		°C		75,00			
	19	Specific Heat Ratio (K)		--					
	20	Molecular Mass		---					
	21	Density (Upstream)		kg/m ³		712,00			
	22	Compressibility (Z)		--					
	23	Viscosity		cP		0,702			
	24	Critical Pressure		barg					
	25	Vapour Pressure		barg					
	26	Specific Gravity		--					
	Calculated Results	27	Allow. Sound Press. Level	Req. Leakage Class	dBa / --	80	IV		
28		Flow Coefficient Cv				66,9			
29		Travel		%		Mfr. Std.			
30	Sound Pressure Level		dBa		Mfr. Calc. Data				
Body & Trim	31	Body Size	Body Type	3"	GLOBE				
	32	Body Mat.	Stem Mat.	C.S.	316 St. St.				
	33	Rated Cv	Rated Trvl.	108	62%				
	34	Characteristics							
	35	Flow Action to		CLOSE					
	36	Size Inlet / Outlet (inch)		3"	3"				
	37	Rating Inlet / Outlet (lbs)		150#	150#				
	38	End prep. Inlet/Outlet		RF	RF				
	39	Bonnet type	Material	STANDARD	C.S.				
	40	Bolting Material							
	41	Lubricator	Isolat. Valve						
	42	Guiding	No. of Ports		1				
	43	Trim type	Trim size						
	44	Plug type		= %					
	45	Trim Material		316 St. St.					
	46	Seat Mat.	Packing Mat.	316 St. St.	TEFLON				
	47	NACE Requirements							
	48	Hydrogen Service							
Actuator	49	Type		SPRING DIAPHRAGM					
	50	Area (mm ²)							
	51	Fail Position		CLOSE					
	52	Handweel							
	53	Spring range		Mfr. Std.					
	54	Mounting Orientation							
	55	Manufacturer							
	56	Model							
57									
Positioner	58	Manufacturer							
	59	Model							
	60	Type		PNEUMATIC (3)					
	61	Signal: Inlet	Outlet	0,2-1,0 Barg	0,2-1,0 Barg				
	62	Bypass	Gauges	REQUIRED	METRIC				
	63	El. Conn	Conn.						
	64	Electrical certification							
	65	Tag No.		LUY-1404					
66	Type	Size (mm)							
Solenoid	67	Manufacturer							
	68	Model		Spec. 00805-OGS-S-000-C01-CVS-630					
	69	When De-Energ. Valve to							
	70	Power Suppl.	El. certific.						
71	Manual Reset								
Limit Switches	72	Tag Open	Tag Close						
	73	Type							
	74	Manufacturer							
75	Model								
76	Electrical certification								
77									
Air Set	78	Manufacturer							
	79	Model							
	80	Set Pressure							
81	Filter	Gauge	REQUIRED	METRIC					
82									
Tests	83	Hydro. Pressure							
	84	Leakage							

Notes:

1. ACCORDING TO ATEX/PED NORMATIVE
2. MAX SHUT OFF ΔP 78 bar
3. AIR SUPPLY 3.5-8 barg ACTION / CHARACTERISTICS: DIRECT / LINEAR
4. TUBING MATERIAL / FITTING TYPE & SIZE: SS / SWAGELOK / 0.25"

MOD - PRC - Rev. A

1	20.04.09.	NK	ER			FINAL REVISION	Instrument Data Sheet CONTROL VALVE	 
0	10.10.08.	NK	ER	ZK	ZK	ISSUE FOR BIDDING		
B	01.08.08.	DSO	EMA	ADB	ADB	REISSUED FOR INQUIRY		
A	26.06.08.	DSO	EMA	ADB	ADB	ISSUED FOR INQUIRY		
Rev.	Date	Wrt	Verif	App	Aut	Description	Spec.No. 00805-OGS-000-CVS-601	Sh.: 14 / 25 Rev.: 1



Property of TECHNIP KTI S.p.A. to be returned upon request and used only in reference to contract or proposal of this company. reproduction of this print of unauthorized use of patented or patentable features disclosed herein is prohibited.

General	1	Tag number		LV-1403			
	2	Service		LP SEPARATOR WATER LEVEL CONT			
	3	P&ID No.	Req. / P.O. No.	30602-140-PID-0021-02			
	4	Line Number		2"-SW-AA301-140-17-N			
	5	Area Classification		IIG2			
	6	Ambient Temperature:	Min.	Max.	-5 °C		+52 °C
	7	Available Pneum. Supply Pressure:	Min.	Max.	3,5 barg		10,0 barg
	8	Manufacturer	Model				
	9	Weight (kg)	Serial Number				
Process Conditions	10	Process Fluid / PED Group	Phase	SALTY WATER		WATER	
	11	DP@ Shut Off	Corrosive	Toxic			
	12	Design Pressure	Design Temperature		82 barg (2)		100 °C
	13			Units	@ Min. Flow	@ Norm. Flow	@ Max. Flow
	14	Flow Rate			kg/h	1000	
	15	Inlet Pressure			barg	0,30	
	16	Pressure Drop			bar	0,15	
	17	Outlet pressure			barg	0,15	
	18	Inlet Temperature			°C	75,00	
	19	Specific Heat Ratio (K)			--		
	20	Molecular Mass			---		
	21	Density (Upstream)			kg/m ³	946,00	
	22	Compressibility (Z)			--		
	23	Viscosity			cP	0,374	
	24	Critical Pressure			barg		
	25	Vapour Pressure			barg		
	26	Specific Gravity			--		
Calculated Results	27	Allow. Sound Press. Level	Req. Leakage Class	dBa / --		80	IV
	28	Flow Coefficient Cv					3,27
	29	Travel					Mfr.Std.
30	Sound Pressure Level					Mfr. Calc. Data	
Body & Trim	31	Body Size	Body Type	1"	GLOBE		
	32	Body Mat.	Stem Mat.	C.S.	316 St. St.		
	33	Rated Cv	Rated Trvl.	12	30%		
	34	Characteristics					
	35	Flow Action to	CLOSE				
	36	Size Inlet / Outlet (inch)	1"	1"			
	37	Rating Inlet / Outlet (lbs)	150#	150#			
	38	End prep. Inlet/Outlet	RF	RF			
	39	Bonnet type	Material	STANDARD	C.S.		
	40	Bolting Material					
Actuator	41	Lubricator	Isolat. Valve				
	42	Guiding	No. of Ports			1	
	43	Trim type	Trim size			REDUSED	
	44	Plug type	= %				
	45	Trim Material	304 St. St.				
	46	Seat Mat.	Packing Mat.	316 St. St.	TEFLON		
	47	NACE Requirements					
	48	Hydrogen Service					
Positioner	49	Type	SPRING DIAPHRAGM				
	50	Area (mm ²)					
	51	Fail Position	CLOSE				
	52	Handweel					
	53	Spring range	Mfr. Std.				
	54	Mounting Orientation					
	55	Manufacturer					
	56	Model					
	57						
Solenoid	58	Manufacturer					
	59	Model					
	60	Type	ELECTRO-PNEUMATIC (3)				
	61	Signal: Inlet	Outlet	0,2-1,0 Barg	0,2-1,0 Barg		
	62	Bypass	Gauges	REQUIRED	METRIC		
	63	El. Conn	Conn.				
	64	Electrical certification					
	65	Tag. No.	LUY-1403				
Limit Switches	66	Type	Size (mm)				
	67	Manufacturer					
	68	Model		Spec. 00805-OGS-S-000-C01-CVS-630			
	69	When De-Energ. Valve to					
	70	Power Suppl.	El.certific.				
	71	Manual Reset					
	72	Tag Open	Tag Close				
Air Set	73	Type					
	74	Manufacturer					
	75	Model					
	76	Electrical certification					
	77						
	78	Manufacturer					
Tests	79	Model					
	80	Set Pressure					
	81	Filter	Gauge	REQUIRED	METRIC		
	82						
	83	Hydro. Pressure					
84	Leakage						

Notes:


1. ACCORDING TO ATEX/PED NORMATIVE
2. MAX SHUT OFF ΔP 78 bar
3. AIR SUPPLY 3.5-8 barg ACTION / CHARACTERISTICS: DIRECT / LINEAR
4. TUBING MATERIAL / FITTING TYPE & SIZE: SS / SWAGELOK / 0.25"

MOD - PRC - Rev. A

1	20.04.09.	NK	ER			FINAL REVISION	Instrument Data Sheet CONTROL VALVE	  Technip KTI
0	10.10.08.	NK	ER	ZK	ZK	ISSUE FOR BIDDING		
B	01.08.08	DSO	EMA	ADB	ADB	REISSUED FOR INQUIRY		
A	26.06.08	DSO	EMA	ADB	ADB	ISSUED FOR INQUIRY		
Rev.	Date	Wrt	Verif	App	Aut	Description		
Spec.No. 00805-OGS-000-CVS-601							Sh.: 13 / 25	Rev.: 1


GENERAL	1	Tag No.			LV -2102-04B						
	2	Service			V-2102 LIQ O/L TO E-2103 LVL CV						
	3	Line No.	P&ID No		4"-HC-2100-003-DS0-HC		JI-191-PR-12-2100-10002				
	4	Area Classification			Zone 1 Gr. IIA T3						
	5	Ambient Temperature:		Min.	Max.	(-) 10 °C		52 °C			
	6	Available Air Supply Press.:		Min.	Max.	5 bar-g		8 bar-g			
	7	Leakage Class	Allowable Noise Limit		Class IV		< 85 dB(A)				
	8	Design Press. Max	Design Temp. Min / Max		93 bar-g		-10	88 °C			
MECHANICAL DATA	9	Line Size	Sch.		4 in		80S				
	10	Pipe Material	Insulation		ASTM A312 TP316L		NA				
PROCESS CONDITIONS	11	Process Fluid	Stream Number		HC						
	12	Fluid Phase	Fluid State		Single_Phase		Liquid				
	13	Shutoff Pressure	Molecular Weight		93 bar						
	14										
	15										
	16	Flow Rate	Units	@ Max. Flow	@ Norm. Flow	@ Min. Flow					
	17	Inlet Pressure	kg/d	709926	645387	193617					
	18	Pressure Drop	bar-g	84	84.05	84.33					
	19	Inlet Temperature	bar	54.76	54.89	55.54					
	20	Density	°C	54.8	54.8	54.8					
	21	Inlet Compressibility Factor	kg/m³	768	768	768					
	22	Inlet Viscosity	-	-	-	-					
	23	Inlet Specific Heats Ratio	cP	1.08	1.08	1.08					
	24	Inlet Vapour Pressure	-	-	-	-					
25	Critical Pressure	bar-a	77.1	77.1	85.77						
CALCULATED RESULTS	26	Flow Coefficient Cv	bar-a	75.5							
	27	Travel	-	7.20	6.52	1.95					
	28	Sound Pressure Level	%	79	70	21					
	28	Sound Pressure Level	dBA	<85	<85	<85					
BODY AND TRIM	29	MFR	Model	SGL	5414	POSITIONER	56	MFR	Model	Siemens	Sipart PS2
	30	Body Type	Globe				57	Signal: Inlet	Outlet	4-20mA,HART	Pneumatic
	31	Body Size	Port Size	2 in	1.375 in		58	Increase Signal Valve		Open	
	32	Select Cv	Characteris.	9	Linear		59	Type		Electro Pneumatic, SMART	
	33	Rating, End Con., Facing	1500#, Flanged RTJ				60	Bypass	Gauges (Barg)	No	Required
	34	Body/ Bonnet Material	ASTM A 351 Gr.CF3M				61	Cable Entry		ISO M20 x1.5	
	35	Bonnet Type	Bolted				62	Certification		EEx 'ia' / IP 65	
	36	Packing	PTFE Chevrons				63	E/P Tag No.		LY -2102-04B	
	37	Flow Action To	Open			SOLENOID VALVE	64	MFR	Model	NA	NA
	38	Lubricator	Isolat. Valve	No	No		65	Type	Quantity	NA	NA
	39	Guiding	No. of Ports	Cage	One		66	When De-Enegr.Valve:		NA	
	40	Trim Type	Single Concentric Cage				67	Cable Entry		NA	
	41	Plug/ Disc Material	ASTM A182 Gr. F316L +Stellite 6			SWITCHES	68	MFR	Model	NA	NA
	42	Seat Material	ASTM A182 Gr. F316L +Stellite 6				69	Type	Quantity	NA	NA
	43	Rated Travel	1.5 in				70	Contacts / Rating		NA	
	44	Stem/ Shaft Material	ASTM A182 Gr. F316L +Stellite 6			71	Switching Position		NA		
	45	Cage / Guide Material	SS316L + Chrome Plated			AIR SET	72	MFR	Model	Control Air	300-BCF
	46	NACE MR-01-75	NA				73	Set Pressure		4 barg	
	47	Gasket Material	SS 316L Spiral-wound				74	Filter	Gauge	Required	Required
	48	Body/Bonnet Bolts/Nuts	ASTM A320 Gr. L7 / A194 Gr. 4			TESTS	75	Hydro. Pressure		Required	
	49	MFR	Model	SGL	W2JN		76	Leakage		Note 10	
	ACTUATOR	50	Type	Material	Spring & Diaphragm	CS	77	Other Test		Note 10	
		51	Size	Area	J	150 in2	78	Manufacturer		SEVERN GLOCON LTD	
		52	Air Failure Valve	Close			79	Model			
53		Handwheel	No			PURCHASE	80	Purchase Order Num.		191030090	
54		Bench Range	0.2-1 Bar				81	Serial Number		1539-043-001	
55		Mechanical Travel Stop	-				82				

Notes: See notes

2	PGJ	07/02/2010	RE-ISSUED FOR PURCHASE	INSTRUMENT DATASHEET	Control Valve	
1	PGJ	27/08/2009	RE-ISSUED FOR PURCHASE			
0	PGJ	17/03/2009	ISSUED FOR PURCHASE			
B	PK/PJ	11/09/2008	ISSUED FOR APPROVAL			
A	AP/PK	08/09/2008	ISSUED FOR IDC			
No.	By	Date	Revision	Code: 73	Doc. No.: JI-191-IN-07-2970-10014	Sheet 105 of 236
						Rev.: 2


GENERAL	1 Tag No.		LV -2403-01		
	2 Service		V-2403 O/L TO E-2103 CV		
	3 Line No.	P&ID No	2"-PW-2400-001-DS0-HC	JI-191-PR-12-2400-10008-2	
	4 Area Classification		Zone 1 Gr. IIA T3		
	5 Ambient Temperature:	Min.	Max.	(-)10 °C 52 °C	
	6 Available Air Supply Press.:	Min.	Max.	5 bar-g 8 bar-g	
	7 Leakage Class	Allowable Noise Limit		Class IV < 85 dB(A)	
	8 Design Press. Max	Design Temp. Min / Max		93 bar-g -10 155 °C	
MECHANICAL DATA	9 Line Size	Sch.		2 in 40S	
	10 Pipe Material	Insulation		ASTM A312 TP316L NA	
PROCESS CONDITIONS	11 Process Fluid	Stream Number		PRODUCED WATER	
	12 Fluid Phase	Fluid State		Single_Phase Liquid	
	13 Shutoff Pressure	Molecular Weight		93 bar	
	14				
	15	Units	@ Max. Flow	@ Norm. Flow @ Min. Flow	
	16 Flow Rate	kg/d	7015.19	6376.79 2551.19	
	17 Inlet Pressure	bar-g	81.7	81.75 81.99	
	18 Pressure Drop	bar	51.71	51.79 52.18	
	19 Inlet Temperature	°C	55	55 55	
	20 Density	kg/m³	987.2	987.2 987.2	
	21 Inlet Compressibility Factor			-	
	22 Inlet Viscosity	cP	0.501	0.501 0.501	
	23 Inlet Specific Heats Ratio			-	
	24 Inlet Vapour Pressure	bar-a	0.185	0.185 0.185	
25 Critical Pressure	bar-a	221.2			
CALCULATED RESULTS	26 Flow Coefficient Cv			- 0.05 0.04 0.02	
	27 Travel			% 65 62 39	
	28 Sound Pressure Level			dBA <75 <75 <75	
BODY AND TRIM	29 MFR	Model	SGL	5414	
	30 Body Type			Globe	
	31 Body Size	Port Size	1 in 0.15 in		
	32 Select Cv	Characteris.	0.1 Parabolic		
	33 Rating, End Con., Facing	1500#, Flanged RTJ			
	34 Body/ Bonnet Material	ASTM A351 Gr. CF3M			
	35 Bonnet Type	Bolted			
	36 Packing	PTFE Chevrons			
	37 Flow Action To	Open			
	38 Lubricator	Isolat. Valve	No	No	
	39 Guiding	No. of Ports	Top Guided	One	
	40 Trim Type	Trickle			
	41 Plug/ Disc Material	ASTM A182 Gr. F316L+Stellite 6			
	42 Seat Material	ASTM A182 Gr. F316L+Stellite 6			
	43 Rated Travel	0.75 in			
	44 Stem/ Shaft Material	ASTM A182 Gr. F316L +Stellite 6			
	45 Cage / Guide Material	SS316L			
	46 NACE MR-01-75	NA			
	47 Gasket Material	SS 316L Spiral-wound			
	48 Body/Bonnet Bolts/Nuts	ASTM A320 Gr. L7 / A194 Gr. 4			
	ACTUATOR	49 MFR	Model	SGL	W2HN
		50 Type	Material	Spring & Diaphragm	CS
		51 Size	Area	H	75 in2
		52 Air Failure Valve	Close		
53 Handwheel		No			
54 Bench Range		0.2-1 Bar			
55 Mechanical Travel Stop		-			
POSITIONER		56 MFR	Model	Siemens	Sipart PS2
		57 Signal: Inlet	Outlet	4-20mA,HART	Pneumatic
		58 Increase Signal Valve	Open		
	59 Type	Electro Pneumatic, SMART			
	60 Bypass	Gauges (Barg)	No	Required	
	61 Cable Entry	ISO M20 x1.5			
	62 Certification	EEx 'ia' / IP 65			
	63 E/P Tag No.	LY -2403-01			
	SOLENOID VALVE	64 MFR	Model	NA	NA
		65 Type	Quantity	NA	NA
		66 When De-Enegr.Valve:	NA		
		67 Cable Entry	NA		
	SWITCHES	68 MFR	Model	NA	NA
		69 Type	Quantity	NA	NA
70 Contacts / Rating		NA			
71 Switching Position		NA			
AIR SET	72 MFR	Model	Control Air	300-BCF	
	73 Set Pressure	4 barg			
	74 Filter	Gauge	Required	Required	
TESTS	75 Hydro. Pressure	Required			
	76 Leakage	Note 5			
	77 Other Test	Note 5			
PURCHASE	78 Manufacturer	SEVERN GLOCON LTD			
	79 Model				
	80 Purchase Order Num.	191030090			
	81 Serial Number	1539-055-001			
	82				

Notes: See notes

2	PGJ	07/02/2010	RE-ISSUED FOR PURCHASE	INSTRUMENT DATASHEET Control Valve		
1	PGJ	27/08/2009	RE-ISSUED FOR PURCHASE			
0	PGJ	17/03/2009	ISSUED FOR PURCHASE			
B	PK/PJ	11/09/2008	ISSUED FOR APPROVAL			
A	AP/PK	08/09/2008	ISSUED FOR IDC			
No.	By	Date	Revision			
				Code: 73	Doc. No.: JI-191-IN-07-2970-10014	Sheet 131 of 236
				Rev.: 2		

GENERAL	1	Tag No.			LV -2401-02			
	2	Service			V-2401 TO E-2103 LVL CV			
	3	Line No.	P&ID No		2"-HC-2400-001-DS0-HC		JI-191-PR-12-2400-10002-1	
	4	Area Classification			Zone 1 Gr. IIA T3			
	5	Ambient Temperature:		Min.	Max.	(-) 10 °C		52 °C
	6	Available Air Supply Press.:		Min.	Max.	5 bar-g		8 bar-g
	7	Leakage Class		Allowable Noise Limit		Class IV		< 85 dB(A)
	8	Design Press.	Max	Design Temp. Min / Max		93	bar-g	-10 82 °C
MECHANICAL DATA	9	Line Size		Sch.		2 in		
	10	Pipe Material		Insulation		ASTM A312 TP316L NA		
PROCESS CONDITIONS	11	Process Fluid		Stream Number		HC/WATER		
	12	Fluid Phase		Fluid State		Homogeneous 2 Phase Liquid		
	13	Shutoff Pressure		Molecular Weight		93 bar 19.3		
	14							
					Units	@ Max. Flow	@ Norm. Flow	@ Min. Flow
	16	Flow Rate				kg/d	108953	99047.8 39619.1
	17	Inlet Pressure				bar-g	81.3	81.33 81.45
	18	Pressure Drop				bar	51.7	51.76 52.03
	19	Inlet Temperature				°C	27	27 27
	20	Density				kg/m³	574.6	574.6 574.6
	21	Inlet Compressibility Factor				-		
	22	Inlet Viscosity				cP	0.195	0.195 0.195
	23	Inlet Specific Heats Ratio				-		
	24	Inlet Vapour Pressure				bar-a	82.31	82.34 82.46
25	Critical Pressure				bar-a	77.09		
CALCULATED RESULTS	26	Flow Coefficient Cv				-	1.61 1.46 0.58	
	27	Travel				%	40 36 15	
	28	Sound Pressure Level				dBA	<85 <85 <85	
BODY AND TRIM	29	MFR	Model	SGL	1214			
	30	Body Type		Globe				
	31	Body Size	Port Size	1 in	0.75 in			
	32	Select Cv	Characteris.	4	Linear			
	33	Rating, End Con., Facing		1500#, Flanged RTJ				
	34	Body/ Bonnet Material		ASTM A 351 Gr.CF3M				
	35	Bonnet Type		Bolted				
	36	Packing		PTFE Chevrons				
	37	Flow Action To		Open				
	38	Lubricator	Isolat. Valve	No	No			
	39	Guiding	No. of Ports	Cage	One			
	40	Trim Type		Single Concentric Cage				
	41	Plug/ Disc Material		ASTM A182 Gr.F316L +Stellite 6				
	42	Seat Material		ASTM A182 Gr.F316L +Stellite 6				
	43	Rated Travel		0.75 in				
	44	Stem/ Shaft Material		ASTM A182 Gr. F316L +Stellite 6				
	45	Cage / Guide Material		SS316L + Chrome Plated				
	46	NACE MR-01-75		NA				
	47	Gasket Material		SS 316L Spiral-wound				
	48	Body/Bonnet Bolts/Nuts		ASTM A320 Gr. L7 / A194 Gr. 4				
	49	MFR	Model	SGL	W2HN			
	50	Type	Material	Spring & Diaphragm	CS			
	51	Size	Area	H	75 in2			
	52	Air Failure Valve		Close				
53	Handwheel		No					
54	Bench Range		0.2-1 Bar					
55	Mechanical Travel Stop		-					
POSITIONER	56	MFR	Model	Siemens	Sipart PS2			
	57	Signal: Inlet	Outlet	4-20mA,HART		Pneumatic		
	58	Increase Signal Valve		Open				
	59	Type		Electro Pneumatic, SMART				
	60	Bypass	Gauges (Barg)	No	Required			
	61	Cable Entry		ISO M20 x1.5				
	62	Certification		EEx 'ia' / IP 65				
	63	E/P Tag No.		LY -2401-02				
SOLENOID VALVE	64	MFR	Model	NA	NA			
	65	Type	Quantity	NA	NA			
	66	When De-Enegr.Valve:		NA				
	67	Cable Entry		NA				
SWITCHES	68	MFR	Model	NA	NA			
	69	Type	Quantity	NA	NA			
	70	Contacts / Rating		NA				
	71	Switching Position		NA				
AIR SET	72	MFR	Model	Control Air	300-BCF			
	73	Set Pressure		4 barg				
	74	Filter	Gauge	Required	Required			
	75	Hydro. Pressure		Required				
TESTS	76	Leakage		Note 8				
	77	Other Test		Note 8				
	78	Manufacturer		SEVERN GLOCON LTD				
PURCHASE	79	Model						
	80	Purchase Order Num.		191030090				
	81	Serial Number		1539-052-001				
	82							

Notes: See notes

2	PGJ	07/02/2010	RE-ISSUED FOR PURCHASE	INSTRUMENT DATASHEET Control Valve	
1	PGJ	27/08/2009	RE-ISSUED FOR PURCHASE		
0	PGJ	17/03/2009	ISSUED FOR PURCHASE		
B	PK/PJ	11/09/2008	ISSUED FOR APPROVAL		
A	AP/PK	08/09/2008	ISSUED FOR IDC		
No.	By	Date	Revision	Code: 73	Doc. No.: JI-191-IN-07-2970-10014
				Sheet 125	of 236
				Rev.: 2	