



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
V01	0001	DS	IN	120	HY	GCS	BK

شماره صفحه: 1 از 41

تمامی موارد Hold در
تمامی شیت ها مشخص
گردد.

طرح نگهداشت و افزایش تولید ۲۷ مخزن

INSTRUMENT DATASHEETS / CERTIFICATES

نگهداشت و افزایش تولید میدان نفتی بینک

V01	Nov.2023	IFR	Havayar CO	M.Fakharian	S.Faramarzpour	
V00	SEP.2023	IFR	Havayar CO	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue/Status	Prepared By	Checked By	Approved By	Client Approval

CLIENT Doc. Number:

Status:

IFA: Issued For Approval
IFR: Issued For Review
IFI: Issued For Information
AFC: Approved For Construction



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض
خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد ۰۳_۰۰۸-CO-GCS-BK)



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

INSTRUMENT DATASHEETS / CERTIFICATES

نسخه	سریال	نوع	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
V01	0001	DS	IN	120	HY	GCS	BK

شماره صفحه: 2 از 41

REVISION RECORD SHEET

Page	V00	V01	V02	V03	V04
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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: 3 از 41

INSTRUMENT DATASHEETS / CERTIFICATES

نسخه	سریال	نوع مترک	رشته	تسهلات	صنایع کننده	پسته کاری	پروژه
V01	0001	DS	IN	120	HY	GCS	BK

Data Sheet for Pressure Gauge

1	Type :	Direct Rdg. ☒ Other ☐	liquid filled ☒	3-15 lb Reciever ☐	11	MFR. & Model No.	Wika 233.50.160
2	Mounting :	Surface ☐ Dial : ☐	Local ☒	Flush ☐	12	Press Element :	Bourdon ☒ Bellows ☐
3	Dial :	Diameter ☐	160 mm	Color : White / Black Lettering , Non Rusting Metal	13	Element Mtl. :	Other ☐ Bronze ☐ Steel ☐
4	Case :	Cast Iron ☐ Other ☐	SS316	Phenol ☐	14	Socket Mtl. :	Other ☐ Bronze ☐ Steel ☐
5	Ring :	Screwed ☒ Std ☐	Hinged ☐ Other ☐	Slip ☐	15	Connection-NPT :	Other ☐ 1/4 in. ☒ 1/2 in. ☐ NPTM (refer to note)
6	Blow-out Protection :	Solid Front ☐ Glass ☒	None ☐ Plastic ☐	Back ☐ Disc ☐ Other ☐	16	Movement:	Nylon ☐ As per List ☐
7	Lens :	Glass ☒ Plastic ☐	Safety Glass (shatter proof)	As per List ☒	17	Diaphragm Seal	MFR. ☐ Wetted Part Mtl. ☐ Fill Fluid : ☐ Process Conn. : ☐
8	Options :				18	Ingress Protection :	IP 65
9	Nominal Accuracy Required :		± 1% of full scale		19	Manifold S.S316 2 valve	☒
10	Over range protection :		1.3 times the maximum scale				

در تمامی P&ID ها
شماره صفحه P&ID نوشته
شود.
هواپار: P&ID اضافه شد.

در P&ID نوشته شده NP لذا
مغایرت با P&ID برطرف
شود
هواپار: P&ID اصلاح شد.

Item	Tag No.	Range (barg)	Process Fluid/State	Temp (C°)	LINE NO./EQUIPMENTNO.	P&ID NO.	Accessories	NOTE		
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 Over protector Snubber Set point 10barg
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-112-0002A-AZ00-2"-IS	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"-IS	BK-GCS-HY-120-PR-PI-0001	
9	PG-2205A	0-4	GAS	5	85	1/5	65	FLR-112-0009A-AN07-1"-IS	BK-GCS-HY-120-PR-PI-0001	Nace material
10	PG-2206A	0-6	Water console Comp A	7	85	3	65	CWS-112-0003A-C.S-3"-IS	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"-IS	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"-IS	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 Over protector Snubber Set point 10barg
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-112-0002A-AZ00-2"-IS	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"-IS	BK-GCS-HY-120-PR-PI-0001	
21	PG-2205B	0-4	GAS	5	85	1/5	65	FLR-112-0009A-AN07-1"-IS	BK-GCS-HY-120-PR-PI-0001	Nace material
22	PG-2206B	0-6	Water console Comp B	7	85	3	65	CWS-112-0003A-C.S-3"-IS	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"-IS	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"-IS	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 Over protector Snubber Set point 10barg
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-112-0002A-AZ00-2"-IS	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"-IS	BK-GCS-HY-120-PR-PI-0001	
33	PG-2205C	0-4	GAS	5	85	1/5	65	FLR-112-0009A-AN07-1"-IS	BK-GCS-HY-120-PR-PI-0001	Nace material
34	PG-2206C	0-6	Water console Comp C	7	85	3	65	CWS-112-0003A-C.S-3"-IS	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"-IS	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"-IS	BK-GCS-HY-120-PR-PI-0001	

در P&ID پوشش لوله PT
نوشته شده است بعنوان نمونه
چند خط بررسی شد لذا تمامی
خطوط با هماهنگی بخش ابزار
دقیق و فرایند بررسی شده و
مغایرتها برطرف گرد.
هواپار: P&ID اصلاح شد.

B

C

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه 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			V01
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								
			For use in Intrinsically Safe System ☐ Other EExia, IIB, T4								
	6		Ingress Protection : IP 66								
	7	Power Supply	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 : 0.1% 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	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.											



شماره پیمان:
053 - 073 - 9184

در P&ID مربوطه TAG
مربوط به PT نوشته نشده
است لذا با بخش ابزار دقیق و
فرایند نهایی شود.
هواپار: P&ID اصلاح شد.

نگهداشت و افزایش تولید
سطح الارض و آبیه

خرید پکیج های کمپرسور گاز)
CO-0008_03

ASHEETS / C

تسهيلات

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شماره صفحه برای تمامی
P&ID NO. ها نوشته
شود.

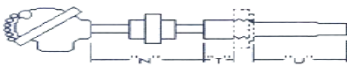
**HAVAYAR**
INDUSTRIAL GROUP

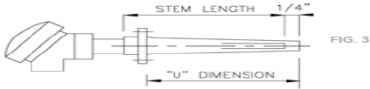
شماره صفحه: 5 از 41

ITEM NO.	TAG NO.	SERVICE	LINE NO. / EQUIPMENT NO.	P&ID No.	PROCESS CONNECTION	FLUID/ STATE	D RANGE			ACCESSORIES Option	MFR. & Model No.	REMARKS
							Oper. / Design	Norm. / Design				
1	PT-2123A	Process gas Comp A	GAS-111-0031A-AN05-6"-ET	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	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-CN05-6"-PT	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	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-112-0002A-AZ00-2"-IS	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	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"-IS	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	1" NPT	Gas	2.2 / 10	60 / 85	0/020	0-10	2 valve manifold S.S316	
9	PT-2211A	N2 Gas Supply Comp A	NIT-112-0002A-SS-1"-NP	BK-GCS-HY-120-PR-P1-0001	1" NPT	Gas	1 / 10	60 / 85	0/020	0-10	2 valve manifold S.S316	
10	PT-2220A	Water console Comp A	CWS-112-0002A-C.S-3"-IS	BK-GCS-HY-120-PR-P1-0001	1" NPT	Liquid	3 / 10	58 / 85	0/478	0-10	2 valve manifold S.S316	
11	PT-2221A	Water console Comp A	CWS-112-0002A-C.S-3"-IS	BK-GCS-HY-120-PR-P1-0001	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-AN05-6"-ET	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	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-CN05-6"-PT	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	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-112-0002A-AZ00-2"-IS	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	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"-IS	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	1" NPT	Gas	2.2 / 10	60 / 85	0/020	0-10	2 valve manifold S.S316	
20	PT-2211B	N2 Gas Supply Comp B	NIT-112-0002A-SS-1"-NP	BK-GCS-HY-120-PR-P1-0001	1" NPT	Gas	1 / 10	60 / 85	0/020	0-10	2 valve manifold S.S316	
21	PT-2220B	Water console Comp B	CWS-112-0002A-C.S-3"-IS	BK-GCS-HY-120-PR-P1-0001	1" NPT	Liquid	3 / 10	58 / 85	0/478	0-10	2 valve manifold S.S316	
22	PT-2221B	Water console Comp B	CWS-112-0002A-C.S-3"-IS	BK-GCS-HY-120-PR-P1-0001	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-AN05-6"-ET	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	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-CN05-6"-PT	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	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-112-0002A-AZ00-2"-IS	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	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"-IS	BK-GCS-HY-120-PR-P1-0001	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-P1-0001	1" NPT	Gas	2.2 / 10	60 / 85	0/020	0-10	2 valve manifold S.S316	
31	PT-2211C	N2 Gas Supply Comp C	NIT-112-0002A-SS-1"-NP	BK-GCS-HY-120-PR-P1-0001	1" NPT	Gas	1 / 10	60 / 85	0/020	0-10	2 valve manifold S.S316	
32	PT-2220C	Water console Comp C	CWS-112-0002A-C.S-3"-IS	BK-GCS-HY-120-PR-P1-0001	1" NPT	Liquid	3 / 10	58 / 85	0/478	0-10	2 valve manifold S.S316	
33	PT-2221C	Water console Comp C	CWS-112-0002A-C.S-3"-IS	BK-GCS-HY-120-PR-P1-0001	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 ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP		
	INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 7 از 41
شماره پیمان: 053 - 073 - 9184	پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	HY	120	IN	DS	0001	V01	

Data Sheet for Temprarure Transmitter/Element/Thermowell									
HEAD					21 BORE DIAMETER 6.6 mm (NOTE 4)				
1 COMPLETE ASSEMBLY YES OTHER					22 OUTSIDE DIAMETER AT SUPPORT/TIP : 28/22 mm (NOTE 4)				
2 SCREWED COVER OTHER					23 LAGGING EXTENTION "T" : VTA				
3 PROTECTION CLASS IP-66					24 TEST : HYDROSTATIC AND PENETRANT TEST				
4 HAZ. AREA CLASSIFICATION EXia IIB T4					25 CONNECTION TO SENSOR 1/2" NPT F				
5 MATERIAL 316 S.S. ELECTRICAL CONN. M20 X 1.5					26 PROCESS CONNECTION See list				
6 NIPPLE SIZE 1/2" DIM."N" UNION									
7 AMBIENT TEMPERATURE IN DIRECT SUNLIGHT									
ELEMENT					PERFORMANCE CHARACTERISTICS				
8 PLATINUM 100/0°C NICKEL OTHER					27 MIN/MAX. AMBIENT WORKING TEMPERATURE: BY VENDOR				
9 TYPE PT100					TRANSMITTER				
10 TEMPERATURE RANGE -100°C to 500 °C					28 TRANSMITTER BODY MATERIAL EXOPXY PAINTED DIE CAST ALUMINIUM				
11 LEADS STD POTTED HERM. SEALED					29 POWER SUPPLY 24 VDC, LOOP POWERED WITH HART				
12 SHEAT MATERIAL 316 S.S. O.D. 6 mm					30 OUTPUT RANGE 4-20 ma				
13 TYPE SINGLE DUPLEX					31 TRANSMITTER MOUNTING HEAD MOUNTED				
14 SPRING LOADED YES NO					32 ELECTRICAL CONNECTION ISO M20				
15 CONNECTION 2-WIRE 3-WIRE 4-WIRE					33 ACCURACY ± 0.1 % OF CALIBRATED SPAN				
16 LEAD WIRES RECEPTACLE TERMINAL BLOCK					34 ENCLOSURE APPROVAL ATEX				
OTHER					35 ZERO ADJUST: YES SPAN ADJUST: YES				
WELL OR TUBE					36 ISOLATION TYPE: Barrier				
17 NONE INCLUDE BY OTHERS					37 NIPPLE & UNION MATERIAL: S.S				
18 MATERIAL AISI 316 S.S.					38 LCD INDICATOR: YES				
19 CONSTRUCTION TAPERED STRAIGHT					39 MANUFACTURER: * See list MODEL NO. : See list				
20 SOILD BAR-STOCK BUILT-UP CLOSE-END TUBE									





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.

سطح الأرض و ابنیه تحت الأرض										خرید پکیج های همپرسور گاز (رقت و برگشتی) پینی									
 NSGC شماره پیمان: 053 - 073 - 9184										INSTRUMENT DATASHEETS / CERTIFICATES									
										نسخه	میرال	نوع مدرک	رشته	نمودات	همار	همار	همار	همار	همار
										43	43	43	43	43	43	43	43	43	43
List of TI/TE/TW																			
ITEM NO	TAG NO.	LINE SIZE	WELL DIMENTION (mm)		OPER. TEMP (°C)	DESIGN TEMP (°C)	MAX VELOCITY (m/s)	RANGE (°C)	PRESSURE No. /Max (bar)	PROCESS CONNECTION & RATING (ANSI)	INDUCTOR	TRANSMITTER MOUNTING	SERVICE	P&ID NO.	MFR. & Model No.	NOTES			
			U	STEM															
1	TT-2122A	8"	250	290	37	180	9/0	0-100	4.9 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0031A-AN05-8"-ET	BK-GCS-HY-120-PR-Pi-0001		Loose Item U Size & rating to be checked by client Thermowell Nace			
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		Thermowell Nace			
3	TT-2192A	6"	250	290	129	180	4/0	0-200	18 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0036A-CN05-6"-PT	BK-GCS-HY-120-PR-Pi-0001		Loose Item U Size & rating to be checked by client Thermowell Nace			
4	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 Item U Size & rating to be checked by client Thermowell Nace			
5	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 Item U Size & rating to be checked by client Thermowell Nace			
6	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 Item U Size & rating to be checked by client Thermowell Nace			
7	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					
8	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"-IS	BK-GCS-HY-120-PR-Pi-0001					
9	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					
10	TT-2213A	-	HOLD	HOLD	65	85	-	0-120	ATM / 3	2", 300#	Yes	REMOTE TYPE	Water Reservoir	BK-GCS-HY-120-PR-Pi-0001					
11	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					
12	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					
13	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					
14	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					
15	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					
16	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					
17	TE-2222A TE-2223A TE-2224A	-	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor T sensor	BK-GCS-HY-120-PR-Pi-0001					
18	TE-2225A TE-2226A TE-2227A	-	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor S sensor	BK-GCS-HY-120-PR-Pi-0001					
19	TE-2228A TE-2229A TE-2230A	-	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor R sensor	BK-GCS-HY-120-PR-Pi-0001					
20	TT-2122B	8"	250	290	37	180	9/0	0-100	4.9 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0031A-AN05-8"-ET	BK-GCS-HY-120-PR-Pi-0001		Loose Item U Size & rating to be checked by client Thermowell Nace			
21	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		Thermowell Nace			
22	TT-2192B	6"	250	290	129	180	4/0	0-200	18 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0036A-CN05-6"-PT	BK-GCS-HY-120-PR-Pi-0001		Loose Item U Size & rating to be checked by client Thermowell Nace			
23	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 Item U Size & rating to be checked by client Thermowell Nace			
24	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 Item U Size & rating to be checked by client Thermowell Nace			
25	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					
26	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"-IS	BK-GCS-HY-120-PR-Pi-0001					
27	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					
28	TT-2213B	-	HOLD	HOLD	65	85	-	0-120	ATM / 3	2", 300#	Yes	REMOTE TYPE	Water Reservoir	BK-GCS-HY-120-PR-Pi-0001					
29	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					
30	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					
31	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					
32	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					
33	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					
34	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					
35	TE-2222B TE-2223B TE-2224B	-	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor T sensor	BK-GCS-HY-120-PR-Pi-0001					
36	TE-2225B TE-2226B TE-2227B	-	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor S sensor	BK-GCS-HY-120-PR-Pi-0001					
37	TE-2228B TE-2229B TE-2230B	-	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor R sensor	BK-GCS-HY-120-PR-Pi-0001					
38	TT-2122C	8"	250	290	37	180	9/0	0-100	4.9 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0031A-AN05-8"-ET	BK-GCS-HY-120-PR-Pi-0001		Loose Item U Size & rating to be checked by client Thermowell Nace			
39	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		Thermowell Nace			
40	TT-2192C	6"	250	290	129	180	4/0	0-200	18 / 22	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0036A-CN05-6"-PT	BK-GCS-HY-120-PR-Pi-0001		Loose Item U Size & rating to be checked by client Thermowell Nace			
41	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 Item U Size & rating to be checked by client Thermowell Nace			
42	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 Item U Size & rating to be checked by client Thermowell Nace			
43	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					
44	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"-IS	BK-GCS-HY-120-PR-Pi-0001					
45	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					
46	TT-2213C	-	HOLD	HOLD	65	85	-	0-120	ATM / 3	2", 300#	Yes	REMOTE TYPE	Water Reservoir	BK-GCS-HY-120-PR-Pi-0001					
47	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					
48	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					
49	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					
50	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					
51	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					
52	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					
53	TE-2222C TE-2223C TE-2224C	-	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor T sensor	BK-GCS-HY-120-PR-Pi-0001					
54	TE-2225C TE-2226C TE-2227C	-	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor S sensor	BK-GCS-HY-120-PR-Pi-0001					
55	TE-2228C TE-2229C TE-2230C	-	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor R sensor	BK-GCS-HY-120-PR-Pi-0001					

شماره صفحه P&ID ها
ذکر شود
هواپار: اضافه شد.

شماره صفحه 43

 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		
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	V01	
Data Sheet for Differential Pressure Transmitter										
	1	Tag No.: (Refer to Next Page)	Service: (Refer to Next Page)							
GENERAL	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							
	7	Power Supply	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 0.1% 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							
	18	Electrical Conn.	MFR STD ☐ Other ISO M20x1.5							
	OPTIONS	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 .										

[illegible]

 NISOC شماره پیمان: 053 - 073 – 9184		تگداشت و افزایش تولید میدان نفتی بینک سطح الارض و آبنیه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (فرار داد BK-HD-GCS-CO-0008_03						 HAVAYAR INDUSTRIAL GROUP							
INSTRUMENT DATASHEETS / CERTIFICATES										شماره صفحه: 11 از 41					
پروژه		بسته کاری		صنایع کننده		تجهیزات		رشته		نوع مدارک		سروال		نسخه	
BK		GCS		HY		120		IN		DS		0001		V01	
Data Sheet for Differential Pressure Gauge															
1Type : Direct Rdg. ☒ 3-15 lb Reciever ☐ 2Mounting : Direct ☒ liquid filled ☐ Local ☐ Yoke ☐ Other ☐ 3Dial : Diameter 160 mm Color : White / Black Lettering ,Non Rusting Metal 4Case : SS316 ☒ Cast Aluminum ☐ Phenol ☐ 5Ring : Screwed ☒ Hinged ☐ Slip ☒ 6Blow-out Protection : Std ☐ None ☐ Back ☒ Disc ☒ 7Lens : Solid Front ☐ Glass ☒ Plastic ☐ Safety Glass (shatter proof) 8Options : Pulsation Dampener ☐ Refer to note 9Nominal Accuracy Required : ±1.6% of full scale 10Over range protection : 1.3 times the maximum scale reading 11MFR.& Model No. See list 12Press Element : Diaphragm ☒ Bellows ☐ 13Element Mtl. : Other (Note6) ☐ Steel ☐ 14Socket Mtl. : SS ☒ 316SS ☐ Steel ☐ 15Connection-NPT : SS ☒ 316SS ☐ 16Movement: 1/4 in. ☐ 1/2 in. ☒ Other NPTM ☐ 17Diaphragm Seal Nylon ☐ N/A ☐ Stainless Steel ☐ 18Ingress Protection : IP 65															
Item	Tag No.	Range (barg)	Process Fluid/State	Design		Operating		Differential Pressure		LINE NO./EQUIPMENTNO.	P&ID NO.	Accessories	MFR.& Model	NOTE	
				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 :

		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 پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 12 از 41	
		پروژه	بسته کاری	صادر کننده	سهیلات	رشته	نوع مدرک	سریال	نسخه		
		BK	GCS	HY	120	IN	DS	0001	V01		
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/m³)		1/183		1/183		1/183		1/183		
15	DENSITY AT OP.COND. (KG/m³)		3/251		2/037		2/037		3/251		
16	COMPRESSIBILITY FACTOR (Z)		1		1		1		1		
17	MOL. WEIGH T	CP/CV	28	1/40	28	1/40	28	1/40	28	1/40	
18	OPERATING VISCOSITY (Cp)		-		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 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		

		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 پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 13 از 41	
		پروژه	بسته کاری	صادر کننده	سهیلات	رشته	نوع مدرک	سریال	نسخه		
		BK	GCS	HY	120	IN	DS	0001	V01		
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		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/m³)		1/183		1/183		1/183		1/183		
15	DENSITY AT OP.COND. (KG/m³)		3/251		2/037		2/037		3/251		
16	COMPRESSIBILITY FACTOR (Z)		1		1		1		1		
17	MOL. WEIGH T	CP/CV	28	1/40	28	1/40	28	1/40	28	1/40	
18	OPERATING VISCOSITY (Cp)		-		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 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)						 HAYAYAR INDUSTRIAL GROUP				
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 14 از 41		
		پروژه	بسته کاری	صادر کننده	سهیلات	رشته	نوع مدرک	سریال	نسخه			
		BK	GCS	HY	120	IN	DS	0001	V01			
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		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/m³)		1/183		1/183		1/183		1/183			
15	DENSITY AT OP.COND. (KG/m³)		3/251		2/037		2/037		3/251			
16	COMPRESSIBILITY FACTOR (Z)		1		1		1		1			
17	MOL. WEIGH T		CP/CV	28 1/40	28 1/40	28 1/40	28 1/40	28 1/40	28 1/40			
18	OPERATING VISCOSITY (Cp)		-		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 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 اینیه 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		
		پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال			نسخه
		BK	GCS	HY	120	IN	DS	0001			V01
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					TEMPERED GLASS					
17	Gasket					KLINGRIT					
18	Bolts / Studs					C.S					



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



053 - 073 - 9184

INSTRUMENT DATASHEETS / CERTIFICATES

شماره صفحه: 16 از 41

پروژہ

مستطه کاری

صادر کنندہ

تسهيلات

رشته

مدرک

میریال

نسخه

41

BK

GCS

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120

IN

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V01

List of Sight Glass

[illegible]

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (فرار داد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP			
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 41 از 17		
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه		
		BK	GCS	HY	120	IN	DS	0001	V01		
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-AN05-8"-ET			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.			8"					
	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		8"			
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				ASTM A193 Gr.B7M/ASTM A194 Gr. 2HM هوایار: اصلاح شد					
	25	Available Range									
	26	Flowmeter Scale									
	27	Full Scale Differential Pressure (bar)									
	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 Powere					
	35	Electrical Connection				ISO M20x1.5					
	36	Explosion Proof				Exia IIB T3					
	37	Enclosure Protection				IP66					
	38	Diaphragm Material				Nace					
	38	Wetted Part Material				316SS+NACE					
	39	Drains/Vents Material				316SS+NACE					
Accessories	41	Valve Manifold				5 valve-S.S316					
	42	Upstream Straight Run				10X					
	43	Downstream Straight Run				5X					
Miscell.	44	Manufacturer									
	45	Requisition No.									

مترتال مشخص گردد. ذکر
 NACE به تنهایی نامفهوم
 است
 هوایار: بعد از دریافت
 دیتای تامین کننده دقیقاً
 مشخص می گردد.

316SS+NACE

316SS+NACE

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 (فرار داد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 18 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V01	
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		+NACE اصلاح شد		
18		Bore Diameter				Hd				
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								
	26	Flowmeter Scale								
	27	Full Scale Differential Pressure (bar)								
	28	Output Signal								
	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 M20x1.5				
	36	Explosion Proof				Exia IIB T3				
	37	Enclosure Protection				Nace				
	38	Diaphragm Material				Nace				
	38	Wetted Part Material				316SS		+NACE اصلاح شد		
	39	Drains/Vents Material				316SS		+NACE اصلاح شد		
40	Integral Indicator / Mounting type				es / Direct					
Accessories	41	Valve Manifold				alve-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 (فرار داد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 19 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V01	
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"-IS		
	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		-		
Element	14	Allowable Pressure Drop @ Max. Flow				0.2				
	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 M20x1.5				
	36	Explosion Proof				Exia IIB T3				
	37	Enclosure Protection				IP66				
	Accessories	38	Diaphragm Material				Nace			
38		Wetted Part Material				Nace				
39		Drains/Vents Material				316SS				
40		Integral Indicator / Mounting type				Yes / Direct				
Miscell.	41	Valve Manifold				5 valve-S.S316				
	42	Upstream Straight Run				10X				
	43	Downstream Straight Run				5X				
	44	Manufacturer								
	45	Requisition No.								

Galvanized

316SS
 + Nace
 خط آب
 شامل این
 مورد نمی
 باشد

Nace

316SS

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 (فرار داد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 20 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V01	
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-AN05-8"-ET		
	3	Pipe O. D. / I. D. mm		Pipe Sch./Thk.		8"				
	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%		
Element	14	Allowable Pressure Drop @ Max. Flow				0.1				
	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		8"		
	20	Flange Standard		Flange Rating		ASME B16.5		ANSI 300#		
	21	Flange Material		Facing		C.S. (Nace)		RF		
Transmitter Unit	22	Bolt /Nut Material		Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H		ASME B1.1		
	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				
	Accessories	35	Electrical Connection				ISO M20x1.5			
36		Explosion Proof				Exia IIB T3				
37		Enclosure Protection				IP66				
38		Diaphragm Material				Nace				
38		Wetted Part Material				316SS+NACE				
39		Drains/Vents Material				316SS				
39		Drains/Vents Material				316SS+NACE				
40		Integral Indicator / Mounting type				Yes / Direct				
Miscell.	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 (فرار داد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 21 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V01	
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		3mm		
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		
23		Gasket Type & Material								
Transmitter Unit	24	Model				3051CD				
	25	Available Range								
	26	Flowmeter Scale								
	27	Full Scale Differential Pressure (bar)								
	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 M20x1.5				
	36	Explosion Proof				Exia IIB T3				
	37	Enclosure Protection				IP66				
	38	Diaphragm Material				Nace				
	38	Wetted Part Material				316SS+NACE				
	39	Drains/Vents Material				316SS		316SS+NACE		
40	Integral Indicator / Mounting type				Yes / Direct					
Accessories	41	Valve Manifold				5 valve-S.S316				
	42	Upstream Straight Run				10X				
	43	Downstream Straight Run								
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										

متربرال مشخص گردد. ذکر
 NACE به تنهایی نامفهوم
 است
 بعد از دریافت دیتای وندور
 مشخص می شود

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (فرار داد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 22 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V01	
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"-IS		
	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		-		
Element	14	Allowable Pressure Drop @ Max. Flow				0.2				
	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 M20x1.5				
	36	Explosion Proof				Exia IIB T3				
	37	Enclosure Protection				IP66				
	38	Diaphragm Material				Nace				
	38	Wetted Part Material				316SS				
39	Drains/Vents Material				316SS					
Accessories	40	Integral Indicator / Mounting type				Yes / Direct				
	41	Valve Manifold				5 valve-S.S316				
	42	Upstream Straight Run				10X				
Miscell.	43	Downstream Straight Run				5X				
	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										

Galvanized
اصلاح شد

متریال مشخص گردد. نیازی به
NACE بودن در سرویس آب
نیست
اصلاح شد

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (فرار داد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP			
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 23 از 41		
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه		
		BK	GCS	HY	120	IN	DS	0001	V01		
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-AN05-8"-ET		
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.			8"					
	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			8"		
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				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					
	31	Scale Factor				loop resistance 0					
	32	Housing Material				Square R					
	33	Allowable Static Pressure				250Bar					
	34	Power Supply				24 V DC Loop					
	35	Electrical Connection				ISO M20					
	36	Explosion Proof				Exia IIB T3					
	37	Enclosure Protection				IP66					
	38	Diaphragm Material				Nace					
	38	Wetted Part Material				Nace					
	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											

ASTM A193
 Gr.B7M/ASTM
 A194 Gr. 2HM
 اصلاح شد

متریل مشخص گردد. ذکر
 NACE به تنهایی نامفهوم
 است
 بعد از دریافت دیتای وندور
 مشخص می شود

316SS+NACE

316SS+NACE

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (فرار داد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 24 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V01	
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		
	23	Gasket Type & Material								
Transmitter Unit	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 M20x1.5				
	36	Explosion Proof				Exia IIB T3				
	37	Enclosure Protection				IP66				
	38	Diaphragm Material				Nace				
	38	Wetted Part Material				316SS+NACE				
	39	Drains/Vents Material				316SS 316S				
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.								

متريال مشخص گردد. ذکر
 NACE به تنهائي نامفهوم
 است
 بعد از دریافت ديتای وندور
 مشخص می شود

اصلاح شد

316SS

316S

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 (فرار داد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 25 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V01	
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"-IS		
	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		-		
Element	14	Allowable Pressure Drop @ Max. Flow				0.2				
	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 M20x1.5				
	36	Explosion Proof				Exia IIB T3				
	37	Enclosure Protection				IP66				
	38	Diaphragm Material				Nace				
	38	Wetted Part Material				316SS + NACE				
	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										

+Galvanized
اصلاح شد

متریال مشخص گردد. ذکر
 NACE به تنهایی نامفهوم
 است
 خط آب احتیاجی به nace
 نیست اصلاح شد

 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: 26 از 41			
		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال			نسخه	
BK	GCS	HY	120	IN	DS	0001	V01					
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 / Gloycol			
	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			
Accessories	34											
	35											
	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							
Miscell.	44	Stilling Well			N/A							
	45	Surge Protection Device			N/A							
	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		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 27 از 41	
		پروژه	کار	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
BK	GCS	HY	120	IN	DS	0001	V01			
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 / Gloycol			
	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			
Accessories	34									
	35									
	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				
Miscell.	44	Stilling Well				N/A				
	45	Surge Protection Device				N/A				
	46									
	47	Manufacturer				AZARSAM (Eyyaz 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 ابنيه 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: 28 از 41
		پروژه	کار	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	
BK	GCS	HY	120	IN	DS	0001	V01		
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 / Gloycol	
	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)							
Body & Cage	11	Upper/Lower Dynamic Viscosity (cP)			0.0209 / 2.084				
	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	
	Transmitter/Switch	23	Other Wetted Parts Material			S.S			
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	
Accessories	33	Housing Material	Integral Indicator		N/A			N/A	
	34								
	35								
	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				
Miscell.	43	Non Frosting Extension			N/A				
	44	Stilling Well			N/A				
	45	Surge Protection Device			N/A				
	46								
	47	Manufacturer			AZARSAM (Eyyaz 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 (رقت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 29 از 41	
		پروژه	کار	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		BK	GCS	HY	120	IN	DS	0001		V01
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)			250 ohms					
	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			
Diaphragm Seal	29	Seal Type			N/A		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			
	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										

تزیل پیچ و مهره بایستی مطابق PMS پروژه باشد

 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: 30 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		BK	GCS	HY	120	IN	DS	0001		V01
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)			250 ohms					
	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			
Diaphragm Seal	29	Seal Type			N/A		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			
	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									
	47	Manufacturer								
	48	Requisition No.								
NOTES: VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable										

متریال پیچ و مهره بایستی مطابق PMS پروژه باشد

		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 پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 31 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		BK	GCS	HY	120	IN	DS	0001		V01
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			
Transmitter	11	C to C mm					-			
	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)			250 ohms					
	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			
Sensing & Body	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			
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449			
Diaphragm Seal	29	Seal Type			N/A		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			
	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.								

مترتیبال پیچ و مهره بایستی مطابق PMS پروژه باشد

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		V01
Data Sheet for Solenoid Valve										
GENERAL	1	TAG NO .	See List							
	2	SERVICE	Instrument Air							
	3	LINE NO,	See List							
	4	QUNTITY	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		V01
List of SOV										
ITEM NO.	TAG NO.	SERVICE	LINE NO. / EQUIPMENT NO.	P&ID No.	OPERATING/DESIGN PRESSURE (Bar)	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	V01
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 g)	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			
	- Proximitior	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 V01
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 g)	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			
	- Proximitior	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 BK	بسته کاری GCS	صادر کننده HY	تسهیلات 120	رشته IN	نوع مدرک DS	سریال 0001	نسخه V01
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 g)	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			
	- Proximitior	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 (رقت و برگشتی) بینک (فراردا 03 - 0008 - BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 37 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		BK	GCS	HY	120	IN	DS	0001		V01
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				
Transmitter	11	C to C mm				-				
	12	Model				3051				
	13	Type		Accuracy		DP level Tranmitter		+/- 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)				250 ohms				
	17	Zero Elevation & Suppression						Yes		
	18	Electrical Connection				ISO M20x1.5				
	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		
Sensing & Body	21	Failure Mode Alarm				Up Scale				
	22	Element Type		Element Material		Diaphragm		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		
Diaphragm Seal	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		
	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 (رقت و برگشتی) بینک (فرار داد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 38 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		BK	GCS	HY	120	IN	DS	0001		V01
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			
Transmitter	11	C to C mm					-			
	12	Model			3051					
	13	Type	Accuracy		DP level Tranmitter		+/- 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)			250 ohms					
	17	Zero Elevation & Suppression					Yes			
	18	Electrical Connection			ISO M20x1.5					
	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			
Sensing & Body	21	Failure Mode Alarm			Up Scale					
	22	Element Type	Element Material		Diaphragm		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			
Diaphragm Seal	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			
	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 (رقت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 39 از 41	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		BK	GCS	HY	120	IN	DS	0001		V01
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			
Transmitter	11	C to C mm					-			
	12	Model			3051					
	13	Type	Accuracy		DP level Tranmitter		+/- 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)			250 ohms					
	17	Zero Elevation & Suppression					Yes			
	18	Electrical Connection			ISO M20x1.5					
	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			
Sensing & Body	21	Failure Mode Alarm			Up Scale					
	22	Element Type	Element Material		Diaphragm		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			
Diaphragm Seal	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			
	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 Corisive 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 ابله تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (فراراد BK-HD-GCS-CO-0008 03)						 HAVAYAR	
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 40 از 41	
		پروژه	پسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه
		BK	GCS	HY	120	IN	DS	0001	V01

Instrument Data Sheet For Pressure Switch										
GENERAL					SWITCH					
1	Press.	●	Vaccum	○	8	Type:	Mercury	○	Snap	●
	Comp.	○	Diff. Press.	○			Other :			
2		●	Factory Set		9	Quantity:	Single	●	Dual	○
	Internal	●	External	○	10	Form:	SPST	○	SPDT	●
3	Fixed		Adj.	●			Other:			
			Min.	○						
ELEMENT					11	Max Rating:	2 Amps		24vdc	
4	Diaphragm	●	Bourdon	○			Other:			
			Bellows	○						
5	Material			Aluminum	12	Load:	Inductive	○	Non-Inductive	●
					13	IP	IP66	Exd/IIB		SIL Certified
6	Connection	1/2"NPT	●	Other Size :	14	Electrical Connection:	M20			
	Bottom	●	Back		15	Manufacturer & Model No.				
7	Local	●	Surface	○	16	Accessories	Manifold 2Valve			
	Flush									

Tag No.	Process Connection	Adj. Range (Bar G)	Set Point (Bar G)	Pressure		Service or Line Number	Remark
				Design	Working		
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"-IS	
PS-2220A	1 " NPT	0~10	HOLD	10Bar	3Bar	CWS-112-0002A-C.S-3"-IS	
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"-IS	
PS-2220B	1 " NPT	0~10	HOLD	10Bar	3Bar	CWS-112-0002A-C.S-3"-IS	
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"-IS	
PS-2220C	1 " NPT	0~10	HOLD	10Bar	3Bar	CWS-112-0002A-C.S-3"-IS	

 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: 41 از 41				
		پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه		
		BK	GCS	HY	120	IN	DS	0001	V01		
Instrument Data Sheet For Temperature Switch											
GENERAL											
1.TAG.NO		TS-2191A		TS-2194A		TS-2191B		TS-2194B			
2.Equipment		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			
4.SERVICE		Gas		Gas		Gas		Gas			
5.RANGE		0-200C		0-200'C		0-200'C		0-200'C			
6.Ingress Protection		IP 66/Exd-IIB SIL Certified									
THERMOWELL											
7.TYPE SYSTEM		Flange		Flange		Flange		Flange			
8 MATERIAL		AISI 316/Nace		AISI 316/Nace		AISI 316/Nace		AISI 316/Nace			
9.CONNECTION LOCATION		Bottom		Bottom		Bottom		Bottom			
10.TUBING LENGTH		N/A		N/A		N/A		N/A			
11.TUBING TYPE & MATERIAL		N/A		N/A		N/A		N/A			
12.WELL CONN.SIZE & TYPE		2"#300		2"#600		2"#300		2"#600			
13.WELL MATERIAL		316 S.S		316 S.S		316 S.S		316 S.S			
14.'U' DIMENSION(NOMINAL)		Hold		Hold		Hold		Hold			
SWITCH											
15.TYPE		Added						Snap Action			
16.QUANTITY								FORM		1/SPD	
17.ENCLOSURE										IP66	
18.RATING.VOLTS		24 VDC		24 VDC		24 VDC		24 VDC			
19.AMPS		2		2		2		2			
20.LOAD TYPE		INDUCTIVE		INDUCTIVE		INDUCTIVE		INDUCTIVE			
21.DIFF.:FIXED		ADJUST		YES/-		YES/-		YES/-			
22.ELECTRICAL CONNECTION		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			
SERVICE CONDITIONS											
27.TEMP.:OPER 'C		129'C		147'C		129'C		147'C			
28.PRESS.:OPER 'C		18		54/9		18		54/9			
29.TRIP POINT 'C		HOLD		Hold		Hold		Hold			
30.MANUFACTURER		HOLD		Hold		Hold		Hold			
31.MANUFACTURER'S MODEL NO.		HOLD		HOLD		HOLD		HOLD			