

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۱۰-CO-GCS-HD-BK)							 	
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده MF	تسهیلات 120	رشته IN	نوع مدرک DS	سریال 0004	نسخه V00	شماره صفحه: ۱ از ۱۲

طرح نگهداشت و افزایش تولید ۲۷ مخزن

INSTRUMENT D.S. FOR TEMPERATURE GAUGE

نگهداشت و افزایش تولید میدان نفتی بینک

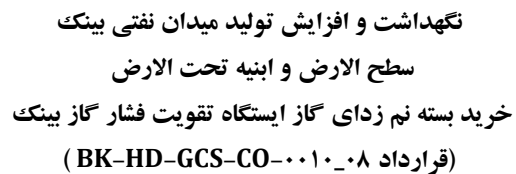
V00	Mar.2025	IFA	MFS	M.Fakharian	S.Faramarzpour	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval
		CLIENT Doc. Number: -				

status:

IFA: Issued For Approval

IFI: Issued For Information

AFC: Approved For Construction



شماره پیمان:

• 03 - • 73 - 918E

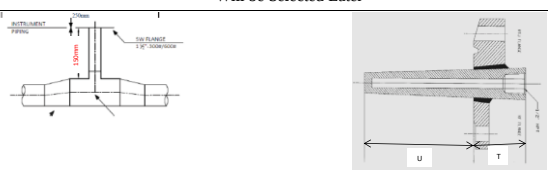
شماره صفحه: ۲ از ۱۲

Page	V00	V01	V02	V03	V04	Page	V00	V01	V02	V03	V04
1	X					61					
2	X					62					
3	X					63					
4	X					64					
5	X					65					
6	X					66					
7	X					67					
8	X					68					
9	X					69					
10	X					70					
11	X					71					
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	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۰۱۰-GCS-BK-HD)									
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE									
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۲ از ۳
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0004	V00		
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2110			1	
	2	Service	DEHYDRATED GAS TO E-300							
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003					1/7	
	4	Line No. / Equipment No.	Piping Class	GAS-111-0002-FN05-6"-PT					FN05	
PROCESS CONDITIONS	5	Fluid	Phase	GAS		Vapor				
	6	Operating Pressure:	Unit	53.10					barg	
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/59					barg	
	8	Operating Temperature(MIN/MAX)	Unit	66.21					°C	
	9	Design Temperature(MIN/MAX)	Unit	5/95					°C	
	10	Corrosive Service	NACE Requirement	YES		YES				
THERMOMETER	11	Toxic Service	Solid Particle							
	12	Type	Bi-metallic							
	13	Calibration Range (Began/End)	0~100 Deg C							
	14	Instrument Range	0~100 Deg C							
	15	Dial Size	Dial Color	150 mm		Black Letter on White Alu. Plate				
	16	Case Material	Aluminium							
	17	Element Type	Element Material	Bi-metallic		VTA				
	18	Connection Type	Connection Size	Threaded		1/2" NPT(M)				
	19	Pointer Color	Pointer Material	Black		Aluminium				
	20	Stem Type	Stem Material	Union connection		316 SS (NACE)				
	21	Stem Position	Bottom							
	22	Stem Length	Stem Diameter	VTA		6mm				
	23	Accuracy	Ingress Protection	1% of full scale		IP65				
	24	Window Material	Laminated Safety Glass							
	25	Over range Protection	1.5 times the maximum scale							
	26	External Calibration Adjustment	YES (VTC)							
	27	Adjustable Compression Fitting	YES (VTC)							
	28	Form	Every angle							
	FILLED SYSTEM	29	Type	NA						
		30		NA						
31		NA								
32		NA								
33		NA								
34		NA								
35		NA								
36		NA								
37		NA								
38		NA								
THERMOWELL	39	Process Connection	Size	Rating	Facing	1 1/2 "		600#	RF (125-250 AARH)	
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange							
	41	Well & Flange Material	SS316L(NACE)							
	42	Instrument Connection	1/2" NPT(F)							
	43	Insertion Length (U)	250mm							
	44	Lagging Extension (T)	75 mm							
	45	Bore Diameter	7 mm							
	46	Tip Thickness	5 mm							
	47	Treatment	Coating	VTA		VTA				
	48	Finish	U-length polished to 0.25µm(VTC)							
	49	Stamping	On flange (NOTE 2)							
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005							
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA		NA				
	52	Screwed Plug and Chain	NA							
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA							
PURCHASE	54	Manufacturer	Will be Selected Later							
	55	Model	Will be Selected Later							
	56	Requisition Number	Will be Selected Later							

Note:

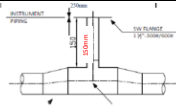
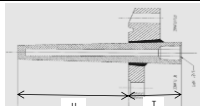
- 1- Stress Calculation, Wake Frequency Calculation, for Thermowell shall be done.
- 2- Thermowell material, length, pressure rating and tag number shall be stamped on flange.
- 3- Engraved stainless steel corrosion resistant tag nameplate is required for thermometer.
- 4-Vendor shall fully supply & assemble thermowell with temp. indicator
- 5-VTA: Vendor to advice. VTC: Vendor to confirm N/A:Not Applicable N/R: Not Required
- 6-Length and Thickness of thermowell shall be confirmed by vendor according to stress calculation results.
- 7-Lines to be swaged to 4" minimum, thermowell length 200 mm
- 8-All the wetted parts in sour service shall be in accordance with NACE MR-01-75/ISO 15156 standard as per Specification For Piping Material (PMS)
- 9-Due to fluid service vendor to provide higher grade or proper material for thermowell if required,defined material is minimum requirement.
- 10-Projection of thermowell flange is 150mm from face of pipe flange to surface of pipe or header



	تگه‌داشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۰۱۰-BK-HD-GCS-CO)									
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE									
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۴ از ۱۲
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0004	V00		
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2111			1	
	2	Service	DEHYDRATED GAS FROM E-300							
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003					1/7	
	4	Line No. / Equipment No.	Piping Class	GAS-111-01791-FN05-6"-PT					FN05	
PROCESS CONDITIONS	5	Fluid	Phase	GAS			Vapor			
	6	Operating Pressure:	Unit	53.1/53.1 (summer/winter)					barg	
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/59					barg	
	8	Operating Temperature(MIN/MAX)	Unit	65.95/66.87 (summer/winter)					°C	
	9	Design Temperature(MIN/MAX)	Unit	5/95					°C	
	10	Corrosive Service	NACE Requirement	YES			YES			
THERMOMETER	11	Toxic Service	Solid Particle							
	12	Type	Bi-metallic							
	13	Calibration Range (Began/End)	0~100 Deg C							
	14	Instrument Range	0~100 Deg C							
	15	Dial Size	Dial Color	150 mm			Black Letter on White Alu. Plate			
	16	Case Material	Aluminium							
	17	Element Type	Element Material	Bi-metallic			VTA			
	18	Connection Type	Connection Size	Threaded			1/2" NPT(M)			
	19	Pointer Color	Pointer Material	Black			Aluminium			
	20	Stem Type	Stem Material	Union connection			316 SS(NACE)			
	21	Stem Position	Bottom							
	22	Stem Length	Stem Diameter	VTA			6mm			
	23	Accuracy	Ingress Protection	1% of full scale			IP65			
	24	Window Material	Laminated Safety Glass							
	25	Over range Protection	1.5 times the maximum scale							
	26	External Calibration Adjustment	YES (VTC)							
	27	Adjustable Compression Fitting	YES (VTC)							
	28	Form	Every angle							
	29	Filled System	Type	NA						
	30		Compensation	NA						
	31		Capillary Length	NA						
	32		Capillary Material	NA						
	33		Armour Material	NA						
	34		Bulb Material	NA						
	35		Bulb Length	NA						
	36		Bulb Type	NA						
	37		Bulb Connection	NA						
	38		Bulb SAMA Class	NA						
THERMOWELL	39	Process Connection	Size	Rating	Facing	1 1/2 "	600#	RF (125-250 AARH)		
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange							
	41	Well & Flange Material	SS316L(NACE)							
	42	Instrument Connection	1/2" NPT(F)							
	43	Insertion Length (U)	250mm							
	44	Lagging Extension (T)	75 mm							
	45	Bore Diameter	7 mm							
	46	Tip Thickness	5 mm							
	47	Treatment	Coating	VTA			VTA			
	48	Finish	U-length polished to 0.25µm(VTC)							
	49	Stamping	On flange (NOTE 2)							
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005							
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA			NA			
	52	Screwed Plug and Chain	NA							
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA							
PURCHASE	54	Manufacturer	Will be Selected Later							
	55	Model	Will be Selected Later							
	56	Requisition Number	Will be Selected Later							

Note:

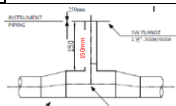
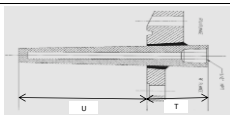
- 1- Stress Calculation, Wake Frequency Calculation, for Thermowell shall be done.
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- 6-Length and Thickness of thermowell shall be confirmed by vendor according to stress calculation results.
- 7-Lines to be swaged to 4" minimum, thermowell length 200 mm
- 8-All the wetted parts in sour service shall be in accordance with NACE MR-01-75/ISO 15156 standard as per Specification For Piping Material (PMS)
- 9-Due to fluid service vendor to provide higher grade or proper material for thermowell if required,defined material is minimum requirement.
- 10-Projection of thermowell flange is 150mm from face of pipe flange to surface of pipe or header

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۸۰۰۰۱۰۰۸-BK-HD-GCS-CO)									
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE									
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۲ از ۱۵	
۹۱۸۴ - ۰۷۳ - ۰۵۳	BK	GCS	MF	120	IN	DS	0004	V00		
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2112			1	
	2	Service	FROM P-100A/B TO E-300							
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003			1/7			
	4	Line No. / Equipment No.	Piping Class	TEG-111-0003-FN04-1"-HI (INSTALL ON 90° ELBOW)			FN04			
PROCESS CONDITIONS	5	Fluid	Phase	TEG			Liquid			
	6	Operating Pressure:	Unit	55.1/55.1 (summer/winter)			barg			
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/62			barg			
	8	Operating Temperature(MIN/MAX)	Unit	120.45/124.6 (summer/winter)			°C			
	9	Design Temperature(MIN/MAX)	Unit	120.45/124.6 (summer/winter)			°C			
	10	Corrosive Service	NACE Requirement							
THERMOMETER	11	Toxic Service	Solid Particle							
	12	Type	Bi-metallic							
	13	Calibration Range (Began/End)	0~250 Deg C							
	14	Instrument Range	0~250 Deg C							
	15	Dial Size	Dial Color	150 mm			Black Letter on White Alu. Plate			
	16	Case Material	Aluminium							
	17	Element Type	Element Material	Bi-metallic			VTA			
	18	Connection Type	Connection Size	Threaded			1/2" NPT(M)			
	19	Pointer Color	Pointer Material	Black			Aluminium			
	20	Stem Type	Stem Material	Union connection			316 SS(NACE)			
	21	Stem Position	Bottom							
	22	Stem Length	Stem Diameter	VTA			6mm			
	23	Accuracy	Ingress Protection	1% of full scale			IP65			
	24	Window Material	Laminated Safety Glass							
	25	Over range Protection	1.5 times the maximum scale							
	26	External Calibration Adjustment	YES (VTC)							
	27	Adjustable Compression Fitting	YES (VTC)							
	28	Form	Every angle							
	29	Filled System	Type	NA						
	30		Compensation	NA						
	31		Capillary Length	NA						
	32		Capillary Material	NA						
	33		Armour Material	NA						
	34		Bulb Material	NA						
	35		Bulb Length	NA						
	36		Bulb Type	NA						
	37		Bulb Connection	NA						
	38		Bulb SAMA Class	NA						
THERMOWELL	39	Process Connection	Size	Rating	Facing	1/2"	600#	RF (125-250 AARH)		
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange							
	41	Well & Flange Material	SS316L(NACE)							
	42	Instrument Connection	1/2" NPT(F)							
	43	Insertion Length (U)	200mm							
	44	Lagging Extension (T)	75 mm							
	45	Bore Diameter	7 mm							
	46	Tip Thickness	5 mm							
	47	Treatment	Coating	VTA			VTA			
	48	Finish	U-length polished to 0.25µm(VTC)							
	49	Stamping	On flange (NOTE 2)							
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005							
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA			NA			
	52	Screwed Plug and Chain	NA							
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA							
PURCHASE	54	Manufacturer	Will be Selected Later							
	55	Model	Will be Selected Later							
	56	Requisition Number	Will be Selected Later							

Note:

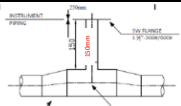
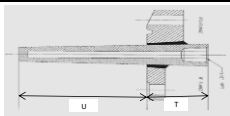
- 1- Stress Calculation, Wake Frequency Calculation, for Thermowell shall be done.
- 2- Thermowell material, length, pressure rating and tag number shall be stamped on flange.
- 3- Engraved stainless steel corrosion resistant tag nameplate is required for thermometer.
- 4-Vendor shall fully supply & assemble thermowell with temp. indicator
- 5-VTA: Vendor to advice. VTC: Vendor to confirm N/A:Not Applicable N/R: Not Required
- 6-Length and Thickness of thermowell shall be confirmed by vendor according to stress calculation results.
- 7-Lines to be swaged to 4" minimum, thermowell length 200 mm
- 8-All the wetted parts in sour service shall be in accordance with NACE MR-01-75/ISO 15156 standard as per Specification For Piping Material (PMS)
- 9-Due to fluid service vendor to provide higher grade or proper material for thermowell if required,defined material is minimum requirement.
- 10-Projection of thermowell flange is 150mm from face of pipe flange to surface of pipe or header

	تنگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۰۱۰-۰۰۱۰-BK-HD-GCS-CO)									
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE									
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیيات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۲ از ۶	
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0004	V00		
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2113			1	
	2	Service	FROM E-100 TO GLYCOL V-120							
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003 2/7						
	4	Line No. / Equipment No.	Piping Class	TEG-111-0007-AN07-1"-HI (INSTALL ON 90° ELBOW) AN07						
PROCESS CONDITIONS	5	Fluid	Phase	TEG			V / L			
	6	Operating Pressure:	Unit	4.5/4.5 (summer/winter)			barg			
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/8.5			barg			
	8	Operating Temperature(MIN/MAX)	Unit	73.63/74.53 (summer/winter)			°C			
	9	Design Temperature(MIN/MAX)	Unit	5/100			°C			
	10	Corrosive Service	NACE Requirement	YES			YES			
THERMOMETER	11	Toxic Service	Solid Particle							
	12	Type	Bi-metallic							
	13	Calibration Range (Began/End)	0~160 Deg C							
	14	Instrument Range	0~160 Deg C							
	15	Dial Size	Dial Color	150 mm			Black Letter on White Alu. Plate			
	16	Case Material	Aluminium							
	17	Element Type	Element Material	Bi-metallic			VTA			
	18	Connection Type	Connection Size	Threaded			1/2" NPT(M)			
	19	Pointer Color	Pointer Material	Black			Aluminium			
	20	Stem Type	Stem Material	Union connection			316 SS(NACE)			
	21	Stem Position	Bottom							
	22	Stem Length	Stem Diameter	VTA			6mm			
	23	Accuracy	Ingress Protection	1% of full scale			IP65			
	24	Window Material	Laminated Safety Glass							
	25	Over range Protection	1.5 times the maximum scale							
	26	External Calibration Adjustment	YES (VTC)							
	27	Adjustable Compression Fitting	YES (VTC)							
	28	Form	Every angle							
	29	Filled System	Type	NA						
	30		Compensation	NA						
	31		Capillary Length	NA						
	32		Capillary Material	NA						
	33		Armour Material	NA						
	34		Bulb Material	NA						
	35		Bulb Length	NA						
	36		Bulb Type	NA						
	37		Bulb Connection	NA						
	38		Bulb SAMA Class	NA						
THERMOWELL	39	Process Connection	Size	Rating	Facing	1"	300#	RF (125-250 AARH)		
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange							
	41	Well & Flange Material	SS316L(NACE)							
	42	Instrument Connection	1/2" NPT(F)							
	43	Insertion Length (U)	200mm							
	44	Lagging Extension (T)	75 mm							
	45	Bore Diameter	7 mm							
	46	Tip Thickness	5 mm							
	47	Treatment	Coating	VTA			VTA			
	48	Finish	U-length polished to 0.25µm(VTC)							
	49	Stamping	On flange (NOTE 2)							
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005							
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA			NA			
	52	Screwed Plug and Chain	NA							
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA							
PURCHASE	54	Manufacturer	Will be Selected Later							
	55	Model	Will be Selected Later							
	56	Requisition Number	Will be Selected Later							

Note:

- 1- Stress Calculation, Wake Frequency Calculation, for Thermowell shall be done.
- 2- Thermowell material, length, pressure rating and tag number shall be stamped on flange.
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- 9-Due to fluid service vendor to provide higher grade or proper material for thermowell if required,defined material is minimum requirement.
- 10-Projection of thermowell flange is 150mm from face of pipe flange to surface of pipe or header

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۰۱۰-۰۰۱۰-BK-HD-GCS-CO)									
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE									
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۲ از ۱۷	
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0004	V00		
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2114			1	
	2	Service			R-100					
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003			4/7			
	4	Line No. / Equipment No.	Piping Class	R-100			NA			
PROCESS CONDITIONS	5	Fluid	Phase	TEG		V / L				
	6	Operating Pressure:	Unit	0.3/0.6 (summer/winter)			barg			
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/4.1			barg			
	8	Operating Temperature(MIN/MAX)	Unit	140/204 (summer/winter)			°C			
	9	Design Temperature(MIN/MAX)	Unit	5/234			°C			
	10	Corrosive Service	NACE Requirement	YES		YES				
THERMOMETER	11	Toxic Service	Solid Particle							
	12	Type	Bi-metallic							
	13	Calibration Range (Began/End)	0-400 Deg C							
	14	Instrument Range	0-400 Deg C							
	15	Dial Size	Dial Color	150 mm		Black Letter on White Alu. Plate				
	16	Case Material	Aluminium							
	17	Element Type	Element Material	Bi-metallic		VTA				
	18	Connection Type	Connection Size	Threaded		1/2" NPT(M)				
	19	Pointer Color	Pointer Material	Black		Aluminium				
	20	Stem Type	Stem Material	Union connection		316 SS(NACE)				
	21	Stem Position	Bottom							
	22	Stem Length	Stem Diameter	VTA		6mm				
	23	Accuracy	Ingress Protection	1% of full scale		IP65				
	24	Window Material	Laminated Safety Glass							
	25	Over range Protection	1.5 times the maximum scale							
	26	External Calibration Adjustment	YES (VTC)							
	27	Adjustable Compression Fitting	YES (VTC)							
	28	Form	Every angle							
	29	Filled System	Type	NA						
	30		Compensation	NA						
	31		Capillary Length	NA						
	32		Capillary Material	NA						
	33		Armour Material	NA						
	34		Bulb Material	NA						
	35		Bulb Length	NA						
	36		Bulb Type	NA						
	37		Bulb Connection	NA						
	38		Bulb SAMA Class	NA						
THERMOWELL	39	Process Connection	Size	Rating	Facing	2"	300#	RF (125-250 AARH)		
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange							
	41	Well & Flange Material	SS316L(NACE)							
	42	Instrument Connection	1/2" NPT(F)							
	43	Insertion Length (U)	500mm							
	44	Lagging Extension (T)	75 mm							
	45	Bore Diameter	7 mm							
	46	Tip Thickness	5 mm							
	47	Treatment	Coating	VTA		VTA				
	48	Finish	U-length polished to 0.25µm(VTC)							
	49	Stamping	On flange (NOTE 2)							
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005							
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA		NA				
	52	Screwed Plug and Chain	NA							
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA							
PURCHASE	54	Manufacturer	Will be Selected Later							
	55	Model	Will be Selected Later							
	56	Requisition Number	Will be Selected Later							

Note:

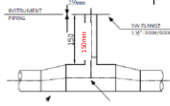
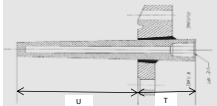
- 1- Stress Calculation, Wake Frequency Calculation, for Thermowell shall be done.
- 2- Thermowell material, length, pressure rating and tag number shall be stamped on flange.
- 3- Engraved stainless steel corrosion resistant tag nameplate is required for thermometer.
- 4-Vendor shall fully supply & assemble thermowell with temp. indicator
- 5-VTA: Vendor to advice. VTC: Vendor to confirm N/A:Not Applicable N/R: Not Required
- 6-Length and Thickness of thermowell shall be confirmed by vendor according to stress calculation results.
- 7-Lines to be swaged to 4" minimum, thermowell length 200 mm
- 8-All the wetted parts in sour service shall be in accordance with NACE MR-01-75/ISO 15156 standard as per Specification For Piping Material (PMS)
- 9-Due to fluid service vendor to provide higher grade or proper material for thermowell if required,defined material is minimum requirement.
- 10-Projection of thermowell flange is 150mm from face of pipe flange to surface of pipe or header



	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نیم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۱۰-۰۰۱-BK-HD-GCS-CO)									
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE									
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۲ از ۱۸
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0004	V00		
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2115			1	
	2	Service	FROM C-100 TO E-100							
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003			4/7			
	4	Line No. / Equipment No.	TEG-111-0007-AN07-1"-HI (INSTALL ON 90° ELBOW)			AN07				
PROCESS CONDITIONS	5	Fluid	Phase	TEG			V / L			
	6	Operating Pressure:	Unit	4.5/4.5 (summer/winter)			barg			
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/8.5			barg			
	8	Operating Temperature(MIN/MAX)	Unit	62.35 / 62.96 (summer/winter)			°C			
	9	Design Temperature(MIN/MAX)	Unit	5/100			°C			
	10	Corrosive Service	NACE Requirement	YES			YES			
	11	Toxic Service	Solid Particle							
THERMOMETER	12	Type	Bi-metallic							
	13	Calibration Range (Began/End)	0-100 Deg C							
	14	Instrument Range	0-100 Deg C							
	15	Dial Size	Dial Color	150 mm			Black Letter on White Alu. Plate			
	16	Case Material	Aluminium							
	17	Element Type	Element Material	Bi-metallic			VTA			
	18	Connection Type	Connection Size	Threaded			1/2" NPT(M)			
	19	Pointer Color	Pointer Material	Black			Aluminium			
	20	Stem Type	Stem Material	Union connection			316 SS(NACE)			
	21	Stem Position	Bottom							
	22	Stem Length	Stem Diameter	VTA			6mm			
	23	Accuracy	Ingress Protection	1% of full scale			IP65			
	24	Window Material	Laminated Safety Glass							
	25	Over range Protection	1.5 times the maximum scale							
	26	External Calibration Adjustment	YES (VTC)							
	27	Adjustable Compression Fitting	YES (VTC)							
	28	Form	Every angle							
	29	Filled System	Type	NA						
	30		Compensation	NA						
	31		Capillary Length	NA						
32	Capillary Material		NA							
33	Armour Material		NA							
34	Bulb Material		NA							
35	Bulb Length		NA							
36	Bulb Type		NA							
37	Bulb Connection		NA							
38	Bulb SAMA Class		NA							
THERMOWELL	39	Process Connection	Size	Rating	Facing	1/2"	300#	RF (125-250 AARH)		
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange							
	41	Well & Flange Material	SS316L(NACE)							
	42	Instrument Connection	1/2" NPT(F)							
	43	Insertion Length (U)	200mm							
	44	Lagging Extension (T)	75 mm							
	45	Bore Diameter	7 mm							
	46	Tip Thickness	5 mm							
	47	Treatment	Coating	VTA			VTA			
	48	Finish	U-length polished to 0.25µm(VTC)							
	49	Stamping	On flange (NOTE 2)							
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005							
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA			NA			
	52	Screwed Plug and Chain	NA							
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA							
PURCHASE	54	Manufacturer	Will be Selected Later							
	55	Model	Will be Selected Later							
	56	Requisition Number	Will be Selected Later							

Note:

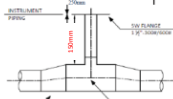
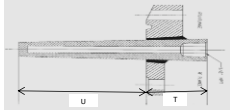
- 1- Stress Calculation, Wake Frequency Calculation, for Thermowell shall be done.
- 2- Thermowell material, length, pressure rating and tag number shall be stamped on flange.
- 3- Engraved stainless steel corrosion resistant tag nameplate is required for thermometer.
- 4-Vendor shall fully supply & assemble thermowell with temp. indicator
- 5-VTA: Vendor to advice. VTC: Vendor to confirm N/A:Not Applicable N/R: Not Required
- 6-Length and Thickness of thermowell shall be confirmed by vendor according to stress calculation results.
- 7-Lines to be swaged to 4" minimum, thermowell length 200 mm
- 8-All the wetted parts in sour service shall be in accordance with NACE MR-01-75/ISO 15156 standard as per Specification For Piping Material (PMS)
- 9-Due to fluid service vendor to provide higher grade or proper material for thermowell if required,defined material is minimum requirement.
- 10-Projection of thermowell flange is 150mm from face of pipe flange to surface of pipe or header

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۰۱۰-BK-HD-GCS-CO)									
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE									
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۲ از ۹
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0004	V00		
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2116			1	
	2	Service	FROM V-120 TO E-200							
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003			5/7			
	4	Line No. / Equipment No.	TEG-111-0004-AN04-2"-PT (INSTALL ON 90° ELBOW)			AN04				
PROCESS CONDITIONS	5	Fluid	Phase	TEG			Liquid			
	6	Operating Pressure:	Unit	0.3/0.6			barg			
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/5.8			barg			
	8	Operating Temperature(MIN/MAX)	Unit	191.5/192.7 (summer/winter)			°C			
	9	Design Temperature(MIN/MAX)	Unit	5/220			°C			
	10	Corrosive Service	NACE Requirement	NO			NO			
THERMOMETER	11	Toxic Service	Solid Particle							
	12	Type	Bi-metallic							
	13	Calibration Range (Began/End)	0-400 Deg C							
	14	Instrument Range	0-400 Deg C							
	15	Dial Size	Dial Color	150 mm			Black Letter on White Alu. Plate			
	16	Case Material	Aluminium							
	17	Element Type	Element Material	Bi-metallic			VTA			
	18	Connection Type	Connection Size	Threaded			1/2" NPT(M)			
	19	Pointer Color	Pointer Material	Black			Aluminium			
	20	Stem Type	Stem Material	Union connection			316 SS(NACE)			
	21	Stem Position	Bottom							
	22	Stem Length	Stem Diameter	VTA			6mm			
	23	Accuracy	Ingress Protection	1% of full scale			IP65			
	24	Window Material	Laminated Safety Glass							
	25	Over range Protection	1.5 times the maximum scale							
	26	External Calibration Adjustment	YES (VTC)							
	27	Adjustable Compression Fitting	YES (VTC)							
	28	Form	Every angle							
	29	Filled System	Type	NA						
	30		Compensation	NA						
	31		Capillary Length	NA						
	32		Capillary Material	NA						
	33		Armour Material	NA						
	34		Bulb Material	NA						
	35		Bulb Length	NA						
	36		Bulb Type	NA						
	37		Bulb Connection	NA						
	38		Bulb SAMA Class	NA						
THERMOWELL	39	Process Connection	Size	Rating	Facing	1/2"	300#	RF (125-250 AARH)		
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange							
	41	Well & Flange Material	SS316L(NACE)							
	42	Instrument Connection	1/2" NPT(F)							
	43	Insertion Length (U)	200mm							
	44	Lagging Extension (T)	75 mm							
	45	Bore Diameter	7 mm							
	46	Tip Thickness	5 mm							
	47	Treatment	Coating	VTA			VTA			
	48	Finish	U-length polished to 0.25µm(VTC)							
	49	Stamping	On flange (NOTE 2)							
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005							
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA			NA			
	52	Screwed Plug and Chain	NA							
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA							
PURCHASE	54	Manufacturer	Will be Selected Later							
	55	Model	Will be Selected Later							
	56	Requisition Number	Will be Selected Later							

Note:

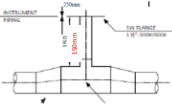
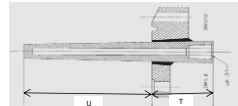
- 1- Stress Calculation, Wake Frequency Calculation, for Thermowell shall be done.
- 2- Thermowell material, length, pressure rating and tag number shall be stamped on flange.
- 3- Engraved stainless steel corrosion resistant tag nameplate is required for thermometer.
- 4-Vendor shall fully supply & assemble thermowell with temp. indicator
- 5-VTA: Vendor to advice. VTC: Vendor to confirm N/A:Not Applicable N/R: Not Required
- 6-Leangth and Thickness of thermowell shall be confirmed by vendor according to stress calculation results.
- 7-Lines to be swaged to 4" minimum, thermowell length 200 mm
- 8-All the wetted parts in sour service shall be in accordance with NACE MR-01-75/ISO 15156 standard as per Specification For Piping Material (PMS)
- 9-Due to fluid service vendor to provide higher grade or proper material for thermowell if required,defined material is minimum requirement.
- 10-Projection of thermowell flange is 150mm from face of pipe flange to surface of pipe or header

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نیم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۰۱-۰۰۱-BK-HD-GCS-CO)									
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE									
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۰ از ۱۲	
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0004	V00		
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2117			1	
	2	Service	TEG FROM E-200 TO C-200							
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003			5/7			
	4	Line No. / Equipment No.	TEG-111-0027-AN07-1"-HI (INSTALL ON 2" 90° ELBOW) AN07							
PROCESS CONDITIONS	5	Fluid	Phase	TEG			V / L			
	6	Operating Pressure:	Unit	3.1			barg			
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/7.5			barg			
	8	Operating Temperature(MIN/MAX)	Unit	140.00			°C			
	9	Design Temperature(MIN/MAX)	Unit	5/165			°C			
	10	Corrosive Service	NACE Requirement	YES			YES			
	11	Toxic Service	Solid Particle							
THERMOMETER	12	Type	Bi-metallic							
	13	Calibration Range (Began/End)	0~250 Deg C							
	14	Instrument Range	0~250 Deg C							
	15	Dial Size	Dial Color	150 mm			Black Letter on White Alu. Plate			
	16	Case Material	Aluminium							
	17	Element Type	Element Material	Bi-metallic			VTA			
	18	Connection Type	Connection Size	Threaded			1/2" NPT(M)			
	19	Pointer Color	Pointer Material	Black			Aluminium			
	20	Stem Type	Stem Material	Union connection			316 SS(NACE)			
	21	Stem Position	Bottom							
	22	Stem Length	Stem Diameter	VTA			6mm			
	23	Accuracy	Ingress Protection	1% of full scale			IP65			
	24	Window Material	Laminated Safety Glass							
	25	Over range Protection	1.5 times the maximum scale							
	26	External Calibration Adjustment	YES (VTC)							
	27	Adjustable Compression Fitting	YES (VTC)							
	28	Form	Every angle							
	29	Filled System	Type	NA						
	30		Compensation	NA						
	31		Capillary Length	NA						
32	Capillary Material		NA							
33	Armour Material		NA							
34	Bulb Material		NA							
35	Bulb Length		NA							
36	Bulb Type		NA							
37	Bulb Connection		NA							
38	Bulb SAMA Class		NA							
THERMOWELL	39	Process Connection	Size	Rating	Facing	1/2"	300#	RF (125-250 AARH)		
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange							
	41	Well & Flange Material	SS316L(NACE)							
	42	Instrument Connection	1/2" NPT(F)							
	43	Insertion Length (U)	200mm							
	44	Lagging Extension (I)	75 mm							
	45	Bore Diameter	7 mm							
	46	Tip Thickness	5 mm							
	47	Treatment	Coating	VTA			VTA			
	48	Finish	U-length polished to 0.25µm(VTC)							
	49	Stamping	On flange (NOTE 2)							
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005							
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA			NA			
	52	Screwed Plug and Chain	NA							
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA							
PURCHASE	54	Manufacturer	Will be Selected Later							
	55	Model	Will be Selected Later							
	56	Requisition Number	Will be Selected Later							

Note:

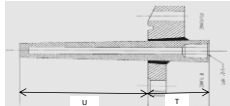
- 1- Stress Calculation, Wake Frequency Calculation, for Thermowell shall be done.
- 2- Thermowell material, length, pressure rating and tag number shall be stamped on flange.
- 3- Engraved stainless steel corrosion resistant tag nameplate is required for thermometer.
- 4-Vendor shall fully supply & assemble thermowell with temp. indicator
- 5-VTA: Vendor to advice. VTC: Vendor to confirm N/A:Not Applicable N/R: Not Required
- 6-Length and Thickness of thermowell shall be confirmed by vendor according to stress calculation results.
- 7-Lines to be swaged to 4" minimum, thermowell length 200 mm
- 8-All the wetted parts in sour service shall be in accordance with NACE MR-01-75/ISO 15156 standard as per Specification For Piping Material (PMS)
- 9-Due to fluid service vendor to provide higher grade or proper material for thermowell if required,defined material is minimum requirement.
- 10-Projection of thermowell flange is 150mm from face of pipe flange to surface of pipe or header

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۰۱۰-۰۰۱-BK-HD-GCS-CO)										
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE										
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۱ از ۱۲	
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0004	V00			
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2118			1		
	2	Service	FROM F-200 TO E-200								
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003			5/7				
	4	Line No. / Equipment No.	EG-111-0021-AN07-1"-HI (INSTALL ON 2" 90° ELBOW) AN07								
PROCESS CONDITIONS	5	Fluid	Phase	TEG			V / L				
	6	Operating Pressure:	Unit	3.3			barg				
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/7.5			barg				
	8	Operating Temperature(MIN/MAX)	Unit	73.6/74.52 (Summer/Winter)			°C				
	9	Design Temperature(MIN/MAX)	Unit	5/165			°C				
	10	Corrosive Service	NACE Requirement	YES			YES				
THERMOMETER	11	Toxic Service	Solid Particle								
	12	Type	Bi-metallic								
	13	Calibration Range (Began/End)	0~160 Deg C								
	14	Instrument Range	0~160 Deg C								
	15	Dial Size	Dial Color	150 mm			Black Letter on White Alu. Plate				
	16	Case Material	Aluminium								
	17	Element Type	Element Material	Bi-metallic			VTA				
	18	Connection Type	Connection Size	Threaded			1/2" NPT(M)				
	19	Pointer Color	Pointer Material	Black			Aluminium				
	20	Stem Type	Stem Material	Union connection			316 SS(NACE)				
	21	Stem Position	Bottom								
	22	Stem Length	Stem Diameter	VTA			6mm				
	23	Accuracy	Ingress Protection	1% of full scale			IP65				
	24	Window Material	Laminated Safety Glass								
	25	Over range Protection	1.5 times the maximum scale								
	26	External Calibration Adjustment	YES (VTC)								
	27	Adjustable Compression Fitting	YES (VTC)								
	28	Form	Every angle								
	THERMOWELL	29	Filled System	Type	NA						
		30		Compensation	NA						
31		Capillary Length		NA							
32		Capillary Material		NA							
33		Armour Material		NA							
34		Bulb Material		NA							
35		Bulb Length		NA							
36		Bulb Type		NA							
37		Bulb Connection		NA							
38		Bulb SAMA Class		NA							
THERMOWELL	39	Process Connection	Size	Rating	Facing	1"	300#	RF (125-250 AARH)			
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange								
	41	Well & Flange Material	SS316L(NACE)								
	42	Instrument Connection	1/2" NPT(F)								
	43	Insertion Length (U)	200mm								
	44	Lagging Extension (T)	75 mm								
	45	Bore Diameter	7 mm								
	46	Tip Thickness	5 mm								
	47	Treatment	Coating	VTA			VTA				
	48	Finish	U-length polished to 0.25µm(VTC)								
	49	Stamping	On flange (NOTE 2)								
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005								
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA			NA				
	52	Screwed Plug and Chain	NA								
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA								
PURCHASE	54	Manufacturer	Will be Selected Later								
	55	Model	Will be Selected Later								
	56	Requisition Number	Will be Selected Later								

Note:

- 1- Stress Calculation, Wake Frequency Calculation, for Thermowell shall be done.
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- 5-VTA: Vendor to advice. VTC: Vendor to confirm N/A:Not Applicable N/R: Not Required
- 6-Leangth and Thickness of thermowell shall be confirmed by vendor according to stress calculation results.
- 7-Lines to be swaged to 4" minimum, thermowell length 200 mm
- 8-All the wetted parts in sour service shall be in accordance with NACE MR-01-75/ISO 15156 standard as per Specification For Piping Material (PMS)
- 9-Due to fluid service vendor to provide higher grade or proper material for thermowell if required,defined material is minimum requirement.
- 10-Projection of thermowell flange is 150mm from face of pipe flange to surface of pipe or header

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نیم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۰۱۰-۰۸-BK-HD-GCS-CO)									
	INSTRUMENT D.S. FOR TEMPERATURE GAUGE									
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۲ از ۱۲
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	MF	120	IN	DS	0004	V00		
GENERAL	1	Item Number	Tag Number	Quantity	1	D-TG-2119			1	
	2	Service	FROM E-200 TO P-100B							
	3	P & ID No.	Page	BK-GCS-MF-120-PR-PI-0003			5/7			
	4	Line No. / Equipment No.	TEG-111-0006-AN04-2"-HI (INSTALL ON 2" 90° ELBOW) AN04							
PROCESS CONDITIONS	5	Fluid	Phase	TEG		Liquid				
	6	Operating Pressure:	Unit	0.2		barg				
	7	Design Pressure(MIN/MAX)	Unit	Full Vacuum/5.8		barg				
	8	Operating Temperature(MIN/MAX)	Unit	119.43/123.6 (summer/winter)		°C				
	9	Design Temperature(MIN/MAX)	Unit	5/220		°C				
	10	Corrosive Service	NACE Requirement	NO		NO				
THERMOMETER	11	Toxic Service	Solid Particle							
	12	Type	Bi-metallic							
	13	Calibration Range (Began/End)	0~250 Deg C							
	14	Instrument Range	0~250 Deg C							
	15	Dial Size	Dial Color	150 mm		Black Letter on White Alu. Plate				
	16	Case Material	Aluminium							
	17	Element Type	Element Material	Bi-metallic		VTA				
	18	Connection Type	Connection Size	Threaded		1/2" NPT(M)				
	19	Pointer Color	Pointer Material	Black		Aluminium				
	20	Stem Type	Stem Material	Union connection		316 SS(NACE)				
	21	Stem Position	Bottom							
	22	Stem Length	Stem Diameter	VTA		6mm				
	23	Accuracy	Ingress Protection	1% of full scale		IP65				
	24	Window Material	Laminated Safety Glass							
	25	Over range Protection	1.5 times the maximum scale							
	26	External Calibration Adjustment	YES (VTC)							
	27	Adjustable Compression Fitting	YES (VTC)							
	28	Form	Every angle							
	29	Filled System	Type	NA						
	30		Compensation	NA						
31	Capillary Length		NA							
32	Capillary Material		NA							
33	Armour Material		NA							
34	Bulb Material		NA							
35	Bulb Length		NA							
36	Bulb Type		NA							
37	Bulb Connection		NA							
38	Bulb SAMA Class		NA							
THERMOWELL	39	Process Connection	Size	Rating	Facing	1/2 "	300#	RF (125-250 AARH)		
	40	Connection Type	Solid Drilled Bar Stoke Tapered Flange							
	41	Well & Flange Material	SS316L(NACE)							
	42	Instrument Connection	1/2" NPT(F)							
	43	Insertion Length (U)	200mm							
	44	Lagging Extension (T)	75 mm							
	45	Bore Diameter	7 mm							
	46	Tip Thickness	5 mm							
	47	Treatment	Coating	VTA		VTA				
	48	Finish	U-length polished to 0.25µm(VTC)							
	49	Stamping	On flange (NOTE 2)							
	50	Standard Drawing Number	BK-GCS-MF-120-IN-DW-0005							
	51	Anti Abrasion Material	Anti Abrasion Thickness (mm)	NA		NA				
	52	Screwed Plug and Chain	NA							
	53	Outside Diameter@Tip / Outside Diameter@Shank	VTA							
PURCHASE	54	Manufacturer	Will be Selected Later							
	55	Model	Will be Selected Later							
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