



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

صادر کننده

PEDCO

تجهیزات

120

رشته

IN

نوع مدرک

DT

سریال

0009

نسخه

D04

شماره صفحه: ۱ از ۳۴

طرح نگهداشت و افزایش تولید ۲۷ مخزن

DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

نگهداشت و افزایش تولید میدان نفتی بینک

Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval
D04	FEB.2024	AFC	P.Hajisadeghi	M.Fakharian	S.Faramarzpour	
D03	OCT.2023	AFC	P.Hajisadeghi	M.Fakharian	S.Faramarzpour	
D02	SEP.2023	AFC	P.Hajisadeghi	M.Fakharian	A.M.Mohseni	
D01	OCT.2022	IFA	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
D00	MAY.2022	IFC	P.Hajisadeghi	M.Fakharian	M.Mehrshad	

Class: 1

CLIENT Doc. Number: F9Z-708930

status:

IDC: Inter-Discipline Check

IFC: Issued For Comment

IFA: Issued For Approval

AFD: Approved For Design

AFC: Approved For Construction

AFP: Approved For PURCHASE (will be finalized later)

AFQ: Approved For Quotation

IFI: Issued For Information

AB-R: As-Built for CLIENT Review

AB-A: As-Built -Approved



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REVISION RECORD SHEET

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5	X	X	X	X	X
6	X	X	X	X	X
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8	X	X	X	X	X
9	X	X	X	X	X
10	X	X	X	X	X
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شماره صفحه: ۳ از ۳۴

REFERENCE DOCUMENTS :

Specification For Instrumentation

Process Basis Of Design

Specification For Painting

Piping Material Specification

Specification For Pressure Safety Valves(PSV)

Instrument & Control System Design Criteria

Symbol & Legend For PFD and P&ID

P&ID - Gas Compression Inlet Gas Pipeline (Binak)

P&ID - Gas Compression Inlet Gas Pipeline (Golkhari)

P&ID - Slug Catcher System

P&ID - Gas Compression Inlet Knock Out Drum

P&ID - 1st Stage Gas Compression Suction Drums

P&ID - 1st Stage Gas Compression Compressors

P&ID - 1st Stage Gas Compression Air Coolers

P&ID - 2nd Stage Gas Compression Suction Drums

P&ID - 2nd Stage Gas Compression Compressors

P&ID - 2nd Stage Gas Compression Air Coolers

P&ID - 2nd Stage Gas Compression Discharge Drum

P&ID - Gas Compression Dehydration Package

P&ID - Lean Glycol Storage Tank

P&ID - Instrument & Plant Air System

P&ID - Nitrogen Generation System

P&ID - Close Drain System

P&ID - Corrosion Inhibitor Package

P&ID - Methanol Injection Package

P&ID - LP Flare System

P&ID - Oily Water Sewer

P&ID - Fuel Gas System

P&ID - Diesel Oil System

P&ID - Potable Water System

P&ID - Glycol Sump Drum

P&ID - Fire Water Network

P&ID - Total Flooding System For Extension of Existing Elect. Building

BK-GNRL-PEDCO-000-IN-SP-0001

BK-GNRL-PEDCO-000-PR-DB-0001

BK-GNRL-PEDCO-000-PI-SP-0006

BK-GCS-PEDCO-120-PI-SP-0001

BK-GNRL-PEDCO-000-IN-SP-0007

BK-GCS-PEDCO-120-IN-DC-0002

BK-GCS-PEDCO-120-PR-PI-0001

BK-GCS-PEDCO-120-PR-PI-0002

BK-GCS-PEDCO-120-PR-PI-0003

BK-GCS-PEDCO-120-PR-PI-0004

BK-GCS-PEDCO-120-PR-PI-0005

BK-GCS-PEDCO-120-PR-PI-0006

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BK-GCS-PEDCO-120-PR-PI-0018

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BK-GCS-PEDCO-120-PR-PI-0023

BK-GCS-PEDCO-120-PR-PI-0024

BK-GCS-PEDCO-120-PR-PI-0025

BK-GCS-PEDCO-120-SA-PI-0001

BK-GCS-PEDCO-120-SA-PI-0002



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شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۴ از ۳۴
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	PEDCO	120	IN	DT	0009	D04	

GENERAL NOTES:

1- All valves shall be clearly and permanently marked. The name plate shall be corrosion resistant Stainless Steel and pinned to the valve body. Wired on labels are not acceptable. Following information shall be submitted on nameplate for approval.

- Tag number
- Manufacturer name, model and serial number
- Set Pressure
- Pressure rating
- Body size and material
- Measurement Range
- Liquid density
- Degree of protection & electrical construction
- Marking as per IEC Codes
- Well name

2- Calculation sheet using API RP-520 formula shall be provided by vendor for each safety/relief valve in accordance with process values.

3- All wetted part material shall be in accordance with ISO 15156-2 region 2 or NACE MR-01-75 as specified in data sheets for each tag . For these mentioned tags, both the compliance shall be provided. primary and secondary sides of valves shall meet NACE MR-01-75 requirements and certificate of

4- The safety/ relief valves shall comply with API RP 520, 521, 526 and 527 standards. All valves shall be supplied with ASME section VIII.

5- All valves shall be tested for leakage at the manufacturer's works in accordance with API 527. The procedures for these tests shall be submitted for approval.

6- Gasket material shall be suitable for the application.

7- The inlet/outlet sizes & rating and center to flange face dimensions for all valves shall be in accordance with API-526.

8- All the valves with the materials offered shall meet the set pressure and other design conditions for the orifice selected.

9- Vendor to advise all wetted parts materials include disc holder, stem guide, blowdown ring, ring pin, bushing and other internal components in contact with process fluid in bid stage

10 - Environmental condition for field instrumentation of Binak Oilfield shall be considered as per the followings:

Maximum ambient temperature: 50 (°C)
Minimum ambient temperature: 5 (°C)
Maximum steel surface exposed to sun: 85 (°C)
Maximum summer dry bulb: 50 (°C)
DB/RH for Summer HVAC Design: 41 °C / 61 %
DB for Winter HVAC Design: 6 °C

Relative Humidity:

- Maximum Design relative humidity (%): 100
- Minimum Design relative humidity (%): 0

11 - Material Test Certificate and calibration Certificate for all transmitters to be submitted by Vendor.

12- Body and other pressure parts subject to inlet pressure (primary pressure zone) shall be hydrostatically tested at a pressure of at least 1.5 times the design pressure of the parts

13- Safety relief valves shall be subject to a seat leakage test in accordance with API standard 527 as applicable, or as agreed upon by the manufacturer and the CLINET

14- Lifting lever shall be provided whenever the fluid to be relieved, is steam, air, or hot water (60°C and above)

15- Balanced bellows valves shall have open bonnet construction.

16- In valves with balancing bellow, the bonnet shall have a ½" threaded hole, NPT as per ANSI 1.20.1.

17- In bellows type, bonnet shall be vented separately from discharge.

18- Body color of Pressure & Safety Relief Valves shall be yellow. For more details refer to the latest revision of Specification For Painting Doc No. "BK-GNRL-PEDCO-000-PI-SP-0006"

18- Body color of Pressure & Safety Relief Valves shall be yellow. For more details refer to the latest revision of Specification For Painting Doc No.

19- Allowable noise level shall be less than 115 dB(A) at 1 m distance from the valve as stated in IPS G-SF-900 sections 13.3.1 and 14.3.2.

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۰۵۳ - ۰۷۳ - ۹۱۸۴

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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2111	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0013-AN07-8"-PT V-2104
	4	Pipe Class / C.A.	P&ID No.	AN07 / 6mm BK-GCS-PEDCO-120-PR-PI-0004-D07 (1 of 2)
	5	Discharge to	To LP FLARE HEADER	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Bellows
	12	Bonnet Type	Open	D04
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	37247.20 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	48.1 kg/kmol 1.659 kg/m3
	16	Oper. Pressure	Set Pressure	5.3 / 9 bar-g
	17	Oper. Temperature	Relieving Temp.	32 / 284 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	3.4 bar-g
	20		Total	3.4 bar-g
	21	% Allowable Overpressure	21%	
	22	Over Pressure Factor	1.21	
	23	Compressibility Factor(Z)	0.95	
	24	Latent Heat of Vaporization (Kj/Kg)	427.9	
	25	Ratio of Specific Heats(Cp/Cv)	1.223	
	26	Density @ flowing temprature	8.355 kg/m3	
SELECTION	27	Operating Viscosity	0.0108 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	YES	
	32	Basis of Selection	FIRE	
	33	Calculated Area	MM²	4134(VTC)
	34	Required Area	MM²	8742 (VTC)
CONNECTIONS	35	Orifice Designation	Q (VTC)	
	36	Size: Inlet	Outlet	6" in 8" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc (Trim)	SS316+PTFE (VTC)	
	40	Nozzle	SS316 (VTC)	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC)(Note2)	
	43	Bellows	SS316+PTFE (VTC)	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2112	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0014-AN07-8"-PT V-2104
	4	Pipe Class / C.A.	P&ID No.	AN07 / 6mm BK-GCS-PEDCO-120-PR-PI-0004-D07 (1 of 2)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Bellows
	12	Bonnet Type	Open	D04
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	37247.20 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	48.1 kg/kmol 1.659 kg/m3
	16	Oper. Pressure	Set Pressure	5.3 / 9 bar-g
	17	Oper. Temperature	Relieving Temp.	32 / 284 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	3.4 bar-g
	20		Total	3.4 bar-g
	21	% Allowable Overpressure	21%	
	22	Over Pressure Factor	1.21	
	23	Compressibility Factor(Z)	0.95	
	24	Latent Heat of Vaporization (KJ/Kg)	427.9	
	25	Ratio of Specific Heats(Cp/Cv)	1.223	
	26	Density @ flowing temprature	8.355 kg/m3	
SELECTION	27	Operating Viscosity	0.0108 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	YES	
	32	Basis of Selection	FIRE	
	33	Calculated Area	MM²	4134(VTC)
	34	Required Area	MM²	8742 (VTC)
CONNECTIONS	35	Orifice Designation	Q (VTC)	
	36	Size: Inlet	Outlet	6" in 8" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+PTFE (VTC)	
	40	Nozzle	SS316 (VTC)	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	SS316+PTFE (VTC)	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number		PSV-2113	
	2	Service		GAS	
	3	Line No.	Vessel No.	GAS-111-0021-AN07-6"-PT	V-2105
	4	Pipe Class / C.A.	P&ID No.	AN07 / 6mm	BK-GCS-PEDCO-120-PR-PI-0005_D07
	5	Discharge to		To FLARE	
	6	Protect Equipment		-	
	7	Area Clacification		Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance		Yes	
BASIS	9	Nozzle (Full, Semi)		Full Nozzle	
	10	Design Type	Safety, Relief, Safety-Relief	Safety	
	11		Conventional, bellows, Pilot Op.	Bellows	
	12	Bonnet Type		Open	
PROCESS CONDITIONS	13	Fluid	State	GAS	Singel Phase
	14	Required Capacity		17833.1	kg/h
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52	kg/kmol
	16	Oper. Pressure	Set Pressure	5.1	bar-g
	17	Oper. Temperature	Relieving Temp.	36.92	°C
	18	Back Pressure	Constant	-	bar-g
	19		Variable	1.2	bar-g
	20		Total	1.2	bar-g
	21	% Allowable Overpressure		10%	
	22	Over Pressure Factor		1.10	
	23	Compressibility Factor(Z)		0.954	
	24	Latent Heat of Vaporization (KJ/Kg)		-	
	25	Ratio of Specific Heats(Cp/Cv)		1.246	
	26	Density @ flowing temprature		5.970	kg/m3
SELECTION	27	Operating Viscosity		0.011	cP
	28	Barometric Pressure		13.26 ~ 14.37	psia
	29	Design Code	Sizing Basis	API 520	-
	30	Construction Code		API 520	
	31	Fire		NO	
	32	Basis of Selection		Blocked Outlet	
	33	Calculated Area	MM²	2240.6	(VTC)
	34	Required Area	MM²	3421	(VTC)
CONNECTIONS	35	Orifice Designation		N (VTC)	
	36	Size: Inlet	Outlet	4" in	6" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF	#150 FLANGED RF
	38	Body and Bonnet		ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc		SS316+PTFE (VTC)	
	40	Nozzle		SS316 (VTC)	
	41	Guide and Rings		VTA	
	42	Spring		ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows		SS316+PTFE (VTC)	
	44				
OPTIONS	45	Cap: Screwed or Bolted		Screwed	
	46	Lever: Plain or Packed		N/A	
	47	Test Gage		Yes	
	48	With Rupture Disc		No	
	49	Hydro Test		Required	
	50	Seat Leakage Test		Required	
	51	Compliance Standard		N/A	
PURCHASE (will be finalized later)	52	Manufacturer		Will Be Finalized Later	
	53	Model		Will Be Finalized Later	
	54	Serial No.		Will Be Finalized Later	

Notes:

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1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

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شماره صفحه: ۸ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2114	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0022-AN07-6"-PT V-2105
	4	Pipe Class / C.A.	P&ID No.	AN07 / 6mm BK-GCS-PEDCO-120-PR-PI-0005_D07
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	Yes	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Bellows
	12	Bonnet Type	Open	D04
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	17833.1 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.846 kg/m3
	16	Oper. Pressure	Set Pressure	5.1 / 9 bar-g
	17	Oper. Temperature	Relieving Temp.	36.92 / 36.92 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	1.2 bar-g
	20		Total	1.2 bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.954	
	24	Latent Heat of Vaporization (Kj/Kg)	-	
	25	Ratio of Specific Heats(Cp/Cv)	1.246	
	26	Density @ flowing temprature	5.970 kg/m3	
SELECTION	27	Operating Viscosity	0.011 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	2240.6 (VTC)
	34	Required Area	MM²	3421 (VTC)
CONNECTIONS	35	Orifice Designation	N (VTC)	
	36	Size: Inlet	Outlet	4" in 6" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+PTFE (VTC)	
	40	Nozzle	SS316 (VTC)	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	SS316+PTFE (VTC)	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2121A	
	2	Service	D04 GAS	
	3	Line No.	Vessel No.	GAS-111-0029A-CN05-2"-PT V-2101A
	4	Pipe Class / C.A.	P&ID No.	AN07 / 6mm BK-GCS-PEDCO-120-PR-PI-0006_D07 (1 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Bellows
	12	Bonnet Type	Open	D04
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	2166.00 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.55 kg/kmol 0.847 kg/m3
	16	Oper. Pressure	Set Pressure	4.9 / 22 bar-g
	17	Oper. Temperature	Relieving Temp.	60 / 60 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	0.5 bar-g
	20		Total	0.5 bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.822	
	24	Latent Heat of Vaporization (KJ/Kg)	-	
SELECTION	25	Ratio of Specific Heats(Cp/Cv)	1.457	
	26	Density @ flowing temprature	5.770 kg/m3	
	27	Operating Viscosity	0.011 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	YES	
	32	Basis of Selection	Control Valve Failure	
CONNECTIONS	33	Calculated Area	MM²	107.25 (VTC)
	34	Required Area	MM²	153.938 (VTC)
	35	Orifice Designation	E (VTC)	
MATERIALS (VTC)	36	Size: Inlet	Outlet	1" in 2" in
	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+PTFE (VTC)	
	40	Nozzle	SS316 (VTC)	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
OPTIONS	43	Bellows	SS316+PTFE (VTC)	
	44			
	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
PURCHASE (will be finalized later)	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage

VTC : Vendor to confirm in bidding stage

N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2121B	
	2	Service	D04 GAS	
	3	Line No.	Vessel No.	GAS-111-0029B-CN05-2"-PT V-2101B
	4	Pipe Class / C.A.	P&ID No.	AN07 / 6mm BK-GCS-PEDCO-120-PR-PI-0006_D07 (2 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Clacification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Bellows
	12	Bonnet Type	Open	D04
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	2166.00 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.55 kg/kmol 0.847 kg/m3
	16	Oper. Pressure	Set Pressure	4.9 / 22 bar-g
	17	Oper. Temperature	Relieving Temp.	60 / 60 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	0.5 bar-g
	20		Total	0.5 bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.822	
	24	Latent Heat of Vaporization (Kj/Kg)	-	
SELECTION	25	Ratio of Specific Heats(Cp/Cv)	1.457	
	26	Density @ flowing temprature	5.770 kg/m3	
	27	Operating Viscosity	0.011 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	YES	
	32	Basis of Selection	Control Valve Failiure	
CONNECTIONS	33	Calculated Area	MM²	107.25 (VTC)
	34	Required Area	MM²	153.938 (VTC)
	35	Orifice Designation	E (VTC)	
MATERIALS (VTC)	36	Size: Inlet	Outlet	1" in 2" in
	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+PTFE (VTC)	
	40	Nozzle	SS316 (VTC)	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
OPTIONS	43	Bellows	SS316+PTFE (VTC)	
	44			
	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
PURCHASE (will be finalized later)	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage

VTC : Vendor to confirm in bidding stage

N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03 ".

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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number		D04		PSV-2121C	
	2	Service		GAS			
	3	Line No.	Vessel No.	GAS-111-0029C-CN05-2"-PT		V-2101C	
	4	Pipe Class / C.A.	P&ID No.	AN07 / 6mm		BK-GCS-PEDCO-120-PR-PI-0006_D06 (3 OF 3)	
	5	Discharge to		To FLARE			
	6	Protect Equipment		-			
	7	Area Clacification		Zone 2, IIB T4			
	8	NACE MR0175/ISO 15156 Compliance		YES			
BASIS	9	Nozzle (Full, Semi)		Full Nozzle			
	10	Design Type	Safety, Relief, Safety-Relief	Safety			
	11		Conventional, bellows, Pilot Op.	Bellows			
	12	Bonnet Type		Open		D04	
PROCESS CONDITIONS	13	Fluid	State	GAS		Singel Phase	
	14	Required Capacity		2166.00		kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.55 kg/kmol		0.847 kg/m3	
	16	Oper. Pressure	Set Pressure	4.9 / 22		bar-g	
	17	Oper. Temperature	Relieving Temp.	60 / 60		°C	
	18	Back Pressure	Constant	-		bar-g	
	19		Variable	0.5		bar-g	
	20		Total	0.5		bar-g	
	21	% Allowable Overpressure		10%			
	22	Over Pressure Factor		1.10			
	23	Compressibility Factor(Z)		0.822			
	24	Latent Heat of Vaporization (Kj/Kg)		-			
	25	Ratio of Specific Heats(Cp/Cv)		1.457			
	26	Density @ flowing temprature		5.770 kg/m3			
SELECTION	27	Operating Viscosity		0.011 cP			
	28	Barometric Pressure		13.26 ~ 14.37 psia			
	29	Design Code	Sizing Basis	API 520		-	
	30	Construction Code		API 520			
	31	Fire		YES			
	32	Basis of Selection		Control Valve Failiure			
	33	Calculated Area	MM²	107.25 (VTC)			
	34	Required Area	MM²	153.938 (VTC)			
CONNECTIONS	35	Orifice Designation		E (VTC)			
	36	Size: Inlet	Outlet	1" in		2" in	
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF		#150 FLANGED RF	
	38	Body and Bonnet		ASTM A216 GR. WCB (VTC)			
	39	Seat and Disc		SS316+PTFE (VTC)			
	40	Nozzle		SS316 (VTC)			
	41	Guide and Rings		VTA			
	42	Spring		ASTM A216 GR. WCB (VTC) (Note2)			
	43	Bellows		SS316+PTFE (VTC)			
	44						
OPTIONS	45	Cap: Screwed or Bolted		Screwed			
	46	Lever: Plain or Packed		N/A			
	47	Test Gage		Yes			
	48	With Rupture Disc		No			
	49	Hydro Test		Required			
	50	Seat Leakage Test		Required			
	51	Compliance Standard		N/A			
PURCHASE (will be finalized later)	52	Manufacturer		Will Be Finalized Later			
	53	Model		Will Be Finalized Later			
	54	Serial No.		Will Be Finalized Later			

Notes:

VTA : Vendor to Advise in bidding stage

VTC : Vendor to confirm in bidding stage

N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2122A	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0032A-CN05-3"-PT -
	4	Pipe Class / C.A.	P&ID No.	CN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0007_D07(1 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664.0 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	19 22 bar-g
	17	Oper. Temperature	Relieving Temp.	124.8 124.8 °C
	18	Back Pressure	Constant	bar-g
	19		Variable	0.9 bar-g
	20		Total	0.9 bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.964	
	24	Latent Heat of Vaporization (KJ/Kg)	693.3	
	25	Ratio of Specific Heats(Cp/Cv)	1.225	
	26	Density @ flowing temprature	15.3 kg/m3	
SELECTION	27	Operating Viscosity	0.015 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	539.85 (VTC)
	34	Required Area	MM²	1017(VTC)
CONNECTIONS	35	Orifice Designation	J (VTC)	
	36	Size: Inlet	Outlet	2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2122B	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0032B-CN05-3"-PT -
	4	Pipe Class / C.A.	P&ID No.	CN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0007_D07 (2 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664.0 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	19 / 22 bar-g
	17	Oper. Temperature	Relieving Temp.	124.8 / 124.8 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	0.9 bar-g
	20		Total	0.9 bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.964	
	24	Latent Heat of Vaporization (KJ/Kg)	693.3	
	25	Ratio of Specific Heats(Cp/Cv)	1.225	
	26	Density @ flowing temprature	kg/m3	
SELECTION	27	Operating Viscosity	cP	
	28	Barometric Pressure	~ 14.37 psia	
	29	Design Code	Sizing Basis	-
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	539.85 (VTC)
	34	Required Area	MM²	1017(VTC)
CONNECTIONS	35	Orifice Designation	J (VTC)	
	36	Size: Inlet	Outlet	2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage

VTC : Vendor to confirm in bidding stage

N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

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شماره صفحه: ۱۴ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2122C	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0032C-CN05-3"-PT -
	4	Pipe Class / C.A.	P&ID No.	CN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0007_D07 (3 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	19 22 bar-g
	17	Oper. Temperature	Relieving Temp.	124.8 124.8 °C
	18	Back Pressure	Constant	bar-g
	19		Variable	bar-g
	20		Total	0.9 bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.964	
	24	Latent Heat of Vaporization (KJ/Kg)	693.3	
	25	Ratio of Specific Heats(Cp/Cv)	1.225	
	26	Density @ flowing temprature	15.38 kg/m3	
SELECTION	27	Operating Viscosity	0.015 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	539.85 (VTC)
	34	Required Area	MM²	1017(VTC)
CONNECTIONS	35	Orifice Designation	J (VTC)	
	36	Size: Inlet	Outlet	2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

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تجهیزات

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0009

نسخه

D04

شماره صفحه: ۱۵ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2123A	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0033A-CN05-3"-PT -
	4	Pipe Class / C.A.	P&ID No.	CN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0007_D07(1 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664.0 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	19 / 22 bar-g
	17	Oper. Temperature	Relieving Temp.	124.8 124.8 °C
	18	Back Pressure	Constant	bar-g
	19		Variable	bar-g
	20		Total	bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.964	
	24	Latent Heat of Vaporization (KJ/Kg)	693.3	
	25	Ratio of Specific Heats(Cp/Cv)	1.225	
	26	Density @ flowing temprature	kg/m3	
SELECTION	27	Operating Viscosity	cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	539.85 (VTC)
	34	Required Area	MM²	1017(VTC)
CONNECTIONS	35	Orifice Designation	J (VTC)	
	36	Size: Inlet	Outlet	2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)

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	DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES								
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	بوع مدرک	سریال	نسخه
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	PEDCO	120	IN	DT	0009	D04	

PRESSURE SAFETY VALVE						
GENERAL	1	Tag Number			PSV-2123B	
	2	Service			GAS	
	3	Line No.	Vessel No.		GAS-111-0033B-CN05-3"-PT	-
	4	Pipe Class / C.A.	P&ID No.		CN05 / 3mm	BK-GCS-PEDCO-120-PR-PI-0007_D07 (2 OF 3)
	5	Discharge to			To FLARE	
	6	Protect Equipment			-	
	7	Area Clacification			Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance			YES	
BASIS	9	Nozzle (Full, Semi)			Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief		Safety	
	11		Conventional, bellows, Pilot Op.		Conventional	
	12	Bonnet Type			Closed	
PROCESS CONDITIONS	13	Fluid	State		GAS	Singel Phase
	14	Required Capacity			8664.0	kg/h
	15	Molecular Mass	Sp. Gr.@ relief Tmp		24.52 kg/kmol	0.85 kg/m3
	16	Oper. Pressure	Set Pressure		19	22 bar-g
	17	Oper. Temperature	RelievingTemp.		124.8	124.8 °C
	18	Back Pressure	Constant			bar-g
	19		Variable			bar-g
	20		Total		1.9	bar-g
	21	% Allowable Overpressure				10%
	22	Over Pressure Factor				1.10
	23	Compressibility Factor(Z)				0.964
	24	Latent Heat of Vaporization (Kj/Kg)				693.3
	25	Ratio of Specific Heats(Cp/Cv)				1.225
	26	Density @ flowing temprature			15.3 kg/m3	
	27	Operating Viscosity			0.015 cP	
	28	Barometric Pressure			13.26 ~ 14.37 psia	
SELECTION	29	Design Code	Sizing Basis		API 520	-
	30	Construction Code			API 520	
	31	Fire			NO	
	32	Basis of Selection			Blocked Outlet	
	33	Calculated Area	MM²		539.85 (VTC)	
	34	Required Area	MM²		1017(VTC)	
	35	Orifice Designation			J (VTC)	
CONNECTIONS	36	Size: Inlet	Outlet		2" in	3" in
	37	Rating & Facing :In	Outlet		#300 FLANGEDRF	#150 FLANGED RF
MATERIALS (VTC)	38	Body and Bonnet			ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc			SS316+RPTFE	
	40	Nozzle			316 SS	
	41	Guide and Rings			VTA	
	42	Spring			ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows			N/A	
	44					
OPTIONS	45	Cap: Screwed or Bolted			Screwed	
	46	Lever: Plain or Packed			N/A	
	47	Test Gage			Yes	
	48	With Rupture Disc			No	
	49	Hydro Test			Required	
	50	Seat Leakage Test			Required	
	51	Compliance Standard			N/A	
PURCHASE (will be finalized later)	52	Manufacturer			Will Be Finalized Later	
	53	Model			Will Be Finalized Later	
	54	Serial No.			Will Be Finalized Later	

Notes: VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

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نسخه

D04

شماره صفحه: ۱۷ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2123C	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0033C-CN05-3"-PT -
	4	Pipe Class / C.A.	P&ID No.	CN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0001_D07 (3 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664.0 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	19 22 bar-g
	17	Oper. Temperature	Relieving Temp.	124.8 124.8 °C
	18	Back Pressure	Constant	bar-g
	19		Variable	bar-g
	20		Total	bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.964	
	24	Latent Heat of Vaporization (KJ/Kg)	693.3	
	25	Ratio of Specific Heats(Cp/Cv)	1.225	
	26	Density @ flowing temprature	15 kg/m3	
SELECTION	27	Operating Viscosity	0.015 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	539.85 (VTC)
	34	Required Area	MM²	1017(VTC)
CONNECTIONS	35	Orifice Designation	J (VTC)	
	36	Size: Inlet	Outlet	2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage

VTC : Vendor to confirm in bidding stage

N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

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PEDCO

تجهیزات

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سریال

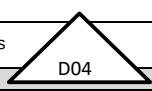
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نسخه

D04

شماره صفحه: ۱۸ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2131A	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0042A-CN05-2"-PT
	4	Pipe Class / C.A.	P&ID No.	CN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0009_D07 (1 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Bellows
	12	Bonnet Type	Open 	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	982.27 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	18.1 / 22 bar-g
	17	Oper. Temperature	RelievingTemp.	60 / 208 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	3.4 bar-g
	20		Total	3.4 bar-g
	21	% Allowable Overpressure	21%	
	22	Over Pressure Factor	1.21	
	23	Compressibility Factor(Z)	0.936	
	24	Latent Heat of Vaporization (Kj/Kg)	-	
	25	Ratio of Specific Heats(Cp/Cv)	1.278	
	26	Density @ flowing temprature	18.08 kg/m3	
SELECTION	27	Operating Viscosity	0.013 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	YES	
	32	Basis of Selection	FIRE	
	33	Calculated Area	MM ²	59.62 (VTC)
CONNECTIONS	34	Required Area	MM ²	153.93 (VTC)
	35	Orifice Designation	D (VTC)	
	36	Size: Inlet	Outlet	1" in 2" in
	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
MATERIALS (VTC)	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	SS316+PTFE (VTC)	
OPTIONS	44			
	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
PURCHASE (will be finalized later)	51	Compliance Standard	N/A	
	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

صادر کننده

PEDCO

تجهیزات

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رشته

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نوع مدرک

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سریال

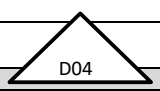
0009

نسخه

D04

شماره صفحه: ۱۹ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2131B	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0042B-CN05-2"-PT
	4	Pipe Class / C.A.	P&ID No.	CN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0009_D07 (2 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Clacification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Bellows
	12	Bonnet Type	Open 	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	982.27 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	18.1 / 22 bar-g
	17	Oper. Temperature	RelievingTemp.	60 / 208 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	3.4 bar-g
	20		Total	3.4 bar-g
	21	% Allowable Overpressure	21%	
	22	Over Pressure Factor	1.21	
	23	Compressibility Factor(Z)	0.936	
	24	Latent Heat of Vaporization (Kj/Kg)	-	
	25	Ratio of Specific Heats(Cp/Cv)	1.278	
	26	Density @ flowing temprature	18.08 kg/m3	
SELECTION	27	Operating Viscosity	0.013 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	YES	
	32	Basis of Selection	FIRE	
	33	Calculated Area	MM ²	59.62 (VTC)
	34	Required Area	MM ²	153.93 (VTC)
CONNECTIONS	35	Orifice Designation	D (VTC)	
	36	Size: Inlet	Outlet	1" in 2" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	SS316+PTFE (VTC)	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

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بسته کاری

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صادر کننده

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نسخه

D04

شماره صفحه: ۳۴ از ۲۰

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2131C	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0042C-CN05-2"-PT -
	4	Pipe Class / C.A.	P&ID No.	CN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0009_D06(3 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Clacification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Bellows
	12	Bonnet Type	Open	D04
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	982.27 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	18.1 / 22 bar-g
	17	Oper. Temperature	RelievingTemp.	60 / 208 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	3.4 bar-g
	20		Total	3.4 bar-g
	21	% Allowable Overpressure	21%	
	22	Over Pressure Factor	1.21	
	23	Compressibility Factor(Z)	0.936	
	24	Latent Heat of Vaporization (Kj/Kg)	-	
	25	Ratio of Specific Heats(Cp/Cv)	1.278	
	26	Density @ flowing temprature	18.80 kg/m3	
SELECTION	27	Operating Viscosity	0.013 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	YES	
	32	Basis of Selection	FIRE	
	33	Calculated Area	MM²	59.62 (VTC)
	34	Required Area	MM²	153.93 (VTC)
CONNECTIONS	35	Orifice Designation	D (VTC)	
	36	Size: Inlet	Outlet	1" in 2" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	SS316+PTFE (VTC)	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage

VTC : Vendor to confirm in bidding stage

N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2132A	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0047A-FN05-2"-PT
	4	Pipe Class / C.A.	P&ID No.	FN05 / 3mm
	5	Discharge to	BK-GCS-PEDCO-120-PR-PI-0010_D05 (1 OF 3)	
	6	Protect Equipment	To FLARE	
	7	Area Classification	-	
	8	NACE MR0175/ISO 15156 Compliance	Zone 2, IIB T4	
BASIS	9	Nozzle (Full, Semi)	YES	
	10	Design Type	Full Nozzle, Spring Loaded Type	
	11	Safety, Relief, Safety-Relief	Safety	
	12	Conventional, bellows, Pilot Op.	Conventional	
PROCESS CONDITIONS	13	Bonnet Type	Closed	
	14	Fluid	State	GAS
	15	Required Capacity	8664.0	Singel Phase
	16	Molecular Mass	Sp. Gr.@ relief Tmp	kg/h
	17	Oper. Pressure	Set Pressure	24.52 kg/kmol
	18	Oper. Temperature	Relieving Temp.	54.80 / 62 bar-g
	19	Back Pressure	Constant	142.3 °C
	20	Variable	bar-g	-
	21	Total	bar-g	1.0
	22	% Allowable Overpressure	10%	
	23	Over Pressure Factor	1.10	
	24	Compressibility Factor(Z)	0.923	
	25	Latent Heat of Vaporization (Kj/Kg)	566.7	
	26	Ratio of Specific Heats(Cp/Cv)	1.28	
	27	Density @ flowing temprature	kg/m3	
	28	Operating Viscosity	cP	
SELECTION	29	Barometric Pressure	1013 ~ 14.37	psia
	30	Design Code	Sizing Basis	API 520
	31	Construction Code	API 520	-
	32	Fire	Blocked Outlet	
	33	Basis of Selection	Calculated Area	193.67 (VTC)
	34	Required Area	MM²	397.60 (VTC)
	35	Orifice Designation	MM²	G (VTC)
CONNECTIONS	36	Size: Inlet	Outlet	1 1/2" in
	37	Rating & Facing :In	Outlet	#600 FLANGED RF
MATERIALS (VTC)	38	Body and Bonnet	3" in	
	39	Seat and Disc	#150 FLANGED RF	
	40	Nozzle	ASTM A216 GR. WCB (VTC)	
	41	Guide and Rings	SS316+RPTFE	
	42	Spring	316 SS	
	43	Bellows	VTA	
	44		ASTM A216 GR. WCB (VTC) (Note2)	
OPTIONS	45	Cap: Screwed or Bolted	N/A	
	46	Lever: Plain or Packed	Screwed	
	47	Test Gage	N/A	
	48	With Rupture Disc	Yes	
	49	Hydro Test	No	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	Required	
PURCHASE (will be finalized later)	52	Manufacturer	N/A	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2133A	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0048A-FN05-2"-PT -
	4	Pipe Class / C.A.	P&ID No.	FN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0010_D05 (1 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664.0 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	54.80 bar-g 62 bar-g
	17	Oper. Temperature	Relieving Temp.	142.3 °C 142.3 °C
	18	Back Pressure	Constant	bar-g
	19		Variable	bar-g
	20		Total	bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.923	
	24	Latent Heat of Vaporization (KJ/Kg)	566.7	
	25	Ratio of Specific Heats(Cp/Cv)	1.28	
	26	Density @ flowing temprature	kg/m3	
SELECTION	27	Operating Viscosity	0.01 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	193.67 (VTC)
	34	Required Area	MM²	397.60 (VTC)
CONNECTIONS	35	Orifice Designation	G (VTC)	
	36	Size: Inlet	Outlet	1 1/2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#600 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2132B	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0047B-FN05-2"-PT -
	4	Pipe Class / C.A.	P&ID No.	FN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0010_D05 (2 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664.0 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol / 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	62 bar-g
	17	Oper. Temperature	Relieving Temp.	142.3 °C
	18	Back Pressure	Constant	bar-g
	19		Variable	1.0 bar-g
	20		Total	1.0 bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.923	
	24	Latent Heat of Vaporization (KJ/Kg)	566.7	
	25	Ratio of Specific Heats(Cp/Cv)	1.28	
	26	Density @ flowing temprature	54.06 kg/m3	
SELECTION	27	Operating Viscosity	0.017 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	193.67 (VTC)
	34	Required Area	MM²	397.60 (VTC)
CONNECTIONS	35	Orifice Designation	G (VTC)	
	36	Size: Inlet	Outlet	1 1/2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#600 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage

VTC : Vendor to confirm in bidding stage

N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2133B	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0048B-FN05-2"-PT -
	4	Pipe Class / C.A.	P&ID No.	FN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0010_D05 (2 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664.0 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	60 / 62 bar-g
	17	Oper. Temperature	Relieving Temp.	142.3 / 142.3 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	1.0 bar-g
	20		Total	1.0 bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.923	
	24	Latent Heat of Vaporization (KJ/Kg)	566.7	
	25	Ratio of Specific Heats(Cp/Cv)	1.28	
	26	Density @ flowing temprature	0.06 kg/m3	
SELECTION	27	Operating Viscosity	0.017 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	193.67 (VTC)
	34	Required Area	MM²	397.60 (VTC)
CONNECTIONS	35	Orifice Designation	G (VTC)	
	36	Size: Inlet	Outlet	1 1/2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#600 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2132C	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0047C-FN05-2"-PT -
	4	Pipe Class / C.A.	P&ID No.	FN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0010_D05 (3 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664.0 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	54.80 / 62 bar-g
	17	Oper. Temperature	Relieving Temp.	142.3 142.3 °C
	18	Back Pressure	Constant	bar-g
	19		Variable	bar-g
	20		Total	bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.923	
	24	Latent Heat of Vaporization (KJ/Kg)	566.7	
	25	Ratio of Specific Heats(Cp/Cv)	1.28	
	26	Density @ flowing temprature	kg/m3	
SELECTION	27	Operating Viscosity	cP	
	28	Barometric Pressure	13.2 - 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	193.67 (VTC)
	34	Required Area	MM²	397.60 (VTC)
CONNECTIONS	35	Orifice Designation	G (VTC)	
	36	Size: Inlet	Outlet	1 1/2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#600 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage

VTC : Vendor to confirm in bidding stage

N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2133C	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0048C-FN05-2"-PT -
	4	Pipe Class / C.A.	P&ID No.	FN05 / 3mm BK-GCS-PEDCO-120-PR-PI-0010_D05 (3 OF 3)
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	8664.0 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.52 kg/kmol 0.85 kg/m3
	16	Oper. Pressure	Set Pressure	54.80 / 62 bar-g
	17	Oper. Temperature	Relieving Temp.	142.3 142.3 °C
	18	Back Pressure	Constant	bar-g
	19		Variable	bar-g
	20		Total	bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.923	
	24	Latent Heat of Vaporization (KJ/Kg)	566.7	
	25	Ratio of Specific Heats(Cp/Cv)	1.28	
	26	Density @ flowing temprature	kg/m3	
SELECTION	27	Operating Viscosity	cP	
	28	Barometric Pressure	13.2 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	193.67 (VTC)
	34	Required Area	MM²	397.60 (VTC)
CONNECTIONS	35	Orifice Designation	G (VTC)	
	36	Size: Inlet	Outlet	1 1/2" in 3" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#600 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage

VTC : Vendor to confirm in bidding stage

N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D02".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

صادر کننده

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D04

شماره صفحه: ۲۷ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2141	
	2	Service	GAS	
	3	Line No.	Vessel No.	GAS-111-0060-FN05-3"-PT
	4	Pipe Class / C.A.	P&ID No.	FN05 / 3mm
	5	Discharge to	To FLARE	
	6	Protect Equipment	-	
	7	Area Classification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	YES	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS
	14	Required Capacity	17252.50 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.562 kg/kmol
	16	Oper. Pressure	Set Pressure	53.9 / 62 bar-g
	17	Oper. Temperature	Relieving Temp.	60 / 60 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	1.0 bar-g
	20		Total	1.0 bar-g
	21	% Allowable Overpressure	10%	
	22	Over Pressure Factor	1.10	
	23	Compressibility Factor(Z)	0.823	
	24	Latent Heat of Vaporization (KJ/Kg)	-	
	25	Ratio of Specific Heats(Cp/Cv)	1.461	
	26	Density @ flowing temprature	59.17 kg/m3	
SELECTION	27	Operating Viscosity	0.014 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520
	30	Construction Code	API 520	
	31	Fire	NO	
	32	Basis of Selection	Blocked Outlet	
	33	Calculated Area	MM²	311 (VTC)
	34	Required Area	MM²	629.01 (VTC)
CONNECTIONS	35	Orifice Designation	H (VTC)	
	36	Size: Inlet	Outlet	2" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#600 FLANGEDRF
	38	Body and Bonnet	ASTM A216 GR. WCB (VTC)	
	39	Seat and Disc	SS316+RPTFE	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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نگهداشت و افزایش تولید میدان نفتی بینک
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DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

شماره صفحه: ۲۸ از ۳۴

نسخه	سریال	بوع مدرک	رشته	تجهیزات	صادر کننده	بسته کاری	پروژه
D04	0009	DT	IN	120	PEDCO	GCS	BK

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number		PSV-2142			
	2	Service		GAS			
	3	Line No.	Vessel No.	GAS-111-0062-FN05-3"-PT		-	
	4	Pipe Class / C.A.	P&ID No.	FN05 / 3mm		BK-GCS-PEDCO-120-PR-PI-0012_D07	
	5	Discharge to		To FLARE			
	6	Protect Equipment		-			
	7	Area Clacification		Zone 2, IIB T4			
	8	NACE MR0175/ISO 15156 Compliance		YES			
BASIS	9	Nozzle (Full, Semi)		Full Nozzle, Spring Loaded Type			
	10	Design Type	Safety, Relief, Safety-Relief	Safety			
	11		Conventional, bellows, Pilot Op.	Conventional			
	12	Bonnet Type		Closed			
PROCESS CONDITIONS	13	Fluid	State	GAS		Singel Phase	
	14	Required Capacity		17252.50		kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	24.562 kg/kmol		0.85 kg/m3	
	16	Oper. Pressure	Set Pressure	53.9 / 62		bar-g	
	17	Oper. Temperature	RelievingTemp.	60 / 60		°C	
	18	Back Pressure	Constant	-		bar-g	
	19		Variable	1.0		bar-g	
	20		Total	1.0		bar-g	
	21	% Allowable Overpressure		10%			
	22	Over Pressure Factor		1.10			
	23	Compressibility Factor(Z)		0.823			
	24	Latent Heat of Vaporization (KJ/Kg)		-			
	25	Ratio of Specific Heats(Cp/Cv)		1.461			
	26	Density @ flowing temprature		59.17 kg/m3			
	27	Operating Viscosity		0.014 cP			
	28	Barometric Pressure		13.26 ~ 14.37 psia			
SELECTION	29	Design Code	Sizing Basis	API 520		-	
	30	Construction Code		API 520			
	31	Fire		NO			
	32	Basis of Selection		Blocked Outlet			
	33	Calculated Area	MM²	311 (VTC)			
	34	Required Area	MM²	629.01 (VTC)			
	35	Orifice Designation		H (VTC)			
CONNECTIONS	36	Size: Inlet	Outlet	2" in		3" in	
	37	Rating & Facing :In	Outlet	#600 FLANGEDRF		#150 FLANGEDRF	
MATERIALS (VTC)	38	Body and Bonnet		ASTM A216 GR. WCB (VTC)			
	39	Seat and Disc		SS316+RPTFE			
	40	Nozzle		316 SS			
	41	Guide and Rings		VTA			
	42	Spring		ASTM A216 GR. WCB (VTC) (Note2)			
	43	Bellows		N/A			
	44						
OPTIONS	45	Cap: Screwed or Bolted		Screwed			
	46	Lever: Plain or Packed		N/A			
	47	Test Gage		Yes			
	48	With Rupture Disc		No			
	49	Hydro Test		Required			
	50	Seat Leakage Test		Required			
	51	Compliance Standard		N/A			
PURCHASE (will be finalized later)	52	Manufacturer		Will Be Finalized Later			
	53	Model		Will Be Finalized Later			
	54	Serial No.		Will Be Finalized Later			

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

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شماره صفحه: ۲۹ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number	PSV-2201	
	2	Service	GAS	
	3	Line No.	Vessel No.	ISA-112-0009-AZ00-2"-NP
	4	Pipe Class / C.A.	P&ID No.	AZ00 / 0mm
	5	Discharge to	To ATM	
	6	Protect Equipment	-	
	7	Area Clacification	Zone 2, IIB T4	
	8	NACE MR0175/ISO 15156 Compliance	No	
BASIS	9	Nozzle (Full, Semi)	Full Nozzle, Spring Loaded Type	
	10	Design Type	Safety, Relief, Safety-Relief	Safety
	11		Conventional, bellows, Pilot Op.	Conventional
	12	Bonnet Type	Closed	
PROCESS CONDITIONS	13	Fluid	State	GAS Singel Phase
	14	Required Capacity	1071.8 kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	28.95 kg/kmol 1.00 kg/m3
	16	Oper. Pressure	Set Pressure	8.00 12.5 bar-g
	17	Oper. Temperature	Relieving Temp.	65 / 323.4 °C
	18	Back Pressure	Constant	- bar-g
	19		Variable	0.0 bar-g
	20		Total	0.0 bar-g
	21	% Allowable Overpressure	21%	
	22	Over Pressure Factor	1.21	
	23	Compressibility Factor(Z)	0.99	
	24	Latent Heat of Vaporization (Kj/Kg)	-	
	25	Ratio of Specific Heats(Cp/Cv)	1.42	
	26	Density @ flowing temprature	9.29 kg/m3	
SELECTION	27	Operating Viscosity	0.021 cP	
	28	Barometric Pressure	13.26 ~ 14.37 psia	
	29	Design Code	Sizing Basis	API 520 -
	30	Construction Code	API 520	
	31	Fire	Yes	
	32	Basis of Selection	FIRE	
	33	Calculated Area	MM²	113.24 (VTC)
	34	Required Area	MM²	153.95 (VTC)
CONNECTIONS	35	Orifice Designation	E (VTC)	
	36	Size: Inlet	Outlet	1" in 2" in
MATERIALS (VTC)	37	Rating & Facing :In	Outlet	#300 FLANGED RF #150 FLANGED RF
	38	Body and Bonnet	ASTM B148 UNS C95800	
	39	Seat and Disc	ASTM B148 UNS C95800	
	40	Nozzle	316 SS	
	41	Guide and Rings	VTA	
	42	Spring	ASTM A216 GR. WCB (VTC) (Note2)	
	43	Bellows	N/A	
	44			
OPTIONS	45	Cap: Screwed or Bolted	Screwed	
	46	Lever: Plain or Packed	N/A	
	47	Test Gage	Yes	
	48	With Rupture Disc	No	
	49	Hydro Test	Required	
	50	Seat Leakage Test	Required	
	51	Compliance Standard	N/A	
PURCHASE (will be finalized later)	52	Manufacturer	Will Be Finalized Later	
	53	Model	Will Be Finalized Later	
	54	Serial No.	Will Be Finalized Later	

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

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GCS

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D04

شماره صفحه: ۳۰ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number		PSV-2211A				D04
	2	Service		GAS				
	3	Line No.	Vessel No.	NIT-112-0022-AN01-2"-PT		V-2204		
	4	Pipe Class / C.A.	P&ID No.	AN01 / 1mm		BK-GCS-PEDCO-120-PR-PI-0016_D07		
	5	Discharge to		To ATM				
	6	Protect Equipment		-				
	7	Area Clacification		Zone 2, IIB T4				
	8	NACE MR0175/ISO 15156 Compliance		No				
BASIS	9	Nozzle (Full, Semi)		Full Nozzle, Spring Loaded Type				
	10	Design Type	Safety, Relief, Safety-Relief	Safety				
	11		Conventional, bellows, Pilot Op.	Conventional				
	12	Bonnet Type		Closed				
PROCESS CONDITIONS	13	Fluid	State	GAS		Singel Phase		
	14	Required Capacity		500.4		kg/h		
	15	Molecular Mass	Sp. Gr.@ relief Tmp	28 kg/kmol		0.97 kg/m3		
	16	Oper. Pressure	Set Pressure	8.00		12.5 bar-g		
	17	Oper. Temperature	RelievingTemp.	60 /		323.4 °C		
	18	Back Pressure	Constant	-		bar-g		
	19		Variable	0.5		bar-g		
	20		Total	0.5		bar-g		
	21	% Allowable Overpressure		21%				
	22	Over Pressure Factor		1.21				
	23	Compressibility Factor(Z)		0.99				
	24	Latent Heat of Vaporization (Kj/Kg)		-				
	25	Ratio of Specific Heats(Cp/Cv)		1.40				
	26	Density @ flowing temprature		9.12 kg/m3				
	27	Operating Viscosity		0.030 cP				
	28	Barometric Pressure		13.26 ~ 14.37 psia				
SELECTION	29	Design Code	Sizing Basis	API 520		-		
	30	Construction Code		API 520				
	31	Fire		Yes				
	32	Basis of Selection		FIRE				
	33	Calculated Area	MM²	54.241 (VTC)				
	34	Required Area	MM²	153.9 (VTC)				
	35	Orifice Designation		D (VTC)				
CONNECTIONS	36	Size: Inlet	Outlet	1" in		2" in		
	37	Rating & Facing :In	Outlet	#300 FLANGED RF		#150 FLANGED RF		
MATERIALS (VTC)	38	Body and Bonnet		A216 Gr. WCB				
	39	Seat and Disc		13Cr+PTFE				
	40	Nozzle		316 SS				
	41	Guide and Rings		VTA				
	42	Spring		ASTM A216 GR. WCB (VTC) (Note2)				
	43	Bellows		N/A				
	44							
OPTIONS	45	Cap: Screwed or Bolted		Screwed				
	46	Lever: Plain or Packed		N/A				
	47	Test Gage		Yes				
	48	With Rupture Disc		No				
	49	Hydro Test		Required				
	50	Seat Leakage Test		Required				
	51	Compliance Standard		N/A				
PURCHASE (will be finalized later)	52	Manufacturer		Will Be Finalized Later				
	53	Model		Will Be Finalized Later				
	52	Serial No.		Will Be Finalized Later				

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)



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سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

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شماره صفحه: ۳۱ از ۳۴

PRESSURE SAFETY VALVE

GENERAL	1	Tag Number		PSV-2271		D04
	2	Service		GAS		
	3	Line No.	Vessel No.	FLG-111-0011-AN07-2"-PT	V-2205	
	4	Pipe Class / C.A.	P&ID No.	AN07 / 6mm	BK-GCS-PEDCO-120-PR-PI-0022_D07	
	5	Discharge to		To FLARE		
	6	Protect Equipment		-		
	7	Area Clacification		Zone 2, IIB T4		
	8	NACE MR0175/ISO 15156 Compliance		Yes		
BASIS	9	Nozzle (Full, Semi)		Full Nozzle		
	10	Design Type	Safety, Relief, Safety-Relief	Safety		
	11		Conventional, bellows, Pilot Op.	Bellows	D04	
	12	Bonnet Type		Open		
PROCESS CONDITIONS	13	Fluid	State	GAS	Singel Phase	
	14	Required Capacity		174.5	kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp	18.02	kg/kmol	0.62 kg/m3
	16	Oper. Pressure	Set Pressure	4.90	9	bar-g
	17	Oper. Temperature	RelievingTemp.	36.78	/	182.6 °C
	18	Back Pressure	Constant	-	bar-g	
	19		Variable	3.2	bar-g	
	20		Total	3.2	bar-g	
	21	% Allowable Overpressure		21%		
	22	Over Pressure Factor		1.21		
	23	Compressibility Factor(Z)		0.975		
	24	Latent Heat of Vaporization (KJ/Kg)		1994.0		
	25	Ratio of Specific Heats(Cp/Cv)		1.25		
	26	Density @ flowing temprature		5.77	kg/m3	
	27	Operating Viscosity		0.012	cP	
	28	Barometric Pressure		13.26 ~ 14.37	psia	
SELECTION	29	Design Code	Sizing Basis	API 520	-	
	30	Construction Code		API 520		
	31	Fire		NO		
	32	Basis of Selection		FIRE		
	33	Calculated Area	MM²	28.75(VTC)		
	34	Required Area	MM²	153.9 (VTC)		
	35	Orifice Designation		D (VTC)		
CONNECTIONS	36	Size: Inlet	Outlet	1" in	2" in	
	37	Rating & Facing :In	Outlet	#300 FLANGED RF	#150 FLANGED RF	
MATERIALS (VTC)	38	Body and Bonnet		ASTM A216 GR. WCB		
	39	Seat and Disc		SS316+PTFE		
	40	Nozzle		316SS		
	41	Guide and Rings		VTA		
	42	Spring		ASTM A216 GR. WCB (VTC) (Note2)		
	43	Bellows		SS316+PTFE (VTC)		
	44					
OPTIONS	45	Cap: Screwed or Bolted		Screwed		
	46	Lever: Plain or Packed		N/A		
	47	Test Gage		Yes		
	48	With Rupture Disc		No		
	49	Hydro Test		Required		
	50	Seat Leakage Test		Required		
	51	Compliance Standard		N/A		
PURCHASE (will be finalized later)	52	Manufacturer		Will Be Finalized Later		
	53	Model		Will Be Finalized Later		
	52	Serial No.		Will Be Finalized Later		

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف توکام گاز در ایستگاه جمع آوری بینک								
DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES										
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴		پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۳۳ از ۳۳
		BK	GCS	PEDCO	120	IN	DT	0009	D04	

PRESSURE SAFETY VALVE									
GENERAL	1	Tag Number				PSV-2293			
	2	Service				GAS			
	3	Line No.	Vessel No.			TEG-111-0113-AN04-2"-PT		V-2107	
	4	Pipe Class / C.A.	P&ID No.			AN04 / 3mm		BK-GCS-PEDCO-120-PR-PI-0025_D07	
	5	Discharge to				To FLARE			
	6	Protect Equipment							
	7	Area Clacification				Zone 2, IIB T4			
	8	NACE MR0175/ISO 15156 Compliance				Yes			
BASIS	9	Nozzle (Full, Semi)				Full Nozzle, Spring Loaded Type			
	10	Design Type				Safety, Relief, Safety-Relief			
	Conventional, bellows, Pilot Op.								
	11					Conventional			
PROCESS CONDITIONS	12	Bonnet Type				Closed			
	13	Fluid	State			GAS		Singel Phase	
	14	Required Capacity				2098.0		kg/h	
	15	Molecular Mass	Sp. Gr.@ relief Tmp			143.6 kg/kmol		4.95 kg/m3	
	16	Oper. Pressure	Set Pressure			0.10		3.5 bar-g	
	17	Oper. Temperature	RelievingTemp.			33 /		335.9 °C	
	18	Back Pressure	Constant					bar-g	
	Variable			0.1		bar-g			
	Total			0.1		bar-g			
	21	% Allowable Overpressure				21%			
	22	Over Pressure Factor				1.21			
	23	Compressibility Factor(Z)				0.646			
	24	Latent Heat of Vaporization (Kj/Kg)				314.3			
	25	Ratio of Specific Heats(Cp/Cv)				1.08			
	26	Density @ flowing temprature				10.29 kg/m3			
	27	Operating Viscosity				0.010 cP			
	28	Barometric Pressure				13.26 - 14.37 psia			
	SELECTION	29	Design Code	Sizing Basis			API 520		
30		Construction Code				API 520			
31		Fire				NO			
32		Basis of Selection				FIRE			
33		Calculated Area	MM²			275(VTC)			
34		Required Area	MM²			397.6 (VTC)			
35		Orifice Designation				G (VTC)			
CONNECTIONS		36	Size: Inlet	Outlet			1 1/2" in		3" in
	37	Rating & Facing :In	Outlet			#300 FLANGED RF		#150 FLANGED RF	
MATERIALS (VTC)	38	Body and Bonnet				ASTM A105			
	39	Seat and Disc				SS316+PTFE			
	40	Nozzle				316 SS			
	41	Guide and Rings				VTA			
	42	Spring				ASTM A216 GR. WCB (VTC) (Note2)			
	43	Bellows				N/A			
	44								
OPTIONS	45	Cap: Screwed or Bolted				Screwed			
	46	Lever: Plain or Packed				N/A			
	47	Test Gage				Yes			
	48	With Rupture Disc				No			
	49	Hydro Test				Required			
	50	Seat Leakage Test				Required			
	51	Compliance Standard				N/A			
PURCHASE (will be finalized later)	52	Manufacturer				Will Be Finalized Later			
	53	Model				Will Be Finalized Later			
	54	Serial No.				Will Be Finalized Later			

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف توکام گاز در ایستگاه جمع آوری بینک								
DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES										
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴		پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۳۴ از ۳۳
		BK	GCS	PEDCO	120	IN	DT	0009	D04	

TEMPERATURE SAFETY VALVE										
GENERAL	1	Tag Number					TSV-2281		D04	
	2	Service					LIQUID			
	3	Line No.		Vessel No.		DO-112-0005A-AN01-1"-PT		V-2206		
	4	Pipe Class / C.A.		P&ID No.		AN01 / 1mm		BK-GCS-PEDCO-120-PR-PI-0023_D07(1 OF 3)		
	5	Discharge to					To DIESEL OIL DRUM			
	6	Protect Equipment								
	7	Area Clacification					Zone 2, IIB T4			
	8	NACE MR0175/ISO 15156 Compliance					NO			
BASIS	9	Nozzle (Full, Semi)					Full Nozzle, Spring Loaded Type			
	10	Design Type		Safety, Relief, Safety-Relief		Safety				
	Conventional, bellows, Pilot Op.			Conventional						
	12	Bonnet Type					Closed			
PROCESS CONDITIONS	13	Fluid		State		LIQUID		Singel Phase		
	14	Required Capacity					39.537 (V.T.C)		kg/h	
	15	Molecular Mass		Sp. Gr.@ relief Tmp		184.4		0.85		
	16	Oper. Pressure		Set Pressure		0.10		3.5 bar-g		
	17	Oper. Temperature		RelievingTemp.		AMB /		VTA °C		
	18	Back Pressure		Constant				bar-g		
	Variable			0.0		bar-g				
	Total			0.0		bar-g				
	21	% Allowable Overpressure					10%			
	22	Over Pressure Factor					110%			
	23	Compressibility Factor(Z)					-			
	24	Latent Heat of Vaporization (Kj/Kg)					-			
	25	Ratio of Specific Heats(Cp/Cv)					1.118			
	26	Density @ flowing temprature					850.00			
	27	Operating Viscosity (cp)					2.143			
	28	Barometric Pressure					13.26 - 14.37 psia			
SELECTION	29	Design Code		Sizing Basis		-		-		
	30	Construction Code					-			
	31	Fire					-			
	32	Basis of Selection					Thermal Expansion			
	33	Calculated Area		MM²		0.00003464509 (V.T.C)				
	34	Required Area		MM²		0.0000709676 (V.T.C)				
	35	Orifice Designation					D			
	CONNECTIONS	36	Size: Inlet		Outlet		3/4" in		1" in	
37		Rating & Facing :In		Outlet		#300 FLANGED RF		#150 FLANGED RF		
MATERIALS (VTC)	38	Body and Bonnet					ASTM A105			
	39	Seat and Disc					SS316+PTFE			
	40	Nozzle					316 SS			
	41	Guide and Rings					VTA			
	42	Spring					ASTM A216 GR. WCB (VTC) (Note2)			
	43	Bellows					N/A			
	44									
OPTIONS	45	Cap: Screwed or Bolted					Screwed			
	46	Lever: Plain or Packed					N/A			
	47	Test Gage					Yes			
	48	With Rupture Disc					No			
	49	Hydro Test					Required			
	50	Seat Leakage Test					Required			
	51	Compliance Standard					N/A			
PURCHASE (will be finalized later)	52	Manufacturer					Will Be Finalized Later			
	53	Model					Will Be Finalized Later			
	54	Serial No.					Will Be Finalized Later			

Notes:

VTA : Vendor to Advise in bidding stage VTC : Vendor to confirm in bidding stage N/A: Not applicable

1- For material details refer to "Piping Material Specification Doc No." BK-GCS-PEDCO-120-PI-SP-0001-D03 ".

2- Suitable coating such as cadmiun plated shall be considered (vendor to advise)

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف توکام گاز در ایستگاه جمع آوری بینک								
DATA SHEETS FOR PRESSURE & SAFETY RELIEF VALVES										
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴		پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۳۴ از ۳۴
		BK	GCS	PEDCO	120	IN	DT	0009	D04	

TEMPERATURE SAFETY VALVE										
GENERAL	1	Tag Number					TSV-2281A			
	2	Service					LIQUID			
	3	Line No.		Vessel No.			CHD-112-0040-AN01-1"-PT			
	4	Pipe Class / C.A.		P&ID No.			AN01 / 1mm		BK-GCS-PEDCO-120-PR-PI-0004_D07(1 OF 3)	
	5	Discharge to					To Close Drain Header			
	6	Protect Equipment								
	7	Area Classification					Zone 2, IIB T4			
	8	NACE MR0175/ISO 15156 Compliance					NO			
BASIS	9	Nozzle (Full, Semi)					Full Nozzle, Spring Loaded Type			
	10	Design Type		Safety, Relief, Safety-Relief			Safety			
	Conventional, bellows, Pilot Op.			Conventional						
	12	Bonnet Type					Closed			
PROCESS CONDITIONS	13	Fluid		State			LIQUID		Singel Phase	
	14	Required Capacity								
	15	Molecular Mass		Sp. Gr.@ relief Tmp						
	16	Oper. Pressure		Set Pressure						
	17	Oper. Temperature		Relieving Temp.						
	18	Back Pressure		Constant						
	Variable									
	Total									
	21	% Allowable Overpressure								
	22	Over Pressure Factor								
	23	Compressibility Factor(Z)								
	24	Latent Heat of Vaporization (Kj/Kg)								
	25	Ratio of Specific Heats(Cp/Cv)								
	26	Density @ flowing temprature								
	27	Operating Viscosity (cp)								
	28	Barometric Pressure								
SELECTION	29	Design Code		Sizing Basis			-		-	
	30	Construction Code					-			
	31	Fire					-			
	32	Basis of Selection					Thermal Expansion			
	33	Calculated Area		MM ²						
	34	Required Area		MM ²						
	35	Orifice Designation								
CONNECTIONS	36	Size: Inlet		Outlet			3/4" in		1" in	
	37	Rating & Facing :In		Outlet			#300 FLANGED RF		#150 FLANGED RF	
MATERIALS (VTC)	38	Body and Bonnet					ASTM A105			
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	40	Nozzle					316 SS			
	41	Guide and Rings					VTA			
	42	Spring					ASTM A216 GR. WCB (VTC) (Note2)			
	43	Bellows					N/A			
	44									
OPTIONS	45	Cap: Screwed or Bolted					Screwed			
	46	Lever: Plain or Packed					N/A			
	47	Test Gage					Yes			
	48	With Rupture Disc					No			
	49	Hydro Test					Required			
	50	Seat Leakage Test					Required			
	51	Compliance Standard					N/A			
PURCHASE (will be finalized later)	52	Manufacturer					Will Be Finalized Later			
	53	Model					Will Be Finalized Later			
	52	Serial No.					Will Be Finalized Later			

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