SMD-02001786

South Zagros Oil & Gas Production Company (SZOGPC)

Project	Item No	
Aghar & Dalan Fields	Document No:	

Document Title: **PRESSURE SAFETY VALVE DATA SHEET**

GENERAL	1	Tag No.		02-PSV-X08,X09 (X from 1 to 6)	
	2	Service		DTP Glycol Circulation Pumps	
	3	Line No. / Vessel No.			
	4	Full Nozzle / Semi Nozzle		semi nozzle	
	5	Safety or Relief		safety relief valve	
	6	Conv., Bellows, Pilot Op.		Conv.	
	7	Bonnet Type		Closed	
CONNECTION	8	Inlet Size	Outlet Size	1"	1"
	9	Flange Rating		1500	150
	10	Type of Facing		RTJ*RF	
MATERIALS (forall items, relevant ASTM code shall be specified by vendor)	11	Body and Bonnet		SA216 Gr. WCC	
	12	Seat and Disk		PH ST. ST	
	13	Resilient Seat Seal		AISI 316L	
	14	Guide and Ring		AISI 431	
	15	Spring		50 CV 4	
	16	Bellows		**	
	17	NACE MR 01-75		No	
OPTIONS	18	Cap : Screwed or Bolted		Screwed	
	19	Lever : Plain or Packed		Packed	
	20	Test Gauge		yes	
	21				
	22				
	23				
BASIS	24	Code		API RP 520	
	25	Fire		n.a	
	26	Blocked Outlet		Yes	
	27	Thermal Expansion		n.a	
FLUID DATA	28	Fluid and State		Glycol / Liquid	
	29	Required Capacity (kg/h)		15400	
	30	Mol.Wt.	Oper.sp.gr		1.06
	31	Oper.Pressure	Set Pressure	130	141.5 barg
	32	Oper.Temperature	Rel.Temperature	80	90
	33	Back Pressure	Constant	2.4	
	34		Variable		
	35		Total	2.4	
	36	% Allowable Overpressure		10%	
	37	Overpressure Factor		1.1	
	38	Compressibility Factor			
	39	LatentHeat of Vaporization		n.a	
	40	Ratio of Specific Heats			
	41	Operating Viscosity, cp		18	
	42	Barometric Pressure		0.8	
	43				
	44				
	45	Calc. Area sq. in.		0.1	
	46	Selected Area		V.T.A	
	47	Orifice Designation		V.T.A	
	48	Manufacturer		V.T.A	
	49	Model No.		V.T.A	

NOTES :

V.T.A Vendor to Advise

S1DD_030012121 iT01

South Zagros Oil & Gas Production Company
(SZOGPC)

Project: Aghar & Dalan Fields

Item No.

Document Title: PRESSURE SAFETY VALVE DATA SHEET

					63-PSV-214
	1	Tag No			Aghar Wells P.g Reciever n Manifolds
	2	Service			
GENERAL	3	Line No / Vessel No.			Semi Nozzle
	4	Full Nozzle / Semi Nozzle			Safety
	5	Safety or Relief			Conv.
	6	Conv., Bellows, Pilot Op			Closed
	7	Bonnet Type			
CONNECTION	8	Inlet Size	Outlet Size	3/4"	1
	9	Flange Rating		2500	300
	10	Type of Facing			RTJ * RF
MATERIALS (forall items, relevant ASTM code shall be specified by vendor)	11	Body and Bonnet			AISI 304 / 1.4301
	12	Seat and Disk			AISI 321 / 1.4541
	13	Resilient Seat Seal			****
	14	Guide and Ring			AISI 321 / 1.4541
	15	Spring			AISI 301 / 1.4310
	16	Bellows			****
	17	NACE			Yes
OPTIONS	18	Cap Screwed or Bolted			Screwed
	19	Lever Plain or Packed			Plain
	20	Test Gauge			Yes
	21				
	22				
	23				
BASIS	24	Code			API RP 520
	25	Fire			n.a
	26	Blocked Outlet			n.a
	27	Thermal Expansion			Yes
FLUID DATA	28	Fluid and State			HC / Gas
	29	Required Capacity (m3/h)			
	30	Mol.Wt	Oper sp.gr	19.1	0.65
	31	Oper.Pressure	Set Pressure	200	373.8
	32	Oper Temperature	Rel Temperature	50	85
	33	Back Pressure	Constant	atm	
	34		Variable		
	35		Total	atm	
	36	% Allowable Overpressure		10%	
	37	Overpressure Factor		1.1	
	38	Compressibility Factor		0.9	
	39	LatentHeat of Vaporization			
	40	Ratio of Specific Heats		1.3	
	41	Operating Viscosity, cp		0.02	
	42	Barometric Pressure		0.8	
	43				
	44				
	45	Calc. Area sq. in.		V.T.A	
	46	Selected Diameter(mm)		8	
	47	Orifice Designation		V.T.A	
	48	Manufacturer		V.T.A	
	49	Model No.		V.T.A	

NOTES :

V.T.A Vendor to Advise

SA2030012I I.O 2

South Zagros Oil & Gas Production Company
(SZOGPC)

Project: Aghar & Dalan Fields

Item No

Document Title: PRESSURE SAFETY VALVE DATA SHEET

GENERAL	1	Tag No			53-XV-210
	2	Service			مخزن هوای XV وروذی جاه 4(DM2)
	3	Line No. / Vessel No			
	4	Full Nozzle / Semi Nozzle			Full Nozzle
	5	Safety or Relief			Safety
	6	Conv., Bellows, Pilot Op.			Conv.
	7	Bonnet Type			Closed
CONNECTION	8	Inlet Size	Outlet Size	1/2"	"
	9	Flange Rating		"	"
	10	Type of Facing			NPT
MATERIALS (forall items, relevant ASTM code shall be specified by vendor)	11	Body and Bonnet			CAST BRONZE
	12	Seat and Disk			FORGING BRASS
	13	Resilient Seat Seal			FORGING BRASS
	14	Stem			BRASS
	15	Spring			STEEL
	16	Bellows			"
	17	NACE			"
OPTIONS	18	Cap . Screwed or Bolted			Screwed
	19	Lever : Plain or Packed			Plain
	20	Test Gauge			Yes
	21				
	22				
	23				
BASIS	24	Code			API RP526-527
	25	Fire			n.a
	26	Blocked Outlet			n.a
	27	Thermal Expansion			Yes
FLUID DATA	28	Fluid and State			AIR
	29	Required Capacity (m3/h)			
	30	Mol Wt.	Oper.sp.gr		
	31	Oper.Pressure	Set Pressure		8.2 BAR
	32	Oper.Temperature	Rel.Temperature		
	33	Back Pressure	Constant		atm
	34		Variable		
	35		Total		atm
	36	% Allowable Overpressure			10%
	37	Overpressure Factor			V.T.A
	38	Compressibility Factor			V.T.A
	39	LatentHeat of Vaporization			
	40	Ratio of Specific Heats			V.T.A
	41	Operating Viscosity. cp			V.T.A
	42	Barometric Pressure			V.T.A
	43				
	44				
	45	Calc. Area sq. in			V.T.A
	46	Selected Diameter(mm)			V.T.A
	47	Orifice Designation			V.T.A
	48	Manufacturer			V.T.A
	49	Model No			V.T.A

NOTES :

V.T.A: Vendor to Advise

ZRL-03006002

ITEM 1

	Data Sheet for Safety/Relief Valve	Customer	South Zagros Oil and Gas Production Company
		End-User Ref.	-
		Project Ref.	-
		Project	Homa , Shanoul & Varavi Manifold Units in Persian Field

VALVE ID			SIZING DATA		
1	Tag No.	PSV-54.022-1/2/3	31	Design Code	ASME Section VIII
2	PID No.	HOMA P & ID	32	Sizing Std.	API 520
3	Line No.	GAS-56-0000-C-6"-PT	33	Sizing Basis	Blocked Discharge
4	Service	SWEET GAS	34	Fluid State at Inlet	Gas/Vapor
5	Quantity	3	35	Relieving Case	Pressure Safety
GENERAL			**FLUID PROPERTIES**		
6	Valve Type	Conventional	36	Fluid Name	SWEET GAS
7	Safety/Relief	Safety	37	Molecular Weight, M	18.32
8	Nozzle	Full	38	Compressibility, Z	0.83
9	Bonnet	Close	39	Ratio of Sp. Heats, k (Cp/Cv)	1.67
10	Cap Type	Bolted	40	Gas Constant, C	377.86
11	Seat Type	Metal to Metal	41	-	-

MATERIALS OF CONSTRUCTION			PRESSURES						
12	Body / Bonnet	SA 216 Gr. WCB / SA 216 Gr. WCB	42	MAWP	138.00	barg	Operating	125	barg
13	Nozzle	(SS 316L / SS 316) + Stell	43	Set Pressure	138.00	barg	CDTP	137.50	barg
14	Disc	Stainless Steel 17/4 PH	44	Over Pressure	10 %		Inlet Loss	0 %	
15	Spring	Carbon steel	45	Back Pressure	Constant Superimposed		0.5		barg
16	Guide	SS 316L / SS 316	46		Variable Superimposed		0		barg
17	Bellows	-	47		Built-Up		0		barg
18	Soft Seat	-	48		Total		0.5		barg
19	NACE MR0175 (2002)	No	49	Atmospheric (Barometric)			14.7		psia

CONNECTIONS							TEMPERAURES					
20	Inlet & Outlet	Size	2"x3"		Standard	50	Operating	45	Celsius	Relieving	48.31	Celsius
21		Rating	900 x 150	Facing	RFxRF	ASME B16.5	51	Design Min	-	Celsius	Design Max	90	Celsius

SIZING / SELECTION SUMMARY					ACCESSORIES		
22	Valve Model No.		A1-1C2H34R1C62/FMXC		52	Test Gag	-
23	Series		A1		53	-	Bolted Cap
24	Orifice		H		54	-	-
25	Area	Calculated	0.509	in2	55	-	-
26		Selected	0.860	in2	56	-	-
27	Flow	Required	71176.00	lb/hr	57	-	-
28		Actual	120415.18	lb/hr	58	-	-
29	Estimated Reaction Force		10.52	kN	59	-	-
30	Estimated Noise Level (@30 m)		173.32	dB	60	-	-

REMARKS		Valve Dimensions			
1		A	After P/O	In	
2	-	B	After P/O		
3	-	C	After P/C		
4	-	W	After P/O	Kg	

Rev.	Prep.	Chk.	Appr.	Date	Rev. Description
3	-			-	-
2	-				
1	S.G	A.A	M.M		Issued for approval
0	S.G	A.A	M.M		Issued for approval

Rev.	Prep.	Chk.	Appr.	Date	Rev. Description
7	-	-	-	-	-
6	-	-	-	-	-
5	-	-	-	-	-
4	-	-	-	-	-

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SI - 0300602

ITEM 2

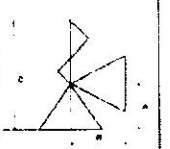
	Data Sheet for Safety/Relief Valve	Customer	South Pars Oil and Gas Production Company
		End-User Ref.	-
		Project Ref	-
		Project	Homa , Shanoul & Varavi Manifold Units in Parsian Field

VALVE ID			SIZING DATA		
1	Tag No.	PSV-60.022-1/2/3	31	Design Code	ASME Section VIII
2	PID No.	HOMA P & ID	32	Sizing Std.	API 520
3	Line No.	GAS-56-0060-C-6"-PT	33	Sizing Basis	Blocked Discharge
4	Service	SWEET GAS	34	Fluid State at Inlet	Gas/Vapor
5	Quantity	3	35	Relieving Case	Pressure Safety
GENERAL			**FLUID PROPERTIES**		
6	Valve Type	Conventional	36	Fluid Name	SWEET GAS
7	Safety/Relief	Safety	37	Molecular Weight, M	18.32
8	Nozzle	Full	38	Compressibility, Z	0.83
9	Bonnet	Close	39	Ratio of Sp. Heats, k (Cp/Cv)	1.67
10	Cap Type	Bolted	40	Gas Constant, C	377.86
11	Seat Type	Metal to Metal	41	-	-

MATERIALS OF CONSTRUCTION			PRESSURES							
12	Body / Bonnet	SA 216 Gr. WCB / SA 216 Gr. WCB	42	MAWP	138.00	barg	Operating	125	barg
13	Nozzle	(SS 316L / SS 316) + Stell.	43	Set Pressure	117.00	barg	CDTP	116.50	barg
14	Disc	Stainless Steel 17/4 PH	44	Over Pressure	10 %		Inlet Loss	0 %	
15	Spring	Carbon steel	45	Back Pressure	Constant Superimposed	0.5			barg
16	Guide	SS 316L / SS 316	46		Variable Superimposed	0			barg
17	Bellows	-	47		Built-Up	0			barg
18	Soft Seat	-	48		Total	0.5			barg
19	NACE MR0175 (2002)	No	49	Atmospheric (Barometric)		14.7			psia

CONNECTIONS						TEMPERAURES					
20	Inlet & Outlet	Size	2"x3"		Standard	50	Operating	45	Celsius	Relieving	48.31 Celsius
21		Rating	900 x 150	Facing	RF x RF	ASME B16.5	51	Design Min	-	Celsius	Design Max	90 Celsius

SIZING / SELECTION SUMMARY					ACCESSORIES		
22	Valve Model No.		A1-1C2H34R1C62/FMXC		52	Test Gag	-
23	Series		A1		53	-	Bolted Cap
24	Orifice		H		54	-	-
25	Area	Calculated	0.599	in2	55	-	-
26		Selected	0.860	in2	56	-	-
27	Flow	Required	71176.00	lb/hr	57	-	-
28		Actual	122212.66	lb/hr	58	-	-
29	Estimated Reaction Force		8.86	kN	59	-	-
30	Estimated Noise Level (@30 m)		164.08	dB	60	-	-

REMARKS		Valve Dimensions			
1	-	A	After P/O	In	
2	-	B	After P/O		
3	-	C	After P/O		
4	-	W	After P/O	Kg	

Rev.	Prep.	Chk.	Appr.	Date	Rev. Description
3	-	-	-	-	-
2	-	-	-	-	Issued For Approval
1	S.G	A.A	M.M	-	Issued for approval
0	S.G	A.A	M.M	-	Issued for approval

Rev.	Prep.	Chk.	Appr.	Date	Rev. Description
7	-	-	-	-	-
6	-	-	-	-	-
5	-	-	-	-	-
4	-	-	-	-	-

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ERL-020089

SPRING – LOADED LESER
PRESSURE SAFETY VALVE
SPECIFICATION SHEET

Sheet No.	
Requisition No.	
Job No.	
Data	
Revised	
By	

GENERAL

1.	Item number : **1**
2.	Tag Number:
3.	Service , line , or Equipment Number : **header in separation center**
4.	Number required :5

VALVE DESING

9.	Design Type : **SAFETY VALVE**
	Conventional [] Bellows [✓] Balanced Piston [ ]
10.	Nozzle Type : Full [✓] Semi [ ]
	Other [ ] Specify :
11.	Bonnet Type : Open [] closed [✓]
12.	Seat Type : Metal – to – metal [✓] Resilient [ ]
13.	Seat Tightness : API 527 [✓]
	Other [ ] Specify :

CONNECTIONS

14.	Inlet : **FLANGE TYPE 3"** rating **900 psi**
15.	Outlet : **FLANGE TYPE 6"** rating: **150 psi**
16	Other[ ] specify: **ASME B16.5**

SERVICE CONDITIONS

33	Fluid and state: **HC GAS**
34	Required capacity per valve and units: **102300 KG/HR**
35	specific gravity: **0.63**
36	Viscosity at flowing temperature and units CP : **0.01614**
37	Operating pressure and units: **105 BARG**
38	Set pressure and units: **128 BARG**
39	Blow down: Standard [✓] Other[ ]
40	Latent Heat of Vaporization and Units: -
41	Operating Temperature and Units : **35 °C**
42	Relieving Temperature and Units : **52.15 °C**
43	Built –up Back pressure and units: **1 BARA**
44	Superimposed Back pressure and units: **1 BARA**
45	Cold Differential Test pressure and units: **128 BARG**
46	Allowable Over Pressure in Percent or units: **10%**
47	Compressibility Factor, Z: **0.8463**
48	Ratio of Specific Heats: **1.5738**

BASIS OF SELECTION

5.	Code : ASME VIII [✓] stamp required: Yes [✓] NO [ ]
6.	Comply with API 526 : Yes [✓] NO [ ]
7.	Fire [ ] other [✓] specify :
8.	Rupture Disk : Yes [ ] No [✓]

MATERIALS

17.	Body : **WCB 1.0619**
18.	Bonnet : **WCB 1.0619**
19.	Seat (Nozzle): 316 L -1.4404 **Disk** : 1.4122 H.S.S
20.	Resilient Seat : -
21.	Guide : **316L -1.4404**
22.	Adjusting Ring (s) : **1.4104**
23.	Spring : **1.8159 HIGH TEMP ALLOY STEEL** Washer : **1.0718 steel**
24.	Bellows : **316 Ti-1.4571**
25.	Balanced Piston :-
26.	Comply with NACE MR0175 : Yes[ ] No [✓]
27.	Other [ ] Specify :

ACCESSORIES

28	Cap : Screwed [✓] Bolted [ ]
29	Lifting Lever. Plain [ ] Packed [✓] None[]
30	Test Gas : Yes [ ] No [✓]
31	Bug Screen: Yes [ ] No [✓]
32	Other [ ] Specify:

SIZING AND SELECTION

49.	Calculated Orifice Area (in square inches): **2.25**
50.	Selected Effective Orifice Area (in square inches): **1.849**
51	Orifice Designation (letter): **K**
52	Manufacturer :**LESER**
53	Model Number :**5262.2054**
54	Vendor Calculations Required :Yes[✓] No[ ]

Pressure change of LESER safety valve