



NISOC

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض
خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد ۰۳_۰۰۰۸-CO-GCS-HD-BK)



INSTRUMENT DATASHEETS / CERTIFICATES

نسخه	سریال	نوع	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
V00	0001	DS	IN	120	HY	GCS	BK

شماره صفحه: 1 از 41

طرح نگهداشت و افزایش تولید ۲۷ مخزن

INSTRUMENT DATASHEETS / CERTIFICATES

نگهداشت و افزایش تولید میدان نفتی بینک

V00	SEP.2023	IFR	Havayar Co.	M.Fakharian	A.M.Mohseni	
Rev.	Date	Purpose of Issue/Status	Prepared By	Checked By	Approved By	Client Approval

Class:

CLIENT Doc. Number:

status:

IFA: Issued For Approval

IFR: Issued For Review

IFI: Issued For Information

AFC: Approved For Construction



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نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض
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(قرارداد ۰۳_۰۰۸-CO-GCS-BK)



INSTRUMENT DATASHEETS / CERTIFICATES

شماره صفحه: 2 از 41

نسخه	سریال	نوع	رشته	تسهیلات	صادر کنند	بسته کاری	پروژه
V00	0001	DS	IN	120	HY	GCS	BK

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 NISOC شماره پیمان: 053 - 073 - 9184		تنگ‌داشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (BK-HD-GCS-CO-0008_03 قرارداد)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 3 از 41	
		پروژه	پسینه کاری	صنایع کننده	تسهیلات	رشته	نوع مترک	سریال	نسخه
		BK	GCS	HY	120	IN	DS	0001	V00

1

Type : Direct Rdg. ☒ Other ☐ liquid filled ☐ 3-15 lb Reciever ☐

2

Mounting : Surface ☐ Local ☒ Flush ☐

3

Dial : Diameter 160 mm Color : White / Black Lettering ,Non Rusting Metal

4

Case : Cast Iron ☐ SS316 ☒ Phenol ☐

5

Ring : Screwed ☒ Hinged ☐ Slip ☐

6

Blow-out Protection : Std ☐ Other ☐ None ☐ Back ☒ Disc ☐

7

Lens : Solid Front ☐ Plastic ☐ Safety Glass (shatter proof)

8

Options : ☒ As per List

9

Nominal Accuracy Required : ± 1% of full scale

10

Over range protection : 1.3 times the maximum scale reading

11

MFR. & Model No. Wika 233.50.160

12

Press Element : Bourdon ☒ Bellows ☐

13

Element Mtl. : Other ☐ Steel ☐

14

Socket Mtl. : SS ☒ Other 316SS ☐ Steel ☐

15

Connection-NPT : SS ☒ Other 316SS ☐ 1/4 in. ☐ 1/2 in. ☐ Other NPTM (refer to note)

16

Movement: Bottom ☒ Back ☐ SS ☒ Other Stainless Steel

17

Diaphragm Seal : Nylon ☐ As per List ☐ MFR. ☐ Type Other Mtl.

18

Ingress Protection : IP 65

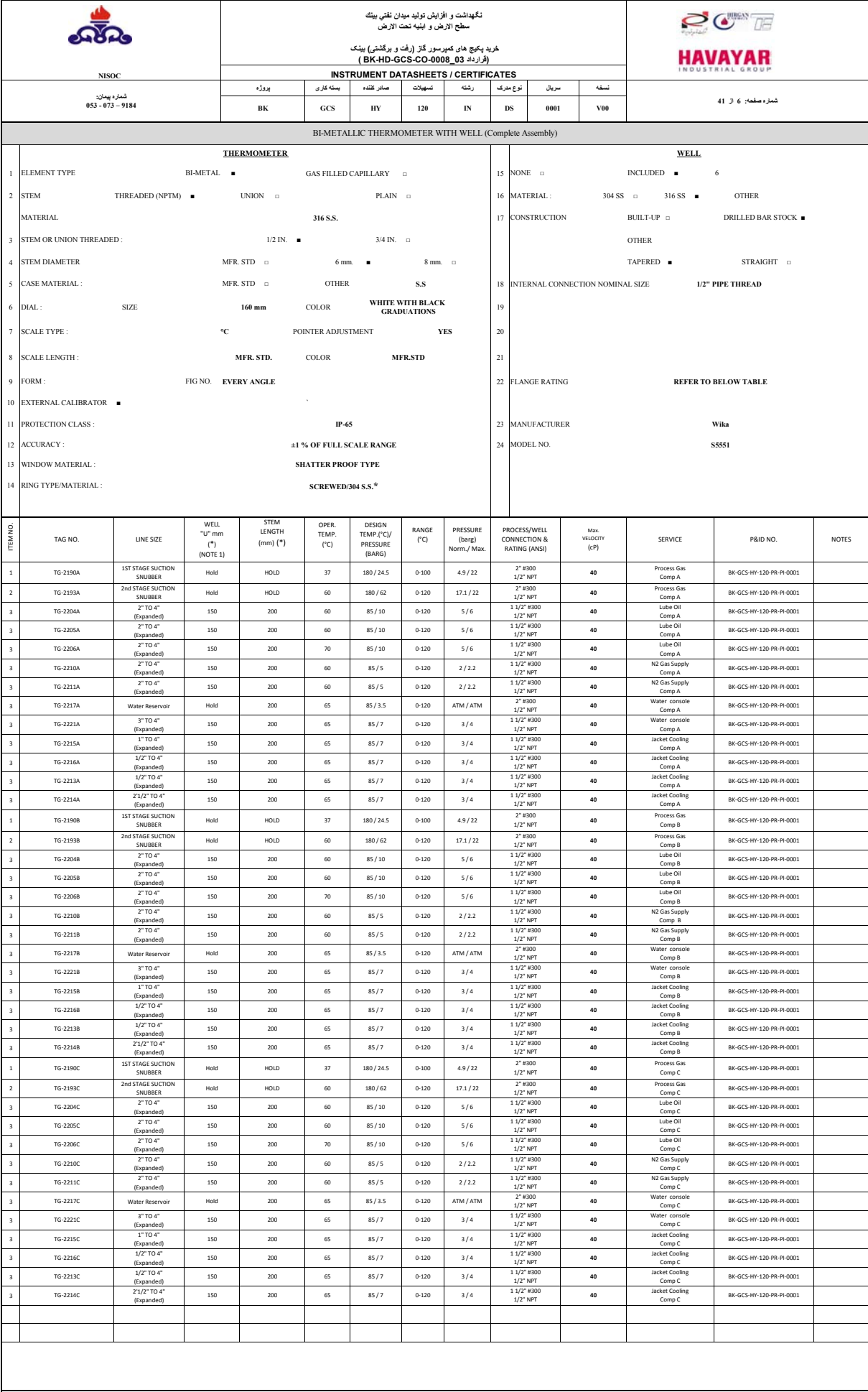
19

Manifold S.S316 2 valve ☒

Item	Tag No.	Range (barg)	Process Fluid/State	Design		Operating		LINE NO./EQUIPMENTNO.	P&ID NO.	Accessories	NOTE
				Press (barg)	Temp (C°)	Press (barg)	Temp (C°)				
1	PG-2190A	0-10	Process gas Comp A	24.5	180	4.9	36.8	1ST STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
2	PG-2191A	0-40	Process gas Comp A	24.5	180	18	129	1ST STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
3	PG-2193A	0-40	Process gas Comp A	62	180	17.1	59.9	2nd STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
4	PG-2194A	0-100	Process gas Comp A	62	180	54.9	147	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
5	PG-2200A	0-16	Instrument Air Comp A	12.5	85	8	65	ISA-112-0001A-AZ00-2"-NP	BK-GCS-HY-120-PR-PI-0001		
6	PG-2201A	0-16	Lube Oil Comp A	10	85	6	70	OIL-112-0004A-S.S-1.1/2"-NP	BK-GCS-HY-120-PR-PI-0001		
7	PG-2202A	0-16	Lube Oil Comp A	10	85	6	70	OIL-112-0003A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001		
8	PG-2204A	0-16	Lube Oil Comp A	10	85	6	60	OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001		
9	PG-2205A	0-4	GAS	5	85	1.5	65	FLR-112-0009A-AN07-1"-NP	BK-GCS-HY-120-PR-PI-0001		
10	PG-2206A	0-6	Water console Comp A	7	85	3	65	CWS-112-0003A-C.S-3"-PT	BK-GCS-HY-120-PR-PI-0001	Pulsation Damper (Snubber)	
11	PG-2207A	0-6	Water console Comp A	7	85	3	65	CWS-112-0004A-C.S-3"-PT	BK-GCS-HY-120-PR-PI-0001	Pulsation Damper (Snubber)	
12	PG-2208A	0-6	Water console Comp A	7	85	3	58	CWS-112-0002A-C.S-3"-PT	BK-GCS-HY-120-PR-PI-0001		
13	PG-2190B	0-10	Process gas Comp B	24.5	180	4.9	36.8	1ST STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
14	PG-2191B	0-40	Process gas Comp B	24.5	180	18	129	1ST STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
15	PG-2193B	0-40	Process gas Comp B	62	180	17.1	59.9	2nd STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
16	PG-2194B	0-100	Process gas Comp B	62	180	54.9	147	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
17	PG-2200B	0-16	Instrument Air Comp B	12.5	85	8	65	ISA-112-0001A-AZ00-2"-NP	BK-GCS-HY-120-PR-PI-0001		
18	PG-2201B	0-16	Lube Oil Comp B	10	85	6	70	OIL-112-0004A-S.S-1.1/2"-NP	BK-GCS-HY-120-PR-PI-0001		
19	PG-2202B	0-16	Lube Oil Comp B	10	85	6	70	OIL-112-0003A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001		
20	PG-2204B	0-16	Lube Oil Comp B	10	85	6	60	OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001		
21	PG-2205B	0-4	GAS	5	85	1.5	65	FLR-112-0009A-AN07-1"-NP	BK-GCS-HY-120-PR-PI-0001		
22	PG-2206B	0-6	Water console Comp B	7	85	3	65	CWS-112-0003A-C.S-3"-PT	BK-GCS-HY-120-PR-PI-0001	Pulsation Damper (Snubber)	
23	PG-2207B	0-6	Water console Comp B	7	85	3	65	CWS-112-0004A-C.S-3"-PT	BK-GCS-HY-120-PR-PI-0001	Pulsation Damper (Snubber)	
24	PG-2208B	0-6	Water console Comp B	7	85	3	58	CWS-112-0002A-C.S-3"-PT	BK-GCS-HY-120-PR-PI-0001		
25	PG-2190C	0-10	Process gas Comp C	24.5	180	4.9	36.8	1ST STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
26	PG-2191C	0-40	Process gas Comp C	24.5	180	18	129	1ST STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
27	PG-2193C	0-40	Process gas Comp C	62	180	17.1	59.9	2nd STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
28	PG-2194C	0-100	Process gas Comp C	62	180	54.9	147	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001	Nace material	
29	PG-2200C	0-16	Instrument Air Comp C	12.5	85	8	65	ISA-112-0001A-AZ00-2"-NP	BK-GCS-HY-120-PR-PI-0001		
30	PG-2201C	0-16	Lube Oil Comp C	10	85	6	70	OIL-112-0004A-S.S-1.1/2"-NP	BK-GCS-HY-120-PR-PI-0001		
31	PG-2202C	0-16	Lube Oil Comp C	10	85	6	70	OIL-112-0003A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001		
32	PG-2204C	0-16	Lube Oil Comp C	10	85	6	60	OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001		
33	PG-2205C	0-4	GAS	5	85	1.5	65	FLR-112-0009A-AN07-1"-NP	BK-GCS-HY-120-PR-PI-0001		
34	PG-2206C	0-6	Water console Comp C	7	85	3	65	CWS-112-0003A-C.S-3"-PT	BK-GCS-HY-120-PR-PI-0001	Pulsation Damper (Snubber)	
35	PG-2207C	0-6	Water console Comp C	7	85	3	65	CWS-112-0004A-C.S-3"-PT	BK-GCS-HY-120-PR-PI-0001	Pulsation Damper (Snubber)	
36	PG-2208C	0-6	Water console Comp C	7	85	3	58	CWS-112-0002A-C.S-3"-PT	BK-GCS-HY-120-PR-PI-0001		

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 4 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		Bk	GCS	HY	120	IN	DS	0001		V00
Data Sheet for Pressure Transmitter										
GENERAL	1	Tag No.: (Refer to Next Page)	Service: (Refer to Next Page)							
	2	Function	Record ☐ Indicate ☒ Control ☐ Blind ☐ Trans ☒ Integ ☐ (Note1)							
	3	Case	MFR STD ☒ Nom Size ☐ Color MFR STD ☒ Other							
	4	Mounting	Flush ☐ Surface ☐ Yoke ☒ Other							
	5	Enclosure Class	General Purpose ☐ Weather Proof ☒ Explosion-Proof ☐ Class							
	6		For use in Intrinsically Safe System ☒ Other EEExia, IIB, T4							
	7	Power Supply	Ingress Protection : IP 66 117 V 60 Hz ☐ Other: ac ☐ dc ☒ Volts : 24 VDC Loop Powered							
TRANSMITTER	8	Trans. Output	4-20mA ☒ 10-50mA ☐ 21-10 kpa(3-15 psig) ☐ Other 4-20mA Smart HART							
	9		Transmitter Accuracy : 0.2% of full scale.							
UNIT	10	Service	Gage Press ☒ Vacuum ☐ Absolute ☐ Compound ☐							
	11	Element Type	Diaphragm ☒ Helix ☐ Bourdon ☐ Bellows ☐ Fill Fluid:Silicone							
	12	Material	Body Aluminum Element 316 S.S. as minimum							
	13	Range	Fixed ☐ Adj. Range ☒ Set At (Refer to Next Page)							
	14	Rating	Overrange Protection: at least 1.3 times the maximum range							
	15	Process Data	Press: Normal Max Element Range (Refer to Next Page)							
	16	Process Conn.	½ in. NPT ☒ Other Male with wrench flats							
	17		Location: Bottom ☒ Back ☐ Other							
OPTIONS	18	Electrical Conn.	MFR STD ☐ Other ISO M20x1.5							
	19	Miscellaneous	Filt Reg. ☐ Sup. Gage ☐ Output Gage ☐ Charts							
	20	Diaphragm Seal	Diaph Seal ☐ Type : Capillary Length: Mtl. : Conn. Fill Fluid : shall be Suitable for Normal and Max. Operating Temp Flushing Connection :							
	21	Manifold	Valve Manifold : See list							
	22	MFR. & Model No.	See PT list							
Notes: 1- All transmitters shall be provided complete with LCD type integral indicator . 2- Repeatability of the transmitter shall be better than 0.1% of the span. 3- All transmitters shall be reverse polarity protected. 4- Each Instrument Shall Have a S.S. Tag Plate With Purchaser's Tag Number, The Tag Plate Shall Be Permanently Attached To The Instrument . 5- NACE MR-01-75 to be considered.										

 NISOC شماره پیمان: 053 - 073 – 9184			نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و آبپایه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (BK-HD-GCS-CO-0008_03 فراردا) INSTRUMENT DATASHEETS / CERTIFICATES							 HAVAYAR INDUSTRIAL GROUP		شماره صفحه: 5 از 41			
			نسخه	سریال	نوع مدرک	رشته	تمهيلات	صدر کننده	پشته کاری	پروژه					
			V00	0001	DS	IN	120	HY	GCS	Bk					
List of PT															
ITEM NO.	TAG NO.	SERVICE	LINE NO. / EQUIPMENT NO.	P&ID No.	PROCESS CONNECTION	FLUID/ STATE	PRESSURE (Barg)		TEMPERATURE (C)		VISCOSITY (cP)	CALIBRATED RANGE (Barg)	ACCESSORIES Option	MFR. & Model No.	REMARKS
							Oper. / Design	Norm. / Design							
1	PT-2123A	Process gas Comp A	GAS-111-0031A-AN05-10"-ET	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	4.9 / 24.5	36.8 / 180	0.012	0-40	Nace Material 2 valve manifold S.S316				Loose Item
2	PT-2124A	Process gas Comp A	GAS-111-0051A-FN05-6"-IS	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	54.9 / 62	147 / 180	0.016	0-80	Nace Material 2 valve manifold S.S316				
3	PT-2192A	Process gas Comp A	GAS-111-0036A-CN05-10"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	18 / 24.5	129 / 180	0.015	0-40	Nace Material 2 valve manifold S.S316				Loose Item
4	PT-2197A	Process gas Comp A	GAS-111-0044A-CN05-6"-ET	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	17.1 / 62	59.9 / 180	0.013	0-80	Nace Material 2 valve manifold S.S316				Loose Item
5	PT-2201A	Instrument Air Comp A	ISA-112-0001A-AZ00-2"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	6 / 12.5	65 / 85	0.021	0-16	2 valve manifold S.S316				
6	PT-2200A	Lubricator Comp A	OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	1/2" NPT	Liquid	6 / 10	65 / 85	40	0-10	2 valve manifold S.S316				
7	PT-2204A	Lube Oil Comp A	OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Liquid	6 / 10	60 / 85	40	0-10	2 valve manifold S.S316				
8	PT-2210A	N2 Gas Supply Comp A	NIT-112-0001A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	2.2 / 10	60 / 85	0.020	0-6	2 valve manifold S.S316				
9	PT-2211A	N2 Gas Supply Comp A	NIT-112-0002A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	1 / 10	60 / 85	0.020	0-6	2 valve manifold S.S316				
10	PT-2220A	Water console Comp A	NIT-112-0001A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Liquid	3 / 10	58 / 85	0.478	0-10	2 valve manifold S.S316				
11	PT-2221A	Water console Comp A	NIT-112-0002A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Liquid	3 / 10	58 / 85	0.478	0-10	2 valve manifold S.S316				
12	PT-2123B	Process gas Comp B	GAS-111-0031A-AN05-10"-ET	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	4.9 / 24.5	36.8 / 180	0.012	0-40	Nace Material 2 valve manifold S.S316				Loose Item
13	PT-2124B	Process gas Comp B	GAS-111-0051A-FN05-6"-IS	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	54.9 / 62	147 / 180	0.016	0-80	Nace Material 2 valve manifold S.S316				
14	PT-2192B	Process gas Comp B	GAS-111-0036A-CN05-10"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	18 / 24.5	129 / 180	0.015	0-40	Nace Material 2 valve manifold S.S316				Loose Item
15	PT-2197B	Process gas Comp B	GAS-111-0044A-CN05-6"-ET	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	17.1 / 62	59.9 / 180	0.013	0-80	Nace Material 2 valve manifold S.S316				Loose Item
16	PT-2201B	Instrument Air Comp B	ISA-112-0001A-AZ00-2"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	6 / 12.5	65 / 85	0.021	0-16	2 valve manifold S.S316				
17	PT-2200B	Lubricator Comp B	OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	1/2" NPT	Liquid	6 / 10	65 / 85	40	0-10	2 valve manifold S.S316				
18	PT-2204B	Lube Oil Comp B	OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Liquid	6 / 10	60 / 85	40	0-10	2 valve manifold S.S316				
19	PT-2210B	N2 Gas Supply Comp B	NIT-112-0001A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	2.2 / 10	60 / 85	0.020	0-6	2 valve manifold S.S316				
20	PT-2211B	N2 Gas Supply Comp B	NIT-112-0002A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	1 / 10	60 / 85	0.020	0-6	2 valve manifold S.S316				
21	PT-2220B	Water console Comp B	NIT-112-0001A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Liquid	3 / 10	58 / 85	0.478	0-10	2 valve manifold S.S316				
22	PT-2221B	Water console Comp B	NIT-112-0002A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Liquid	3 / 10	58 / 85	0.478	0-10	2 valve manifold S.S316				
23	PT-2123C	Process gas Comp C	GAS-111-0031A-AN05-10"-ET	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	4.9 / 24.5	36.8 / 180	0.012	0-40	Nace Material 2 valve manifold S.S316				Loose Item
24	PT-2124C	Process gas Comp C	GAS-111-0051A-FN05-6"-IS	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	54.9 / 62	147 / 180	0.016	0-80	Nace Material 2 valve manifold S.S316				
25	PT-2192C	Process gas Comp C	GAS-111-0036A-CN05-10"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	18 / 24.5	129 / 180	0.015	0-40	Nace Material 2 valve manifold S.S316				Loose Item
26	PT-2197C	Process gas Comp C	GAS-111-0044A-CN05-6"-ET	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	17.1 / 62	59.9 / 180	0.013	0-80	Nace Material 2 valve manifold S.S316				Loose Item
27	PT-2201C	Instrument Air Comp C	ISA-112-0001A-AZ00-2"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	6 / 12.5	65 / 85	0.021	0-16	2 valve manifold S.S316				
28	PT-2200C	Lubricator Comp C	OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	1/2" NPT	Liquid	6 / 10	65 / 85	40	0-10	2 valve manifold S.S316				
29	PT-2204C	Lube Oil Comp C	OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Liquid	6 / 10	60 / 85	40	0-10	2 valve manifold S.S316				
30	PT-2210C	N2 Gas Supply Comp C	NIT-112-0001A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	2.2 / 10	60 / 85	0.020	0-6	2 valve manifold S.S316				
31	PT-2211C	N2 Gas Supply Comp C	NIT-112-0002A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Gas	1 / 10	60 / 85	0.020	0-6	2 valve manifold S.S316				
32	PT-2220C	Water console Comp C	NIT-112-0001A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Liquid	3 / 10	58 / 85	0.478	0-10	2 valve manifold S.S316				
33	PT-2221C	Water console Comp C	NIT-112-0002A-SS-1"-NP	BK-GCS-HY-120-PR-PI-0001	1" NPT	Liquid	3 / 10	58 / 85	0.478	0-10	2 valve manifold S.S316				



 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ایلیه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
	INSTRUMENT DATASHEETS / CERTIFICATES								
شماره پیمان: 053 - 073 - 9184	پروژه BK	بسته کاری GCS	صنایع کننده HY	تجهیزات 120	رشته IN	نوع مدرک DS	سریال 0001	نسخه V00	شماره صفحه: 7 از 41

Data Sheet for Temprarure Transmitter/Element/Thermowell		
HEAD		
1 COMPLETE ASSEMBLY	YES	OTHER _____
2 SCREWED COVER ☒	OTHER _____	
3 PROTECTION CLASS	IP-66	
4 HAZ. AREA CLASSIFICATION	EXia IIB T4	
5 MATERIAL	316 S.S.	ELECTRICAL CONN. M20 X 1.5
6 NIPPLE SIZE	1/2"	DIM."N" UNION ☐
7 AMBIENT TEMPERATURE IN DIRECT SUNLIGHT		
ELEMENT		
8 PLATINUM ☒ 100/0°C	NICKEL ☐	OTHER _____
9 TYPE	PT100	
10 TEMPERATURE RANGE	-100°C to 500 °C	
11 LEADS	STD ☐	POTTED ☐ HERM. SEALED ☒
12 SHEAT MATERIAL	316 S.S.	O.D. 6 mm
13 TYPE	SINGLE ☒	DUPLEX ☐
14 SPRING LOADED	YES ☒	NO ☐
15 CONNECTION	2-WIRE ☐	3-WIRE ☒ 4-WIRE ☐
16 LEAD WIRES ☒	RECEPTACLE ☐	TERMINAL BLOCK ☒
OTHER _____		
WELL OR TUBE		
17 NONE ☐	INCLUDE ☒	BY OTHERS ☐
18 MATERIAL	AISI 316 S.S.	
19 CONSTRUCTION	TAPERED ☒	STRAIGHT ☐
20 SOILD BAR-STOCK ☒	BUILT-UP ☐	CLOSE-END TUBE ☐

21 BORE DIAMETER 6.6 mm (NOTE 4)	22 OUTSIDE DIAMETER AT SUPPORT/TIP : 28/22 mm (NOTE 4)
23 LAGGING EXTENTION "I" : VTA	24 TEST : HYDROSTATIC AND PENETRANT TEST
25 CONNECTION TO SENSOR	1/2" NPT F
26 PROCESS CONNECTION	1 1/2" FLANGE (SEE Next TABLE)
PERFORMANCE CHARACTERISTICS	
27 MIN/MAX. AMBIENT WORKING TEMPERATURE:	BY VENDOR
TRANSMITTER	
28 TRANSMITTER BODY MATERIAL	EXOPXY PAINTED DIE CAST ALUMINIUM
29 POWER SUPPLY	24 VDC, LOOP POWERED WITH HART
30 OUTPUT RANGE	4-20 ma
31 TRANSMITTER MOUNTING	HEAD MOUNTED
32 ELECTRICAL CONNECTION	ISO M20
33 ACCURACY	± 0.2 % OF CALIBRATED SPAN
34 ENCLOSURE APPROVAL	ATEX
35 ZERO ADJUST: YES	SPAN ADJUST: YES
36 ISOLATION TYPE: Barrier	
37 NIPPLE & UNION MATERIAL: S.S	
38 LCD INDICATOR: YES	
39 MANUFACTURER: *	See list
MODEL NO. :	See list

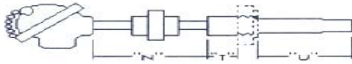


FIG 1

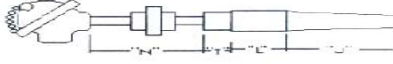


FIG 2

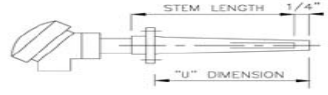


FIG. 3

NOTES :

- * VENDOR TO CONFIRM
- 1) VENDOR SHALL FULLY SUPPLY & ASSEMBLE THERMOWELL WITH THERMOELEMENT AND HEAD MOUNTED TRANSMITTER.
- 2) SURFACE TEMPERATURE WILL REACH TO 85°C IN EXPOSURE OF DIRECT SUNLIGHT.
- 3) HEAD COVER SHALL BE FRONT GLASS TYPE FOR COMPATIBILITY OF INDICATOR REQUIREMENT
- 4) WAKE FREQUENCY CALCULATION SHALL BE SUBMITTED BY MANUFACTURE FOR FINALIZING ALL THERMOWELL SIZE. (ASME PTC 19.3)
- 5) THE LINE SIZE SHALL BE EXPANDED TO 4".
- 6) REFER TO IPS-D-IN-101" FOR THERMOWELL DIMENSION.
- 7) COMPABILITY WITH NACE MR0175/ISO 15156 TO BE CONSIDERED FOR WETTED EQUIPEMNT.

 NIOC شماره پیمان: 053 - 073 ~ 9184			سطح الأرض و ابنيه تحت الأرض										 HAVAYAR INDUSTRIES GROUP شماره صفحه: 41 از 47			
خرید کپیج های کمپرسور گاز (رقت و برگشتی) بینک																
INSTRUMENT DATASHEETS / CERTIFICATES																
		نوع سرب	مربل	نسبه	رشته	تجهيزات	صنایع کلانده	بسته کاری	برند							
		IBK	GCS	BY	120	IN	IBK	0001	Y00							
List of TT/TE/TW																
ITEM NO	TAG NO	LINE SIZE	WELL DIMENTION (mm) (*)		OPER. TEMP (°C)	DESIGN TEMP (°C)	MAX VELOCITY (m/s)	RANGE (°C)	PRESSURE Nec. Max (barg)	PROCESS CONNECTION & RATING (ANSI)	PROCESSOR	TRANSMITTER MOUNTING	SERVICE	PILID NO	MFR. & Model No	NOTES
			U	STEM												
1	TT-2122A	10"	250	290	37	180	9.0	0-100	4.9 / 22	1 1/2", 300#	Yes	REMOTE TYPE	Process gas Inlet Comp A	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
2	TT-2191A	..	HOLD	HOLD	129	180	4.0	0-200	18 / 22	2", 300#	Yes	REMOTE TYPE	1STG DISCHARGE SNUBBER	BK-GCS-HY-120-PR-Pi-0001		
3	TT-2123A	10"	250	290	129	180	4.0	0-200	18 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0036A-CN05-10"-NP	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
4	TT-2132A	6"	200	240	60	180	8.0	0-120	17.1 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0044A-CN05-6"-ET	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
5	TT-2133A	6"	200	240	147	180	3.5	0-200	54.9 / 22	1 1/2", 600#	Yes	REMOTE TYPE	GAS-111-0051A-FN05-6"-IS	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
6	TT-2194A	..	HOLD	HOLD	147	180	3.5	0-200	54.9 / 22	2", 600#	Yes	REMOTE TYPE	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-Pi-0001		
7	TT-2204A	2" TO 4" (Expanded)	150	200	60	85	0.3	0-120	5 / 6	1 1/2", 300#	Yes	REMOTE TYPE	LUBE OIL OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-Pi-0001		
8	TT-2203A	..	200	250	70	85	1.1	0-120	ATM / 6	1/2" NPT	Yes	REMOTE TYPE	crankcase CompA	BK-GCS-HY-120-PR-Pi-0001		
9	TT-2213A	..	HOLD	HOLD	65	85	-	0-120	ATM / 3	2", 300#	Yes	REMOTE TYPE	Water Reservoir	BK-GCS-HY-120-PR-Pi-0001		
10	TT-2214A	..	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor NDE	BK-GCS-HY-120-PR-Pi-0001		
11	TT-2215A	..	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor DE	BK-GCS-HY-120-PR-Pi-0001		
12	TT-2216A	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Packing Stg1	BK-GCS-HY-120-PR-Pi-0001		
13	TT-2218A	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Packing Stg2	BK-GCS-HY-120-PR-Pi-0001		
14	TT-2217A	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Cylinder Stg2	BK-GCS-HY-120-PR-Pi-0001		
15	TT-2219A	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Cylinder Stg1	BK-GCS-HY-120-PR-Pi-0001		
16	TE-2222A TE-2223A TE-2224A	..	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	REMOTE TYPE	Main Motor T sensor	BK-GCS-HY-120-PR-Pi-0001		
17	TE-2225A TE-2226A TE-2227A	..	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	REMOTE TYPE	Main Motor S sensor	BK-GCS-HY-120-PR-Pi-0001		
18	TE-2228A TE-2229A TE-2230A	..	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	REMOTE TYPE	Main Motor R sensor	BK-GCS-HY-120-PR-Pi-0001		
19	TT-2122B	10"	250	290	37	180	9.0	0-100	4.9 / 22	1 1/2", 300#	Yes	REMOTE TYPE	Process gas Inlet Comp B	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
20	TT-2191B	..	HOLD	HOLD	129	180	4.0	0-200	18 / 22	2", 300#	Yes	REMOTE TYPE	1STG DISCHARGE SNUBBER	BK-GCS-HY-120-PR-Pi-0001		
21	TT-2192B	10"	250	290	129	180	4.0	0-200	18 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0036A-CN05-10"-NP	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
22	TT-2197B	6"	200	240	60	180	8.0	0-120	17.1 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0044A-CN05-6"-ET	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
23	TT-2123B	6"	200	240	147	180	3.5	0-200	54.9 / 22	1 1/2", 600#	Yes	REMOTE TYPE	GAS-111-0051A-FN05-6"-IS	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
24	TT-2194B	..	HOLD	HOLD	147	180	3.5	0-200	54.9 / 22	2", 600#	Yes	REMOTE TYPE	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-Pi-0001		
25	TT-2204B	2" TO 4" (Expanded)	150	200	60	85	0.3	0-120	5 / 6	1 1/2", 300#	Yes	REMOTE TYPE	LUBE OIL OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-Pi-0001		
26	TT-2203B	..	200	250	70	85	1.1	0-120	ATM / 6	1/2" NPT	Yes	REMOTE TYPE	crankcase CompA	BK-GCS-HY-120-PR-Pi-0001		
27	TT-2213B	..	HOLD	HOLD	65	85	-	0-120	ATM / 3	2", 300#	Yes	REMOTE TYPE	Water Reservoir	BK-GCS-HY-120-PR-Pi-0001		
28	TT-2214B	..	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor NDE	BK-GCS-HY-120-PR-Pi-0001		
29	TT-2215B	..	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor DE	BK-GCS-HY-120-PR-Pi-0001		
30	TT-2216B	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Packing Stg1	BK-GCS-HY-120-PR-Pi-0001		
31	TT-2218B	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Packing Stg2	BK-GCS-HY-120-PR-Pi-0001		
32	TT-2217B	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Cylinder Stg2	BK-GCS-HY-120-PR-Pi-0001		
33	TT-2219B	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Cylinder Stg1	BK-GCS-HY-120-PR-Pi-0001		
34	TE-2222B TE-2223B TE-2224B	..	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	REMOTE TYPE	Main Motor T sensor	BK-GCS-HY-120-PR-Pi-0001		
35	TE-2225B TE-2226B TE-2227B	..	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	REMOTE TYPE	Main Motor S sensor	BK-GCS-HY-120-PR-Pi-0001		
36	TE-2228B TE-2229B TE-2230B	..	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	REMOTE TYPE	Main Motor R sensor	BK-GCS-HY-120-PR-Pi-0001		
37	TT-2122C	10"	250	290	37	180	9.0	0-100	4.9 / 22	1 1/2", 300#	Yes	REMOTE TYPE	Process gas Inlet Comp C	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
38	TT-2191C	..	HOLD	HOLD	129	180	4.0	0-200	18 / 22	2", 300#	Yes	REMOTE TYPE	1STG DISCHARGE SNUBBER	BK-GCS-HY-120-PR-Pi-0001		
39	TT-2192C	10"	250	290	129	180	4.0	0-200	18 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0036A-CN05-10"-NP	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
40	TT-2197C	6"	200	240	60	180	8.0	0-120	17.1 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0044A-CN05-6"-ET	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
41	TT-2123C	6"	200	240	147	180	3.5	0-200	54.9 / 22	1 1/2", 600#	Yes	REMOTE TYPE	GAS-111-0051A-FN05-6"-IS	BK-GCS-HY-120-PR-Pi-0001		Loose Rem U Size & rating to be checked by client
42	TT-2194C	..	HOLD	HOLD	147	180	3.5	0-200	54.9 / 22	2", 600#	Yes	REMOTE TYPE	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-Pi-0001		
43	TT-2204C	2" TO 4" (Expanded)	150	200	60	85	0.3	0-120	5 / 6	1 1/2", 300#	Yes	REMOTE TYPE	LUBE OIL OIL-112-0008A-S.S-2"-NP	BK-GCS-HY-120-PR-Pi-0001		
44	TT-2203C	..	200	250	70	85	1.1	0-120	ATM / 6	1/2" NPT	Yes	REMOTE TYPE	crankcase Comp C	BK-GCS-HY-120-PR-Pi-0001		
45	TT-2213C	..	HOLD	HOLD	65	85	-	0-120	ATM / 3	2", 300#	Yes	REMOTE TYPE	Water Reservoir	BK-GCS-HY-120-PR-Pi-0001		
46	TT-2214C	..	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor NDE	BK-GCS-HY-120-PR-Pi-0001		
47	TT-2215C	..	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor DE	BK-GCS-HY-120-PR-Pi-0001		
48	TT-2216C	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Packing Stg1	BK-GCS-HY-120-PR-Pi-0001		
49	TT-2218C	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Packing Stg2	BK-GCS-HY-120-PR-Pi-0001		
50	TT-2217C	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Cylinder Stg2	BK-GCS-HY-120-PR-Pi-0001		
51	TT-2219C	..	N/A	N/A	N/A	N/A	N/A	HOLD	N/A	N/A	Yes	REMOTE TYPE	Cylinder Stg1	BK-GCS-HY-120-PR-Pi-0001		
52	TE-2222C TE-2223C TE-2224C	..	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	REMOTE TYPE	Main Motor T sensor	BK-GCS-HY-120-PR-Pi-0001		
53	TE-2225C TE-2226C TE-2227C	..	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	REMOTE TYPE	Main Motor S sensor	BK-GCS-HY-120-PR-Pi-0001		
54	TE-2228C TE-2229C TE-2230C	..	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	REMOTE TYPE	Main Motor R sensor	BK-GCS-HY-120-PR-Pi-0001		

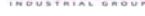
 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03_0008-CO-GCS-BK-HD)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 9 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		Bk	GCS	HY	120	IN	DS	0001		V00
Data Sheet for Differential Pressure Transmitter										
GENERAL	1	Tag No.: (Refer to Next Page)	Service: (Refer to Next Page)							
	2	Function	Record ☐ Indicate ☒ Control ☐ Blind ☐ Trans ☒ Integ ☐ (Note1)							
	3	Case	MFR STD ☒ Nom Size ☐ Color MFR STD ☒ Other							
	4	Mounting	Flush ☐ Surface ☐ Yoke ☒ Other							
	5	Enclosure Class	General Purpose ☐ Weather Proof ☒ Explosion-Proof ☐ Class							
	6		For use in Intrinsically Safe System ☒ Other EExi, IIB, T4							
	7	Power Supply	Ingress Protection : IP 66 117 V 60 Hz ☒ Other: ac ☐ dc ☐ Volts : 24 VDC Loop Powered							
TRANSMITTER	8	Trans. Output	4-20mA ☒ 10-50mA ☐ 21-10 kpa(3-15 psig) ☐ Other 4-20mA Smart HART							
	9		Transmitter Accuracy : Better than 0.2% of Calibrated Span							
UNIT	10	Service	Flow ☐ Level ☐ Diff. Pressure ☒ Other							
	11	Element Type	Diaphragm ☒ Helix ☐ Bourdon ☐ Bellows ☐ Other							
	12	Material	Body Epoxy Painted Die Cast Aluminum Copper free Element 316 S.S. as minimum							
	13	Range	Fixed ☐ Adj. Range ☒ Set At (Refer to Next Page)							
	14	Rating	Overrange Protection: at least 1.3 times the maximum range							
	15	Process Data	Press: Normal Max Element Range (Refer to Next Page)							
	16	Process Conn.	½ in. NPT ☒ Other Male with wrench flats							
	17		Location: Bottom ☒ Back ☐ Other							
OPTIONS	18	Electrical Conn.	MFR STD ☐ Other ISO M20x1.5							
	19	Miscellaneous	Filt Reg. ☐ Sup. Gage ☐ Output Gage ☐ Charts							
	20	Diaphragm Seal	Diaph Seal ☐ (N/A) Type : Capillary Length: Mtl : Conn. Fill Fluid : Flushing Connection :							
	21	Manifold	Valve Manifold : See List							
	22	MFR. & Model No.	See list							
Notes: 1- All transmitters shall be provided complete with LCD type integral indicator . 2- Repeatability of the transmitter shall be better than 0.1% of the span. 3- All transmitters shall be reverse polarity protected. 4- All components, particularly if containing electric contacts, shall be vibration resistant. 5- Each Instrument Shall Have a S.S. Tag Plate With Purchaser's Tag Number, The Tag Plate Shall Be Permanently Attached To The Instrument .										



شماره پیمان:
053 - 073 - 9184

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض

خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد BK-HD-GCS-CO-0008_03)



شماره صفحه: 10 از 41

INSTRUMENT DATASHEETS / CERTIFICATES

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
V00	0001	DS	IN	120	HY	GCS	Bk

List of DPT

[illegible]



053 - 073 - 9184

خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد BK-HD-GCS-CO-0008_03)



شماره صفحه: 11 از 41

Data Sheet for Differential Pressure Gauge

[illegible]

Item	Tag No.	Range (barg)	Process Fluid/State	Design		Operating		Differential Pressure		LINE NO./EQUIPMENTNO.	P&ID NO.	Accessories	MFR.& Model	NOTES
				Press (barg)	Temp (C°)	Press (barg)	Temp (C°)	Norm. (bar)	Max. (bar)					
1	PDG-2204A	0~1	Lub Oil Filter	10	85	6	60	0.1	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
2	PDG-2200A	0~1	N2 Gas Supply	10	85	7.5	60	0.15	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
3	PDG-2205A	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0018A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
4	PDG-2206A	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0017A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
5	PDG-2204B	0~1	Lub Oil Filter	10	85	6	60	0.1	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
6	PDG-2200B	0~1	N2 Gas Supply	10	85	7.5	60	0.15	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
7	PDG-2205B	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0018A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
8	PDG-2206B	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0017A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
9	PDG-2204C	0~1	Lub Oil Filter	10	85	6	60	0.1	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
10	PDG-2200C	0~1	N2 Gas Supply	10	85	7.5	60	0.15	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
11	PDG-2205C	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0018A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		
12	PDG-2206C	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0017A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001	5 valve manifold S.S316		

NOTES :

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP													
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 12 از 41											
		پروژه		پسته کاری		صادر کننده		سهیلات				رشته		نوع مدرک		سریال		نسخه			
		BK		GCS		HY		120				IN		DS		0001		V00			
INSTRUMENT DATA SHEET FOR FLOW INDICATOR (ROTAMETER)																					
GENERAL DATA																					
1		TAG NO.		FI-2200A				FI-2201A				FI-2202A				FI-2203A					
2		QUANTITY		1				1				1				1					
3		P&ID NO.		BK-GCS-HY-120-PR-PI-0001				BK-GCS-HY-120-PR-PI-0001				BK-GCS-HY-120-PR-PI-0001				BK-GCS-HY-120-PR-PI-0001					
4		SERVICE		N2 Gas Supply				N2 Gas Supply				N2 Gas Supply				N2 Gas Supply					
5		LINE NUMBER		1/2" SS316L Tubing				1/2" SS316L Tubing				1/2" SS316L Tubing				1/2" SS316L Tubing					
6		FUNCTION		Local Indicator				Local Indicator				Local Indicator				Local Indicator					
7		MOUNTING		Inline				Inline				Inline				Inline					
FLUID DATA																					
8		FLUID		N2 Gas				N2 Gas				N2 Gas				N2 Gas					
9		FLUID STATE		Gas				Gas				Gas				Gas					
10		MAXIMUM FLOW Nm3/h		3				3				3				3					
11		NORMAL FLOW Nm3/h		1.5				1.5				1.5				1.5					
12		PRESS. OPERATING / DESIGN (BARG)		2.2		12.5		1		12.5		1		12.5		2.2		12.5			
13		TEMP. OPERATING / DESIGN (°C)		60		85		60		85		60		85		60		85			
14		DENSITY AT ST. COND. (KG/m ³)		1.23				1.23				1.23				1.23					
15		DENSITY AT OP.COND. (KG/m ³)		1.55				1.55				1.24				2.38					
16		COMPRESSIBILITY FACTOR (Z)		1				1				1				1					
17		MOL. WEIGHT		CP/CV		28		1.40		28		1.40		28		1.40		28		1.40	
18		OPERATING VISCOSITY (Cp)		0.02				0.02				0.02				0.02					
19		MAX. PRESSURE DROP @ MAX. FLOW(BAR)		min (nil)				min (nil)				min (nil)				min (nil)					
ROTAMETER DETAIL																					
20		TYPE		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication				Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication				Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication				Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication					
21		FLANGE SIZE / RATING / FACING		1/2", 150# R.F				1/2", 150# R.F				1/2", 150# R.F				1/2", 150# R.F					
22		RANGE: FROM / TO (Kg/Hr)		3 Nm3/h				3 Nm3/h				3 Nm3/h				3 Nm3/h					
23		SCALE GRADUATION		Direct Scale				Direct Scale				Direct Scale				Direct Scale					
24		BODY / FLANGE MATERIAL		316 S.S		ASTM A182 F316		316 S.S		ASTM A182 F316		316 S.S		ASTM A182 F316		316 S.S		ASTM A105			
25		FLOAT EXTENSION MATERIAL		316 S.S				316 S.S				316 S.S				316 S.S					
26		CONNECTION LAYOUT		Bottom-Top , Vertical				Bottom-Top , Vertical				Bottom-Top , Vertical				Bottom-Top , Vertical					
27		INGRESS PROTECTION		IP 65				IP 65				IP 65				IP 65					
28		ACCURACY		±1.6% of full scale or better.				±1.6% of full scale or better.				±1.6% of full scale or better.				±1.6% of full scale or better.					
ACCESSORIES																					
29		NEEDLE VALVE		No				No				No				No					
30		SWITCH		No				No				No				No					
PURCHASE																					
31		MODEL		H250				H250				H250				H250					
32		MANUFACTURE		KROHNE				KROHNE				KROHNE				KROHNE					

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (قرارداد 03 0008-BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP			
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 13 از 41	
		پروژه	بسته کاری	صادرکننده	سهیلات	رشته	نوع مدرک	سریال	نسخه		
		BK	GCS	HY	120	IN	DS	0001	V00		
INSTRUMENT DATA SHEET FOR FLOW INDICATOR (ROTAMETER)											
GENERAL DATA											
1	TAG NO.		FI-2200B		FI-2201B		FI-2202B		FI-2203B		
2	QUANTITY		1		1		1		1		
3	P&ID NO.		BK-GCS-HY-120-PR-PI-0001		BK-GCS-HY-120-PR-PI-0001		BK-GCS-HY-120-PR-PI-0001		BK-GCS-HY-120-PR-PI-0001		
4	SERVICE		N2 Gas Supply		N2 Gas Supply		N2 Gas Supply		N2 Gas Supply		
5	LINE NUMBER		1/2" SS316L Tubing		1/2" SS316L Tubing		1/2" SS316L Tubing		1/2" SS316L Tubing		
6	FUNCTION		Local Indicator		Local Indicator		Local Indicator		Local Indicator		
7	MOUNTING		Inline		Inline		Inline		Inline		
FLUID DATA											
8	FLUID		N2 Gas		N2 Gas		N2 Gas		N2 Gas		
9	FLUID STATE		Gas		Gas		Gas		Gas		
10	MAXIMUM FLOW Nm3/h		3		3		3		3		
11	NORMAL FLOW Nm3/h		3		3		3		3		
12	PRESS. OPERATING / DESIGN (BARG)		1.5	12	1.5	12	1.2	12	1.2	12	
13	TEMP. OPERATING / DESIGN (°C)		52	85	52	85	52	85	52	85	
14	DENSITY AT ST. COND. (KG/m ³)		1.23		1.23		1.23		1.23		
15	DENSITY AT OP.COND. (KG/m ³)		1.55		1.55		1.24		2.38		
16	COMPRESSIBILITY FACTOR (Z)		1		1		1		1		
17	MOL. WEIGHT	CP/CV	28	1.40	28	1.40	28	1.40	28	1.40	
18	OPERATING VISCOSITY (Cp)		0.02		0.02		0.02		0.02		
19	MAX. PRESSURE DROP @ MAX. FLOW(BAR)		min (nil)		min (nil)		min (nil)		min (nil)		
ROTAMETER DETAIL											
20	TYPE		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		
21	FLANGE SIZE / RATING / FACING		1/2", 150# R.F		1/2", 150# R.F		1/2", 150# R.F		1/2", 150# R.F		
22	RANGE: FROM / TO (Kg/Hr)		3 Nm3/h		3 Nm3/h		3 Nm3/h		3 Nm3/h		
23	SCALE GRADUATION		Direct Scale		Direct Scale		Direct Scale		Direct Scale		
24	BODY / FLANGE MATERIAL		316 S.S	ASTM A182 F316	316 S.S	ASTM A182 F316	316 S.S	ASTM A182 F316	316 S.S	ASTM A105	
25	FLOAT EXTENSION MATERIAL		316 S.S		316 S.S		316 S.S		316 S.S		
26	CONNECTION LAYOUT		Bottom-Top , Vertical		Bottom-Top , Vertical		Bottom-Top , Vertical		Bottom-Top , Vertical		
27	INGRESS PROTECTION		IP 65		IP 65		IP 65		IP 65		
28	ACCURACY		±1.6% of full scale or better.		±1.6% of full scale or better.		±1.6% of full scale or better.		±1.6% of full scale or better.		
ACCESSORIES											
29	NEEDLE VALVE		No		No		No		No		
30	SWITCH		No		No		No		No		
PURCHASE											
31	MODEL		H250		H250		H250		H250		
32	MANUFACTURE		KROHNE		KROHNE		KROHNE		KROHNE		



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض

خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک
(قرارداد 03 0008-BK-HD-GCS-CO)



HAVAYAR
INDUSTRIAL GROUP

شماره پیمان:
053 - 073 - 9184

INSTRUMENT DATASHEETS / CERTIFICATES

پروژه	پسته کاری	صادرکننده	سهیلات	رشته	نوع مدرک	سریال	نسخه
BK	GCS	HY	120	IN	DS	0001	V00

شماره صفحه: 14 از 41

INSTRUMENT DATA SHEET FOR FLOW INDICATOR (ROTAMETER)

GENERAL DATA

1	TAG NO.	FI-2200C	FI-2201C	FI-2202C	FI-2203C
2	QUANTITY	1	1	1	1
3	P&ID NO.	BK-GCS-HY-120-PR-PI-0001	BK-GCS-HY-120-PR-PI-0001	BK-GCS-HY-120-PR-PI-0001	BK-GCS-HY-120-PR-PI-0001
4	SERVICE	N2 Gas Supply	N2 Gas Supply	N2 Gas Supply	N2 Gas Supply
5	LINE NUMBER	1/2" SS316L Tubing	1/2" SS316L Tubing	1/2" SS316L Tubing	1/2" SS316L Tubing
6	FUNCTION	Local Indicator	Local Indicator	Local Indicator	Local Indicator
7	MOUNTING	Inline	Inline	Inline	Inline

FLUID DATA

8	FLUID	N2 Gas	N2 Gas	N2 Gas	N2 Gas	
9	FLUID STATE	Gas	Gas	Gas	Gas	
10	MAXIMUM FLOW Nm3/h	3	3	3	3	
11	NORMAL FLOW Nm3/h	3	3	3	3	
12	PRESS. OPERATING / DESIGN (BARG)	1.5	12	1.2	12	
13	TEMP. OPERATING / DESIGN (°C)	52	85	52	85	
14	DENSITY AT ST. COND. (KG/m ³)	1.23	1.23	1.23	1.23	
15	DENSITY AT OP.COND. (KG/m ³)	1.55	1.55	1.24	2.38	
16	COMPRESSIBILITY FACTOR (Z)	1	1	1	1	
17	MOL. WEIGHT	CP/CV	28	1.40	28	1.40
18	OPERATING VISCOSITY (Cp)	0.02	0.02	0.02	0.02	
19	MAX. PRESSURE DROP @ MAX. FLOW(BAR)	min (nil)	min (nil)	min (nil)	min (nil)	

ROTAMETER DETAIL

20	TYPE	Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication	Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication	Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication	Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication
21	FLANGE SIZE / RATING / FACING	1/2", 150# R.F	1/2", 150# R.F	1/2", 150# R.F	1/2", 150# R.F
22	RANGE: FROM / TO (Kg/Hr)	3 Nm3/h	3 Nm3/h	3 Nm3/h	3 Nm3/h
23	SCALE GRADUATION	Direct Scale	Direct Scale	Direct Scale	Direct Scale
24	BODY / FLANGE MATERIAL	316 S.S	ASTM A182 F316	316 S.S	ASTM A182 F316
25	FLOAT EXTENSION MATERIAL	316 S.S	316 S.S	316 S.S	316 S.S
26	CONNECTION LAYOUT	Bottom-Top , Vertical	Bottom-Top , Vertical	Bottom-Top , Vertical	Bottom-Top , Vertical
27	INGRESS PROTECTION	IP 65	IP 65	IP 65	IP 65
28	ACCURACY	±1.6% of full scale or better.	±1.6% of full scale or better.	±1.6% of full scale or better.	±1.6% of full scale or better.

ACCESSORIES

29	NEEDLE VALVE	No	No	No	No
30	SWITCH	No	No	No	No

PURCHASE

31	MODEL	H250	H250	H250	H250
32	MANUFACTURE	KROHNE	KROHNE	KROHNE	KROHNE

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 15 از 41	
		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری		
		V00	0001	DS	IN	120	HY	GCS		
BK										
INSTRUMENT DATA SHEET FOR SIGHT GLASS										
DESIGN DATA										
1	Tag Numbers						See Next Page			
2	Pipe Material Class						C.S			
3	Service						Cooling Water			
4	Operating Pressure						See List			
5	Operating Temperature						See List			
6	Rating						See List			
7	Size Range						See List			
9	P&ID Reference						See List			
SPECIFICATIONS										
10	TYPE						Rotary			
11	End Connection						Flanged R.F			
12	Cover Type						Tempered			
13	Installation Requirements						Horizontal or Vertical			
MATERIALS										
15	Body						C.S			
16	Glass Cover									
17	Glass						TEMPERED GLASS			
18	Gasket						KLINGRIT			
19	Bolts / Studs									



خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد 03 BK-HD-GCS-CO-0008)



شماره پیمان:
053 - 073 - 9184

INSTRUMENT DATASHEETS / CERTIFICATES

شماره صفحه: 16 از 41

پروژہ

بسته کاری

صادر کنندہ

تصهيلات

رشته

تنوع مدرک

سریال

[illegible]

BK

GCS

HY

120

IN

DS

0001

1

List of Sight Glass

[illegible]

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 17 از 41		
		پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مترک			سریال
		BK	GCS	HY	120	IN	DS	0001	V00	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2121A		BK-GCS-HY-120-PR-PI-0001			
	2	Service	Pipe No.		Process gas		GAS-111-0031A-AN05-10"-ET			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		10"					
	4	Pipe Material	Pipe Insulation							
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		4.9		24.5			
	7	Operating Temperature °C	Design Temperature °C		36.8		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		5.771		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.0115			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.245		0.975			
	12	Vapor Pressure	Vapor Density kg/m3		5.102		-			
	13	Molecular Weight	Relative Humidity		24.52		97%			
	14	Allowable Pressure Drop @ Max. Flow			0.1					
	Element	15	Tag Number			FE-2121A				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		316SS		6mm			
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		10"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1			
Transmitter Unit	23	Gasket Type & Material								
	24	Model			Diff pressure					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0~8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0~100 mbar					
	28	Output Signal			HART 4-20mA					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Hastelloy (Nace)					
	38	Wetted Part Material			316SS					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
	Accessories	41	Valve Manifold			5 valve-S.S316				
42		Upstream Straight Run			10X					
43		Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 304+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 18 از 41		
		پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مترک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V00	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2197A		BK-GCS-HY-120-PR-PI-0001			
	2	Service	Pipe No.		Process gas		GAS-111-0044A-CN05-6"-ET			
	3	Pipe O. D. /I. D. mm	Pipe Sch./Thk.		6"					
	4	Pipe Material	Pipe Insulation							
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		18		62			
	7	Operating Temperature °C	Design Temperature °C		59.9		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		17.35		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		.0126			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.275		0.964			
	12	Vapor Pressure	Vapor Density kg/m3		19.76		-			
	13	Molecular Weight	Relative Humidity		24.52		89%			
	14	Allowable Pressure Drop @ Max. Flow			0.1					
	Element	15	Tag Number			FE-2197A				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		316SS		3mm			
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		6"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1			
23	Gasket Type & Material									
Transmitter Unit	24	Model			Diff pressure					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0-8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0-100 mbar					
	28	Output Signal			HART 4-20mA					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Hastelloy (Nace)					
	38	Wetted Part Material			316SS					
	39	Drains/Vents Material			316SS					
40	Integral Indicator / Mounting type			Yes / Direct						
Accessories	41	Valve Manifold			5 valve-S.S316					
	42	Upstream Straight Run			10X					
	43	Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 304+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 19 از 41		
		پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مترک			سریال
		BK	GCS	HY	120	IN	DS	0001	V00	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2206A		BK-GCS-HY-120-PR-PI-0001			
	2	Service	Pipe No.		Water Console		CWR-112-0010A-C.S-3"-PT			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		3"					
	4	Pipe Material	Pipe Insulation							
Process Conditions	5	Fluid	State		Water		Liquid			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		3		7			
	7	Operating Temperature °C	Design Temperature °C		58		85			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	m3/h			16000				
	9	Operating Density kg/m3	Standard Density kg/Nm3		976.6		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.4298			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.166		0.0026			
	12	Vapor Pressure	Vapor Density kg/m3		0.25		-			
	13	Molecular Weight	Relative Humidity		18.02		-			
	14	Allowable Pressure Drop @ Max. Flow			0.2					
	Element	15	Tag Number			FE-2206A				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		316SS		3mm			
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		3"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 150#			
21		Flange Material	Facing		C.S.		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1			
Transmitter Unit	23	Gasket Type & Material								
	24	Model			Diff pressure					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0~20000m3/h					
	27	Full Scale Differential Pressure (bar)			0~200 mbar					
	28	Output Signal			HART 4-20mA					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Hastelloy (Nace)					
	38	Wetted Part Material			316SS					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
	Accessories	41	Valve Manifold			5 valve-S.S316				
42		Upstream Straight Run			10X					
43		Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 304+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 20 از 41		
شماره پیمان: 053 - 073 - 9184		پروژه BK	بسته کاری GCS	صادر کننده HY	تسهیلات 120	رشته IN	نوع مترک DS	سریال 0001	نسخه V00	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2121B		BK-GCS-HY-120-PR-PI-0001			
	2	Service	Pipe No.		Process gas		GAS-111-0031A-AN05-10"-ET			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		10"					
	4	Pipe Material	Pipe Insulation							
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		4.9		24.5			
	7	Operating Temperature °C	Design Temperature °C		36.8		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		5.771		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.0115			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.245		0.975			
	12	Vapor Pressure	Vapor Density kg/m3		5.102		-			
	13	Molecular Weight	Relative Humidity		24.52		97%			
	14	Allowable Pressure Drop @ Max. Flow				0.1				
	Element	15	Tag Number			FE-2121B				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		316SS		6mm			
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		10"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1			
Transmitter Unit	23	Gasket Type & Material								
	24	Model			3051CD					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0~8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0~100 mbar					
	28	Output Signal			HART 4-20mA					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Hastelloy (Nace)					
	38	Wetted Part Material			316SS					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
	Accessories	41	Valve Manifold			5 valve-S.S316				
42		Upstream Straight Run			10X					
43		Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 304+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 21 از 41		
		پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مترک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V00	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2197B		BK-GCS-HY-120-PR-PI-0001			
	2	Service	Pipe No.		Process gas		GAS-111-0044A-CN05-6"-ET			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		6"					
	4	Pipe Material	Pipe Insulation							
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		18		62			
	7	Operating Temperature °C	Design Temperature °C		59.9		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		17.35		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		.0126			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.275		0.964			
	12	Vapor Pressure	Vapor Density kg/m3		19.76		-			
	13	Molecular Weight	Relative Humidity		24.52		89%			
	14	Allowable Pressure Drop @ Max. Flow			0.1					
	Element	15	Tag Number			FE-2197B				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		316SS					
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		6"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 600#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1			
Transmitter Unit	23	Gasket Type & Material								
	24	Model			3051CD					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0-8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0-100 mbar					
	28	Output Signal			HART 4-20mA					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Hastelloy (Nace)					
	38	Wetted Part Material			316SS					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
	Accessories	41	Valve Manifold			5 valve-S.S316				
42		Upstream Straight Run			10X					
43		Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 304+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 22 از 41		
		پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مترک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V00	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2206B		BK-GCS-HY-120-PR-PI-0001			
	2	Service	Pipe No.		Water Console		CWR-112-0010A-C.S-3"-PT			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		3"					
	4	Pipe Material	Pipe Insulation							
Process Conditions	5	Fluid	State		Water		Liquid			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		3		7			
	7	Operating Temperature °C	Design Temperature °C		58		85			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	m3/h			16000				
	9	Operating Density kg/m3	Standard Density kg/Nm3		976.6		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.4298			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.166		0.0026			
	12	Vapor Pressure	Vapor Density kg/m3		0.25		-			
	13	Molecular Weight	Relative Humidity		18.02		-			
	14	Allowable Pressure Drop @ Max. Flow			0.2					
	Element	15	Tag Number			FE-2206B				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		316SS		3mm			
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		3"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 150#			
21		Flange Material	Facing		C.S		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1			
Transmitter Unit	23	Gasket Type & Material								
	24	Model			3051CD					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0~20000m3/h					
	27	Full Scale Differential Pressure (bar)			0~200 mbar					
	28	Output Signal			HART 4-20mA					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Hastelloy (Nace)					
	38	Wetted Part Material			316SS					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
	Accessories	41	Valve Manifold			5 valve-S.S316				
42		Upstream Straight Run			10X					
43		Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 304+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 23 از 41		
		پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مترک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V00	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2121C		BK-GCS-HY-120-PR-PI-0001			
	2	Service	Pipe No.		Process gas		GAS-111-0031A-AN05-10"-ET			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		10"					
	4	Pipe Material	Pipe Insulation							
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		4.9		24.5			
	7	Operating Temperature °C	Design Temperature °C		36.8		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		5.771		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.0115			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.245		0.975			
	12	Vapor Pressure	Vapor Density kg/m3		5.102		-			
	13	Molecular Weight	Relative Humidity		24.52		97%			
	14	Allowable Pressure Drop @ Max. Flow				0.1				
	Element	15	Tag Number			FE-2121C				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		316SS					
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		10"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1			
Transmitter Unit	23	Gasket Type & Material								
	24	Model			3051CD					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0~8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0~100 mbar					
	28	Output Signal			HART 4-20mA					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Hastelloy (Nace)					
	38	Wetted Part Material			316SS					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
	Accessories	41	Valve Manifold			5 valve-S.S316				
42		Upstream Straight Run			10X					
43		Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 304+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 24 از 41		
		پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مترک			سریال
		BK	GCS	HY	120	IN	DS	0001	V00	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2197C		BK-GCS-HY-120-PR-PI-0001			
	2	Service	Pipe No.		Process gas		GAS-111-0044A-CN05-6"-ET			
	3	Pipe O. D. /I. D. mm	Pipe Sch./Thk.		6"					
	4	Pipe Material	Pipe Insulation							
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		18		62			
	7	Operating Temperature °C	Design Temperature °C		59.9		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		17.35		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		.0126			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.275		0.964			
	12	Vapor Pressure	Vapor Density kg/m3		19.76		-			
	13	Molecular Weight	Relative Humidity		24.52		89%			
	14	Allowable Pressure Drop @ Max. Flow			0.1					
	Element	15	Tag Number			FE-2197C				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		316SS					
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		6"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1			
Transmitter Unit	23	Gasket Type & Material								
	24	Model			3051CD					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0-8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0-100 mbar					
	28	Output Signal			HART 4-20mA					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Hastelloy (Nace)					
	38	Wetted Part Material			316SS					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
	Accessories	41	Valve Manifold			5 valve-S.S316				
42		Upstream Straight Run			10X					
43		Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 304+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 25 از 41		
		پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مترک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V00	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2206C		BK-GCS-HY-120-PR-PI-0001			
	2	Service	Pipe No.		Water Console		CWR-112-0010A-C.S-3"-PT			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		3"					
	4	Pipe Material	Pipe Insulation							
Process Conditions	5	Fluid	State		Water		Liquid			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		3		7			
	7	Operating Temperature °C	Design Temperature °C		58		85			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	m3/h			16000				
	9	Operating Density kg/m3	Standard Density kg/Nm3		976.6		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.4298			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.166		0.0026			
	12	Vapor Pressure	Vapor Density kg/m3		0.25		-			
	13	Molecular Weight	Relative Humidity		18.02		-			
	14	Allowable Pressure Drop @ Max. Flow			0.2					
	Element	15	Tag Number			FE-2206C				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		316SS		3mm			
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		3"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 150#			
21		Flange Material	Facing		C.S		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1			
Transmitter Unit	23	Gasket Type & Material								
	24	Model			3051CD					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0~20000m3/h					
	27	Full Scale Differential Pressure (bar)			0~200 mbar					
	28	Output Signal			HART 4-20mA					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Hastelloy (Nace)					
	38	Wetted Part Material			316SS					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
	Accessories	41	Valve Manifold			5 valve-S.S316				
42		Upstream Straight Run			10X					
43		Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 304+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 26 از 41	
شماره پیمان: 053 - 073 - 9184		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک		
		BK	GCS	HY	120	IN	DS	0001	V00
General	1	Instrument Name				Level gauge			
	2	Tag Number	P&ID No.		LG-2213A		BK-GCS-HY-120-PR-PI-0001		
	3	Service	Equipment No.				TK-2101-WR A		
	4	Pipe Class	Vessel Material						
	5	Vessel Class							
Process Conditions	6	Upper Fluid	Lower Fluid		Air		Water / Glycol		
	7	Upper Density kg/m3	Lower Density kg/m3		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Kinetic Viscosity (mm2/S)				-			
	11	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084			
Body & Cage	12	Model/Type				Magnetic			
	13	C to C mm				HOLD			
	14	Allowable Oper. Temp. °C	Pressure Rating						
	15	Mounting Style	Connection Orientation		External		Side-Side		
	16	Visible Length mm			HOLD				
	17	Scale Unit/Material	Accuracy		Cm		5mm		
	18	Indicator Type	Indicator Colour		Magnetic		Flag/White & red		
	19	Chamber Material	Float Material		S.S		S.S		
	20	Connection Type	Connection Size		Flange		2"		
	21	Flange Standard	Flange Rating		ASME		300		
	22	Flange Material	Facing		C.S		RF		
	23	Other Wetted Parts Material				S.S			
Transmitter/Switch	24	Float Dimension	Indicator Housing Material		HOLD		S.S		
	25	Output Signal	Load Resistance		N/A		N/A		
	26	Switch Type	Switch Quantity		N/A		N/A		
	27	Contact Form	Contact Rating		N/A		N/A		
	28	Switch 1 Contact Action				N/A			
	29	Switch 2 Contact Action				N/A			
	30	Calibration Value (for Switch)				N/A			
	31	Power Supply	Electrical Connection		N/A		N/A		
	32	Explosion Proof	Enclosure Protection		N/A		N/A		
	33	Housing Material	Integral Indicator		N/A		N/A		
	34								
	35								
Accessories	36	Drain Valve	Drain Valve Material		1/2"NPT		S.S		
	37	Vent Valve	Vent Valve Material		N/A		N/A		
	38	Vent Valve Connection	Vent Valve Size		N/A		N/A		
	39	Drain Plug	Vent Plug		N/A		N/A		
	40	Protective Heat Shield				N/A			
	41	Steam Jacket	Jacket Connection Size		N/A		N/A		
	42	Steam Pressure bar(g)				N/A			
	43	Non Frosting Extension				N/A			
	44	Stilling Well				N/A			
	45	Surge Protection Device				N/A			
Miscell	46								
	47	Manufacturer				AZARSAM (Eyvaz Technic)			
	48	Requisition No.							

NOTES: VTA : Vendor to advise VTC : Vendor to confirm N/A : Not Applicable
 1. Vendor shall supply and install Swage Nipple 11/2"THREAD(L) × 3/4" PE(S) for vent and drain connections
 2. COMPABILITY WITH NACE MR0175/ISO 15156 TO BE CONSIDERED FOR WETTED EQUIPEMNT.

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 27 از 41	
شماره پیمان: 053 - 073 - 9184		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک		
		BK	GCS	HY	120	IN	DS	0001	V00
General	1	Instrument Name				Level gauge			
	2	Tag Number	P&ID No.		LG-2213B		BK-GCS-HY-120-PR-PI-0001		
	3	Service	Equipment No.				TK-2101-WR B		
	4	Pipe Class	Vessel Material						
	5	Vessel Class							
Process Conditions	6	Upper Fluid	Lower Fluid		Air		Water / Glycol		
	7	Upper Density kg/m3	Lower Density kg/m3		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Kinetic Viscosity (mm2/S)				-			
	11	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084			
Body & Cage	12	Model/Type				Magnetic			
	13	C to C mm				HOLD			
	14	Allowable Oper. Temp. °C	Pressure Rating						
	15	Mounting Style	Connection Orientation		External		Side-Side		
	16	Visible Length mm			HOLD				
	17	Scale Unit/Material	Accuracy		Cm		5mm		
	18	Indicator Type	Indicator Colour		Magnetic		Flag/White & red		
	19	Chamber Material	Float Material		S.S		S.S		
	20	Connection Type	Connection Size		Flange		2"		
	21	Flange Standard	Flange Rating		ASME		300		
	22	Flange Material	Facing		C.S		RF		
	23	Other Wetted Parts Material				S.S			
Transmitter/Switch	24	Float Dimension	Indicator Housing Material		HOLD		S.S		
	25	Output Signal	Load Resistance		N/A		N/A		
	26	Switch Type	Switch Quantity		N/A		N/A		
	27	Contact Form	Contact Rating		N/A		N/A		
	28	Switch 1 Contact Action				N/A			
	29	Switch 2 Contact Action				N/A			
	30	Calibration Value (for Switch)				N/A			
	31	Power Supply	Electrical Connection		N/A		N/A		
	32	Explosion Proof	Enclosure Protection		N/A		N/A		
	33	Housing Material	Integral Indicator		N/A		N/A		
	34								
	35								
Accessories	36	Drain Valve	Drain Valve Material		1/2"NPT		S.S		
	37	Vent Valve	Vent Valve Material		N/A		N/A		
	38	Vent Valve Connection	Vent Valve Size		N/A		N/A		
	39	Drain Plug	Vent Plug		N/A		N/A		
	40	Protective Heat Shield				N/A			
	41	Steam Jacket	Jacket Connection Size		N/A		N/A		
	42	Steam Pressure bar(g)				N/A			
	43	Non Frosting Extension				N/A			
	44	Stilling Well				N/A			
	45	Surge Protection Device				N/A			
Miscell	46								
	47	Manufacturer				AZARSAM (Eyvaz Technic)			
	48	Requisition No.							

NOTES: VTA : Vendor to advise VTC : Vendor to confirm N/A : Not Applicable
 1. Vendor shall supply and install Swage Nipple 11/2"THREAD(L) × 3/4" PE(S) for vent and drain connections
 2. COMPABILITY WITH NACE MR0175/ISO 15156 TO BE CONSIDERED FOR WETTED EQUIPEMNT.

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 28 از 41	
شماره پیمان: 053 - 073 - 9184		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک		
		BK	GCS	HY	120	IN	DS	0001	V00
General	1	Instrument Name				Level gauge			
	2	Tag Number	P&ID No.		LG-2213C		BK-GCS-HY-120-PR-PI-0001		
	3	Service	Equipment No.				TK-2101-WR C		
	4	Pipe Class	Vessel Material						
	5	Vessel Class							
Process Conditions	6	Upper Fluid	Lower Fluid		Air		Water / Glycol		
	7	Upper Density kg/m3	Lower Density kg/m3		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Kinetic Viscosity (mm2/S)				-			
	11	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084			
Body & Cage	12	Model/Type				Magnetic			
	13	C to C mm				HOLD			
	14	Allowable Oper. Temp. °C	Pressure Rating						
	15	Mounting Style	Connection Orientation		External		Side-Side		
	16	Visible Length mm			HOLD				
	17	Scale Unit/Material	Accuracy		Cm		5mm		
	18	Indicator Type	Indicator Colour		Magnetic		Flag/White & red		
	19	Chamber Material	Float Material		S.S		S.S		
	20	Connection Type	Connection Size		Flange		2"		
	21	Flange Standard	Flange Rating		ASME		300		
	22	Flange Material	Facing		C.S		RF		
	23	Other Wetted Parts Material				S.S			
Transmitter/Switch	24	Float Dimension	Indicator Housing Material		HOLD		S.S		
	25	Output Signal	Load Resistance		N/A		N/A		
	26	Switch Type	Switch Quantity		N/A		N/A		
	27	Contact Form	Contact Rating		N/A		N/A		
	28	Switch 1 Contact Action				N/A			
	29	Switch 2 Contact Action				N/A			
	30	Calibration Value (for Switch)				N/A			
	31	Power Supply	Electrical Connection		N/A		N/A		
	32	Explosion Proof	Enclosure Protection		N/A		N/A		
	33	Housing Material	Integral Indicator		N/A		N/A		
	34								
	35								
Accessories	36	Drain Valve	Drain Valve Material		1/2"NPT		S.S		
	37	Vent Valve	Vent Valve Material		N/A		N/A		
	38	Vent Valve Connection	Vent Valve Size		N/A		N/A		
	39	Drain Plug	Vent Plug		N/A		N/A		
	40	Protective Heat Shield				N/A			
	41	Steam Jacket	Jacket Connection Size		N/A		N/A		
	42	Steam Pressure bar(g)				N/A			
	43	Non Frosting Extension				N/A			
	44	Stilling Well				N/A			
	45	Surge Protection Device				N/A			
Miscell	46								
	47	Manufacturer				AZARSAM (Eyvaz Technic)			
	48	Requisition No.							

NOTES: VTA : Vendor to advise VTC : Vendor to confirm N/A : Not Applicable

1. Vendor shall supply and install Swage Nipple 11/2"THREAD(L) × 3/4" PE(S) for vent and drain connections

2. COMPABILITY WITH NACE MR0175/ISO 15156 TO BE CONSIDERED FOR WETTED EQUIPEMNT.

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES							
شماره پیمان: 053 - 073 - 9184		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
		V00	0001	DS	IN	120	HY	GCS	BK
شماره صفحه: 29 از 41									
General	1	Instrument Name			Diff. Press. Level Transmitter				
	2	Tag Number	P&ID No.		LT-2213A		BK-GCS-HY-120-PR-PI-0001		
	3	Service	Pipe / Equipment No.		1601-CC-001A		TK-2101-WR C		
	4	Pipe Class	Vessel Material		-				
	5	Vessel Class							
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Water-Glycol / Liquid		
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Dynamic Viscosity (cP)			0.0209 / 2.084				
	11	C to C mm			-				
Transmitter	12	Model			3051				
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range	Calibration Range (bar)		HOLD		HOLD		
	15	Output Signal	Power Supply		HART 4-20mA		24VDC Loop Powered		
	16	Load Resistance(Ω)			VTA				
	17	Zero Elevation & Suppression			Yes				
	18	Electrical Connection			ISO M20				
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T3)		IP65		
	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
	21	Failure Mode Alarm			Up Scale				
Sensing & Body	22	Element Type	Element Material		Diaphragm (VTC)		316SS		
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material	Flange Material		316SS		ASTM A105		
	25	Process Connection	Flange Standard		2"		ASME B16.5		
	26	Overrange Protection	Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS		
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449		
	29	Seal Type			N/A		N/A		
Diaphragm Seal	30	Extended Length	Extended Material		N/A		N/A		
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A		
	32	Capillary Material	Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material	Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A		
	35	Connection Type	Size		N/A		N/A		
	36	Flange Standard	Flange Rating		N/A		N/A		
	37	Flange Material	Facing		N/A		N/A		
	38	Flushing Connection			N/A		N/A		
	39	Indicator Type	Display		Integral LCD type		Digital		
Indicator	40	Mounting Bracket	Remo. Indic. Connection		No		YES		
	41	Manifold Model	Manifold Type		VTA		5 Way		
Manifold	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection			1/2" PROCESS SIDE/FLANG INST SIDE				
Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A		
Miscell	46								
	47	Manufacturer							
	48	Requisition No.							
NOTES: VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable									

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP	
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 30 از 41
		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	
		V00	0001	DS	IN	120	HY	GCS	BK
General	1	Instrument Name			Diff. Press. Level Transmitter				
	2	Tag Number	P&ID No.		LT-2213B		BK-GCS-HY-120-PR-PI-0001		
	3	Service	Pipe / Equipment No.				TK-2101-WR B		
	4	Pipe Class	Vessel Material		-				
	5	Vessel Class							
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Water-Glycol / Liquid		
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084			
	11	C to C mm				-			
Transmitter	12	Model		3051					
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range	Calibration Range (bar)		HOLD		HOLD		
	15	Output Signal	Power Supply		HART 4-20mA		24VDC Loop Powered		
	16	Load Resistance(Ω)			VTA				
	17	Zero Elevation & Suppression				Yes			
	18	Electrical Connection			ISO M20				
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T3)		IP65		
	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
	21	Failure Mode Alarm			Up Scale				
Sensing & Body	22	Element Type	Element Material		Diaphragm (VTC)		316SS		
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material	Flange Material		316SS		ASTM A105		
	25	Process Connection	Flange Standard		2"		ASME B16.5		
	26	Overrange Protection	Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS		
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449		
	29	Seal Type			N/A		N/A		
Diaphragm Seal	30	Extended Length	Extended Material		N/A		N/A		
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A		
	32	Capillary Material	Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material	Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A		
	35	Connection Type	Size		N/A		N/A		
	36	Flange Standard	Flange Rating		N/A		N/A		
	37	Flange Material	Facing		N/A		N/A		
	38	Flushing Connection			N/A		N/A		
	39	Indicator Type	Display		Integral LCD type		Digital		
Indicator	40	Mounting Bracket	Remo. Indic. Connection		No		YES		
	41	Manifold Model	Manifold Type		VTA		5 Way		
Manifold	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection			1/2" PROCESS SIDE/FLANG INST SIDE				
Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A		
	46								
Miscell	47	Manufacturer							
	48	Requisition No.							

NOTES:
VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES							
شماره پیمان: 053 - 073 - 9184		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
		V00	0001	DS	IN	120	HY	GCS	BK
شماره صفحه: 31 از 41									
General	1	Instrument Name			Diff. Press. Level Transmitter				
	2	Tag Number	P&ID No.		LT-2213C		BK-GCS-HY-120-PR-PI-0001		
	3	Service	Pipe / Equipment No.				TK-2101-WR C		
	4	Pipe Class	Vessel Material		-				
	5	Vessel Class							
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Water-Glycol / Liquid		
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Dynamic Viscosity (cP)			0.0209 / 2.084				
	11	C to C mm			-				
Transmitter	12	Model			3051				
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range	Calibration Range (bar)		HOLD		HOLD		
	15	Output Signal	Power Supply		HART 4-20mA		24VDC Loop Powered		
	16	Load Resistance(Ω)			VTA				
	17	Zero Elevation & Suppression			Yes				
	18	Electrical Connection			ISO M20				
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T3)		IP65		
	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
	21	Failure Mode Alarm			Up Scale				
Sensing & Body	22	Element Type	Element Material		Diaphragm (VTC)		316SS		
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material	Flange Material		316SS		ASTM A105		
	25	Process Connection	Flange Standard		2"		ASME B16.5		
	26	Overrange Protection	Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS		
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449		
	29	Seal Type			N/A		N/A		
Diaphragm Seal	30	Extended Length	Extended Material		N/A		N/A		
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A		
	32	Capillary Material	Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material	Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A		
	35	Connection Type	Size		N/A		N/A		
	36	Flange Standard	Flange Rating		N/A		N/A		
	37	Flange Material	Facing		N/A		N/A		
	38	Flushing Connection			N/A		N/A		
	Indicator	39	Indicator Type	Display		Integral LCD type		Digital	
40		Mounting Bracket	Remo. Indic. Connection		No		YES		
Manifold	41	Manifold Model	Manifold Type		VTA		5 Way		
	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection			1/2" PROCESS SIDE/FLANG INST SIDE				
Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A		
	46								
Miscell	47	Manufacturer							
	48	Requisition No.							
NOTES: VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable									

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 32 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		BK	GCS	HY	120	IN	DS	0001		V00
Data Sheet for Solenoid Valve										
GENERAL	1	TAG NO .	See List							
	2	SERVICE	Instrument Air							
	3	LINE NO,	See List							
	4	QUANTITY	See List							
VALVE BODY	5	TYPE	For single acting							
	6	SIZE- BODY /PORT	See List							
	7	RATING & TYPE CONN.	NPTF							
	8	MATERIAL -BODY	Brass							
	9	MATERIAL -SEAT	MFR STD							
	10	MATERIAL -DIAPHRAGM	N/A							
	11	OPERATION DIRECT / PILOT	Pilot operated							
	12	MANUAL RESET	N/A							
	13	MANUAL OPERATOR	N/A							
	14	PAINTING	N/A							
WHEN DEENERGIZED	15	2 WAY VALVE : OPEN/CLOSE	YES							
	16	3 WAY	N/A							
	17	VENT PORT : OPEN/CLOSE	N/A							
	18	PRESS PORT : OPEN/CLOSE	OPEN							
	19	EXTERNAL OVERRIDE	No							
SOLENOID	20	ENCLOSURE	IP 66							
	21	VOLTAGE/POWER	24 VDC /11W							
	22	STYLE OF COIL	MFR STD							
	23	SINGLE OR DOUBLE COIL	SINGLE							
	24	INSULATION CLASS	F							
	25	ENCLOSURE MATERIAL	ALUMINUM							
	26	CERTIFICATION	Eex 'd'-IIB-T3							
	27	ELEC. ENTRY	M20x1.5 ISO							
SERVICE CONDITIONS	28	FLUID	Instrument Air							
	29	OPER.DIFF.MIN (BAR)	See List							
	30	OPER.DIFF.MAX (BAR)	See List							
	31	TEMP. NORMAL /MAX	See List							
	32	SP.GR	1.0							
	33	VISCOSITY	N/A							
	34	VALVE CV	V.T.A							
	35	MANUFACTURER	V.T.A							
	36	MODEL NO.	V.T.A							
	37									

NOTE:
 VTA:Vendor To Advise N/A:Not Applicable

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)							 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 – 9184	INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 33 از 41		
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه	
	BK	GCS	HY	120	IN	DS	0001		V00	
List of SOV										
ITEM NO.	TAG NO.	SERVICE	LINE NO. / EQUIPMENT NO.	P&ID No.	OPERATING/DESIGN PRESSURE (Barg)		TEMPERATURE (C)		SOLENOID VALVE SIZE	REMARKS
					Min. / Max	Norm. / Design				
1	SV-2201A	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001	8 / 12.5		65 / 85		1/2"	
2	SV-2202A	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001	8 / 12.5		65 / 85		1/2"	
3	SV-2203A	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001	8 / 12.5		65 / 85		1/2"	
4	SV-2201B	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001	8 / 12.5		65 / 85		1/2"	
5	SV-2202B	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001	8 / 12.5		65 / 85		1/2"	
6	SV-2203B	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001	8 / 12.5		65 / 85		1/2"	
7	SV-2201C	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001	8 / 12.5		65 / 85		1/2"	
8	SV-2202C	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001	8 / 12.5		65 / 85		1/2"	
9	SV-2203C	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001	8 / 12.5		65 / 85		1/2"	

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES							
شماره پیمان: 053 - 073 – 9184		شماره صفحه: 34 از 41							
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
		BK	GCS	HY	120	IN	DS	0001	V00
SERVICE	Tag Number	VE-2200A VE-2201A VE-2202A				ZE-2200A ZE-2201A			
	Service	Frame vibration				Cylinder Rod Drop Detector			
	P&ID No.	BK-GCS-HY-120-PR-PI-0001				BK-GCS-HY-120-PR-PI-0001			
	Q'TY	3				2			
OPERATING CONDITION	Press. Nor(Kg/cm ²)	N/A				N/A			
	Temp. Nor(°C)	- 40°C to +100°C				- 40°C to +100°C			
	Humidity								
	Explosion Class & Cert.	Ex ia IIC, T4				Ex ia IIC, T4			
GENERAL	Description	Frame vibration				Cylinder Rod Drop Detector			
	Manufacturer	Metrix				SHINKAWA			
	Model No. - Probe					FL-452F11L-M9-00-09-10/E50/Z05			
	- Ext. Cable	N/A				FW-452FT-80/E50			
	- Proximitor	N/A				FK-452F2-1-2/E50			
	Piston Rod Material	N/A				N/A			
PROBE	Type	Seismic Vibration				Proximity			
	Range	25.4mm/SEC, RMS				4.0 mm			
	Material	316 Stainless Steel				316 Stainless Steel			
	Conduit size	N/A				N/A			
	Probe Cable Length	N/A				1.0 Meter + Ext 9 Meter			
	Sealing	IP66				IP66			
	Sensor Mounting	M8 x P1.25				Internal of Bare block			
	Mounting Housing	N/A				N/A			
	Mounting Thread	N/A				M16x1.5			
	Sensitivity	100 mV/g				100 mV/g			
	Standard	API 670				API 670			
	TRANSMITTER	Input Power	24 VDC(Loop Powered)				24 VDC(Loop Powered)		
Output		4~20 mA				4~20 mA			
Enclosure Class		IP66				Without			
Model No.		VST5484E				VM-21T1-22C012-1			
Notes :									

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES							
شماره پیمان: 053 - 073 – 9184		شماره صفحه: 35 از 41							
		پروژه BK	بسته کاری GCS	صادر کننده HY	تسهیلات 120	رشته IN	نوع مدرک DS	سریال 0001	نسخه V00
SERVICE	Tag Number	VE-2200B VE-2201B VE-2202B				ZE-2200B ZE-2201B			
	Service	Frame vibration				Cylinder Rod Drop Detector			
	P&ID No.	BK-GCS-HY-120-PR-PI-0001				BK-GCS-HY-120-PR-PI-0001			
	Q'TY	3				2			
OPERATING CONDITION	Press. Nor(Kg/cm ²)	N/A				N/A			
	Temp. Nor(°C)	- 40°C to +100°C				- 40°C to +100°C			
	Humidity								
	Explosion Class & Cert.	Ex ia IIC, T4				Ex ia IIC, T4			
GENERAL	Description	Frame vibration				Cylinder Rod Drop Detector			
	Manufacturer	Metrix				SHINKAWA			
	Model No. - Probe					FL-452F11L-M9-00-09-10/E50/Z05			
	- Ext. Cable	N/A				FW-452FT-80/E50			
	- Proximitor	N/A				FK-452F2-1-2/E50			
	Piston Rod Material	N/A				N/A			
PROBE	Type	Seismic Vibration				Proximity			
	Range	25.4mm/SEC, RMS				4.0 mm			
	Material	316 Stainless Steel				316 Stainless Steel			
	Conduit size	N/A				N/A			
	Probe Cable Length	N/A				1.0 Meter + Ext 9 Meter			
	Sealing	IP66				IP66			
	Sensor Mounting	M8 x P1.25				Internal of Bare block			
	Mounting Housing	N/A				N/A			
	Mounting Thread	N/A				M16x1.5			
	Sensitivity	100 mV/g				100 mV/g			
	Standard	API 670				API 670			
	TRANSMITTER	Input Power	24 VDC(Loop Powered)				24 VDC(Loop Powered)		
Output		4~20 mA				4~20 mA			
Enclosure Class		IP66				Without			
Model No.		VST5484E				VM-21T1-22C012-1			
Notes :									

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES							
شماره پیمان: 053 - 073 – 9184		شماره صفحه: 36 از 41							
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
		BK	GCS	HY	120	IN	DS	0001	V00
SERVICE	Tag Number	VE-2200C VE-2201C VE-2202C				ZE-2200C ZE-2201C			
	Service	Frame vibration				Cylinder Rod Drop Detector			
	P&ID No.	BK-GCS-HY-120-PR-PI-0001				BK-GCS-HY-120-PR-PI-0001			
	Q'TY	3				2			
OPERATING CONDITION	Press. Nor(Kg/cm ²)	N/A				N/A			
	Temp. Nor(°C)	- 40°C to +100°C				- 40°C to +100°C			
	Humidity								
	Explosion Class & Cert.	Ex ia IIC, T4				Ex ia IIC, T4			
GENERAL	Description	Frame vibration				Cylinder Rod Drop Detector			
	Manufacturer	Metrix				SHINKAWA			
	Model No. - Probe					FL-452F11L-M9-00-09-10/E50/Z05			
	- Ext. Cable	N/A				FW-452FT-80/E50			
	- Proximitor	N/A				FK-452F2-1-2/E50			
	Piston Rod Material	N/A				N/A			
PROBE	Type	Seismic Vibration				Proximity			
	Range	25.4mm/SEC, RMS				4.0 mm			
	Material	316 Stainless Steel				316 Stainless Steel			
	Conduit size	N/A				N/A			
	Probe Cable Length	N/A				1.0 Meter + Ext 9 Meter			
	Sealing	IP66				IP66			
	Sensor Mounting	M8 x P1.25				Internal of Bare block			
	Mounting Housing	N/A				N/A			
	Mounting Thread	N/A				M16x1.5			
	Sensitivity	100 mV/g				100 mV/g			
	Standard	API 670				API 670			
	TRANSMITTER	Input Power	24 VDC(Loop Powered)				24 VDC(Loop Powered)		
Output		4~20 mA				4~20 mA			
Enclosure Class		IP66				Without			
Model No.		VST5484E				VM-21T1-22C012-1			
Notes :									

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP	
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 37 از 41
		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	
		V00	0001	DS	IN	120	HY	GCS	BK
General	1	Instrument Name			Diff. Press. Level Transmitter				
	2	Tag Number	P&ID No.		LT-2200A		BK-GCS-HY-120-PR-PI-0001		
	3	Service	Pipe / Equipment No.				crankcase		
	4	Pipe Class	Vessel Material		-				
	5	Vessel Class							
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Lubricant Oil / Liquid		
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		890		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		6		10		
	9	Operating Temperature °C	Design Temperature °C		70		85		
	10	U/L Dynamic Viscosity (cP)				0.021/0.89			
	11	C to C mm				-			
Transmitter	12	Model		3051					
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range	Calibration Range (bar)		-635~635mmH2O		300mmH2O		
	15	Output Signal	Power Supply		HART 4-20MA		24VDC Loop Powered		
	16	Load Resistance(Ω)			VTA				
	17	Zero Elevation & Suppression				Yes			
	18	Electrical Connection			ISO M20				
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T3)		IP65		
	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
	21	Failure Mode Alarm			Up Scale				
Sensing & Body	22	Element Type	Element Material		Diaphragm (VTC)		316SS		
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material	Flange Material		316SS		ASTM A105		
	25	Process Connection	Flange Standard		2"		ASME B16.5		
	26	Overrange Protection	Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS		
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449		
	29	Seal Type			N/A				
Diaphragm Seal	30	Extended Length	Extended Material		N/A		N/A		
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A		
	32	Capillary Material	Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material	Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A		
	35	Connection Type	Size		N/A		N/A		
	36	Flange Standard	Flange Rating		N/A		N/A		
	37	Flange Material	Facing		N/A		N/A		
	38	Flushing Connection			N/A		N/A		
	39	Indicator Type	Display		Integral LCD type		Digital		
Indicator	40	Mounting Bracket	Remo. Indic. Connection		No		YES		
	41	Manifold Model	Manifold Type		VTA		5 Way		
Manifold	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection			1/2" PROCESS SIDE/FLANG INST SIDE				
Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A		
	46								
Miscell	47	Manufacturer							
	48	Requisition No.							

NOTES:
VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP	
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 38 از 41
		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	
		V00	0001	DS	IN	120	HY	GCS	BK
General	1	Instrument Name			Diff. Press. Level Transmitter				
	2	Tag Number	P&ID No.		LT-2200B		BK-GCS-HY-120-PR-PI-0001		
	3	Service	Pipe / Equipment No.				crankcase		
	4	Pipe Class	Vessel Material		-				
	5	Vessel Class							
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Lubricant Oil / Liquid		
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		890		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		6		10		
	9	Operating Temperature °C	Design Temperature °C		70		85		
	10	U/L Dynamic Viscosity (cP)				0.021/0.89			
	11	C to C mm				-			
Transmitter	12	Model			3051				
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range	Calibration Range (bar)		-635~635mmH2O		300mmH2O		
	15	Output Signal	Power Supply		HART 4-20MA		24VDC Loop Powered		
	16	Load Resistance(Ω)			VTA				
	17	Zero Elevation & Suppression				Yes			
	18	Electrical Connection			ISO M20				
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T3)		IP65		
	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
	21	Failure Mode Alarm			Up Scale				
Sensing & Body	22	Element Type	Element Material		Diaphragm (VTC)		316SS		
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material	Flange Material		316SS		ASTM A105		
	25	Process Connection	Flange Standard		2"		ASME B16.5		
	26	Overrange Protection	Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS		
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449		
	29	Seal Type			N/A				
Diaphragm Seal	30	Extended Length	Extended Material		N/A		N/A		
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A		
	32	Capillary Material	Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material	Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A		
	35	Connection Type	Size		N/A		N/A		
	36	Flange Standard	Flange Rating		N/A		N/A		
	37	Flange Material	Facing		N/A		N/A		
	38	Flushing Connection			N/A		N/A		
Indicator	39	Indicator Type	Display		Integral LCD type		Digital		
	40	Mounting Bracket	Remo. Indic. Connection		No		YES		
Manifold	41	Manifold Model	Manifold Type		VTA		5 Way		
	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection			1/2" PROCESS SIDE/FLANG INST SIDE				
Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A		
Miscell	46	Manufacturer							
	47	Requisition No.							
NOTES: VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable									

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 39 از 41	
شماره پیمان: 053 - 073 - 9184		پروژه BK	بسته کاری GCS	صادر کننده HY	تسهیلات 120	رشته IN	نوع مدرک DS		
General	1	Instrument Name				Diff. Press. Level Transmitter			
	2	Tag Number		P&ID No.		LT-2200B		BK-GCS-HY-120-PR-PI-0001	
	3	Service		Pipe / Equipment No.				crankcase	
	4	Pipe Class		Vessel Material		-			
	5	Vessel Class							
	6	Upper Fluid / Phase		Lower Fluid / Phase		Air / Gas		Lubricant Oil / Liquid	
	7	Upper Density(kg/m3)		Lower Density(kg/m3)		1.225		890	
	8	Operating Pressure bar(g)		Design Pressure bar(g)		6		10	
	9	Operating Temperature °C		Design Temperature °C		70		85	
	10	U/L Dynamic Viscosity (cP)						0.021/0.89	
	11	C to C mm						-	
Transmitter	12	Model				3051			
	13	Type		Accuracy		DP level Transmitter		+/- 0.1% Full Scale	
	14	Available Range		Calibration Range (bar)		-635~635mmH2O		300mmH2O	
	15	Output Signal		Power Supply		HART 4-20MA		24VDC Loop Powered	
	16	Load Resistance(Ω)				VTA			
	17	Zero Elevation & Suppression						Yes	
	18	Electrical Connection				ISO M20			
	19	Explosion Proof		Enclosure Protection		EXia (Zone 2 IIB T3)		IP65	
Sensing & Body	20	Response Time		Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free	
	21	Failure Mode Alarm				Up Scale			
	22	Element Type		Element Material		Diaphragm (VTC)		316SS	
	23	Max. Static Pressure (barg)		Allowable Oper. Temp. °C		250barg		85 °C	
	24	Body Material		Flange Material		316SS		ASTM A105	
	25	Process Connection		Flange Standard		2"		ASME B16.5	
	26	Overrange Protection		Connector Material		130 %		316SS	
	27	Vent/Drain Type&Size		Vent/Drain Material		1/4"NPT		316SS	
Diaphragm Seal	28	Gasket/O-Ring Material		Bolts Material		PTFE		ASTM A449	
	29	Seal Type				N/A			
	30	Extended Length		Extended Material		N/A		N/A	
	31	Diaphragm Diameter		Diaphragm Material		N/A		N/A	
	32	Capillary Material		Capillary Length H/L		N/A		N/A	
	33	Capillary Armor Material		Fill Fluid		N/A		N/A	
	34	Fill Fluid Temperature Limits		Fill Fluid Density		N/A		N/A	
	35	Connection Type		Size		N/A		N/A	
	36	Flange Standard		Flange Rating		N/A		N/A	
	37	Flange Material		Facing		N/A		N/A	
Indicator	38	Flushing Connection				N/A		N/A	
	39	Indicator Type		Display		Integral LCD type		Digital	
Manifold	40	Mounting Bracket		Remo. Indic. Connection		No		YES	
	41	Manifold Model		Manifold Type		VTA		5 Way	
	42	Manifold Rating		Manifold Material		Min. CL 3000		316 SS	
Accessories	43	Manifold Connection				1/2" PROCESS SIDE/FLANG INST SIDE			
	44	Mounting Bracket		Bracket Material		Yes / 2" Pipe		316SS	
Miscell	45	Add Corrosive Envir. Enclosure		Surge Protected Device		N/A		N/A	
	46	Manufacturer							
	47	Requisition No.							
NOTES: VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable									

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)									
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 40 از 41			
		پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدارک	سریال	نسخه		
		BK	GCS	HY	120	IN	DS	0001	V00		
Instrument Data Sheet For Pressure Switch											
GENERAL					SWITCH						
1	Press.	●	Vaccum	○		8	Type:	Mercury	○	Snap	●
	Comp.	○	Diff. Press.	○				Other :			
2		Set In Field	●	Factory Set		9	Quantity:	Single	●	Dual	○
		Internal	●	External	○	10	Form:	SPST	○	SPDT	●
3		Fixed		Adj.	●			Other:			
ELEMENT						11	Max Rating:	2 Amps		24vdc	
4	Diaphragm	●	Bourdon	○	Bellows	○		Other:			
						12	Load:	Inductive	○	Non-Inductive	●
5	Material				Aluminum	13	IP	IP66 Exd/IIB			
6	Connection	1/2"NPT	●	Other Size :		14	Electrical Connection:	M20			
		Bottom	●	Back		15	Manufacturer & Model No.				
7		Local	●	Surface	○	Flush	16	Accessories	Manifold 2Valve		
Tag No.	Process Connection	Adj. Range (Bar G)	Set Point (Bar G)	Pressure Design Working		Service or Line Number		Remark			
PS-2195A	1 " NPT	0~80	HOLD	62Bar	54.9Bar	GAS-111-0051A-FN05-6"-IS		Nace material			
PS-2204A	1 " NPT	0~10	HOLD	10Bar	6Bar	OIL-112-0008A-S.S-2"-NP					
PS-2220A	1 " NPT	0~10	HOLD	10Bar	3Bar	CWS-112-0002A-C.S-3"-PT					
PS-2195B	1 " NPT	0~80	HOLD	62Bar	54.9Bar	GAS-111-0051A-FN05-6"-IS		Nace material			
PS-2204B	1 " NPT	0~10	HOLD	10Bar	6Bar	OIL-112-0008A-S.S-2"-NP					
PS-2220B	1 " NPT	0~10	HOLD	10Bar	3Bar	CWS-112-0002A-C.S-3"-PT					
PS-2195C	1 " NPT	0~80	HOLD	62Bar	54.9Bar	GAS-111-0051A-FN05-6"-IS		Nace material			
PS-2204C	1 " NPT	0~10	HOLD	10Bar	6Bar	OIL-112-0008A-S.S-2"-NP					
PS-2220C	1 " NPT	0~10	HOLD	10Bar	3Bar	CWS-112-0002A-C.S-3"-PT					

شماره پیمان:
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INSTRUMENT DATASHEETS / CERTIFICATES

شماره صفحه: 41 از 41

پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
BK	GCS	HY	120	IN	DS	0001	V00

Instrument Data Sheet For Temperature Switch

GENERAL							
1.TAG.NO		TS-2191A	TS-2194A	TS-2191B	TS-2194B	TS-2191C	TS-2194C
2.Equipment		1ST STAGE DISCHARGE SNUBBER	2ND STAGE DISCHARGE SNUBBER	1ST STAGE DISCHARGE SNUBBER	2ND STAGE DISCHARGE SNUBBER	1ST STAGE DISCHARGE SNUBBER	2ND STAGE DISCHARGE SNUBBER
3.ENCLOSURE MATERIAL		Cast Aluminum	Cast Aluminum	Cast Aluminum	Cast Aluminum	Cast Aluminum	Cast Aluminum
4.SERVICE		Gas	Gas	Gas	Gas	Gas	Gas
5.RANGE		0-200C	0-200°C	0-200°C	0-200°C	0-200°C	0-200°C
6.Ingress Protection		IP 66/EXd	IP 66/Exd	IP 66/Exd	IP 66/EXd	IP 66/Exd	IP 66/Exd
THERMOWELL							
7.TYPE SYSTEM		Flnage	Flange	Flange	Flange	Flange	Flange
8 MATERIAL		AISI 316/Nace	AISI 316/Nace	AISI 316/Nace	AISI 316/Nace	AISI 316/Nace	AISI 316/Nace
9.CONNECTION LOCATION		Bottom	Bottom	Bottom	Bottom	Bottom	Bottom
10.TUBING LENGTH		N/A	N/A	N/A	N/A	N/A	N/A
11.TUBING TYPE & MATERIAL		N/A	N/A	N/A	N/A	N/A	N/A
12.WELL CONN.SIZE & TYPE		2"#300	2"#600	2"#300	2"#600	2"#300	2"#600
13.WELL MATERIAL		316 S.S	316 S.S	316 S.S	316 S.S	316 S.S	316 S.S
14.'U' DIMENSION(NOMINAL)		Hold	Hold	Hold	Hold	Hold	Hold
SWITCH							
15.TYPE		Snap Action	Snap Action	Snap Action	Snap Action	Snap Action	Snap Action
16.QUANTITY	FORM	1/SPD	1/SPD	1/SPD	1/SPD	1/SPD	1/SPD
17.ENCLOSURE		IP66	IP66	IP66	IP66	IP66	IP66
18.RATING:VOLTS		24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC
19.AMPS		2	2	5	2	5	5
20.LOAD TYPE		INDUCTIVE	INDUCTIVE	INDUCTIVE	INDUCTIVE	INDUCTIVE	INDUCTIVE
21.DIFF..FIXED	ADJUST	YES/-	YES/-	YES/-	YES/-	YES/-	YES/-
22.ELECTRICAL CONNECTION		M20*1.5	M20*1.5	M20*1.5	M20*1.5	M20*1.5	M20*1.5
23.Accuracy		1% Of Spna	1% Of Spna	1% Of Spna	1% Of Spna	1% Of Spna	1% Of Spna
SERVICE CONDITIONS							
27.TEMP.:OPER 'C		129°C	147°C	129°C	147°C	129°C	147°C
28.PRESS.:OPER 'C		18	54.9	18	54.9	18	54.9
29.TRIP POINT 'C		HOLD	Hold	Hold	Hold	Hold	Hold
30.MANUFACTURER		HOLD	Hold	Hold	Hold	Hold	Hold
31.MANUFACTURER'S MODEL NO.		HOLD	HOLD	HOLD	HOLD	HOLD	HOLD