

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۰۸-۰۱۰-۰۰۱-BK-HD-GCS-CO)								
	INSTRUMENT D.S. FOR FLOW ELEMENTS								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادرکننده MF	تسهیلات 120	رشته IN	نوع مدرک DS	سریال 0009	نسخه V00	شماره صفحه: ۱ از ۵

طرح نگهداشت و افزایش تولید ۲۷ مخزن

INSTRUMENT D.S. FOR FLOW ELEMENTS

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

	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 FLOW ELEMENTS								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده MF	تسهیلات 120	رشته IN	نوع مدرک DS	سریال 0009	نسخه V00	شماره صفحه: ۲ از ۵

REVISION RECORD SHEET

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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 ۰۸-۰۰۱۰-۰۰۱۰-BK-HD-GCS-CO)									
		INSTRUMENT D.S. FOR FLOW ELEMENTS									
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۳ از ۵	
053 - 073 - 9184		BK	GCS	MF	120	IN	DS	0009	V00		
ORIFICE ASSEMBLY											
GENERAL	1	Tag Number		Item No.		D-FE-2101			1		
	2	P & ID No.		Page No.		BK-GCS-MF-120-PR-PI-0003			1/7		
	3	Service				FROM E300 TO C100					
	4	Pipe Size				1"					
PROCESS CONDITIONS	5	Line No.		Piping Class		Line Schedule		TEG-111-0001-FN04-1"-HI		FN04	
	6	Fluid		Phase		TEG		Liquid			
	7	Flow:		Unit		Minimum	Normal	Maximum			
	8	Temperature:	Minimum	Normal	Maximum	Unit	620	775	930	Kg/h	
	9	Pressure:	Minimum	Normal	Maximum	Unit	20	68	130	°C	
	10	Design Temperature			Unit	50	54.9	60	barg		
	11	Design Pressure			Unit	5 / 145				°C	
	12	Full Scale Flow			Unit	F.V. / 62				barg	
	13	Pressure Loss Maximum			Unit	1100					
	14	Operating Density			Unit	-					
	15	Compressibility Factor (Z)			Unit	1045.15				kg/m3	
	16	Molecular Weight	Cp / Cv		Unit	0.0221					
	17	Maximum Velocity			Unit	147.91	1	1.045	m/s		
	18	Quality % or Superheat (YES/NO)	Operating Viscosity		Unit	NO		7.924		cp	
	19	Vacuum Possibility (YES/NO)	Cold Service (YES/NO)		Unit	-		-			
	20	Comply with NACE MR0175 (YES/NO)				YES					
	21	Vapor Pressure			Unit	0.1817				barg	
	LINE	22	Material				ASTM A106 GR.B(NACE)				
		23	Inside Diameter / Outside Diameter				20.92		33.4		
		24	Piping Line Insulation				N/A				
BASIS	25	Type / Pressure Taps				Flange Tapping		2 TAPS			
	26	Flow Rate Range		Unit	0-1000				Kg/hr		
	27	Differential Pressure @ Full scale				0 ~ 250 mbar					
ORIFICE PLATE	28										
	29	Size and Flange Rating				1"		600#			
	30	Bore Diameter(d)				14.362 mm(VTC)					
	31	Diameter Ratio(beta=d/D)				0.43(VTC)					
	32	Material				316 SS (NACE)					
	33	Thickness				3.2 mm (VTC)					
	34	Ring Material and Type				N/A		N/A			
	35	Drain or Vent / Hole Size				Drain/2mm(VTC)					
ORIFICE FLANGES	36	Actual Pressure Loss		Unit	(VTC)				mbar		
	37	Applicable Standard				ISO-5167/5168					
	38	Type				Weld neck type					
	39	Size, Rating and Facing				1"		600# RF			
	40	Flange Face Finish				125-250 AARH					
	41	Flange Material				ASTM A105					
	42	Bolts and Nuts Material				STUD BOLTS TO ASTM A193 GR.B7M,NUTS TO ASTM A194 GR.2HM					
	43	Gasket Material				Spiral Wound, 4.45mm,S.S 316 Winding/Graphite Filler,C.S. Outer& S.S 316L Inner Ring , ASME B16.20					
	44	Jack Screw Material				YES / ASTM A193-B7M					
	45	Nipple Type for Press. Tap	Material	Qty.	TBE (L-150mm) /3000# /1/2" NPTM		ASTM A106	2			
46	Pressure Taps Size	Orientation			1/2" NPTF		45° (Downward)				
METER RUN	47										
	48	Upstream Length	Downstream Length	Unit	20D(VTA)		5D(VTA)		mm		
	49	Material	End Connection			316SS(NACE)		1", 600# RF			
PURCHASE	50	Straightening Vane				N/A					
	51	Manufacturer				Will be finalized later					
	52	Model				Will be finalized later					
	53	Requisition Number				-					
54											
NOTES: 1-Orifice tag number, material, nominal diameter and bore diameter shall be permanently stamped on the orifice plate handle. 2- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable.											

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک (قرارداد ۸-۰۰۱۰۰۸-BK-HD-GCS-CO)								
		INSTRUMENT D.S. FOR FLOW ELEMENTS								
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۴ از ۵
053 - 073 – 9184		BK	GCS	MF	120	IN	DS	0009	V00	
ORIFICE ASSEMBLY										
GENERAL	1	Tag Number		Item No.		D-FE-2102			1	
	2	P & ID No.		Page No.		BK-GCS-MF-120-PR-PI-0003			1/7	
	3	Service				WET GAS TO C100				
	4	Pipe Size				6"				
	5	Line No.	Piping Class	Line Schedule	GAS-111-0001-FN05-6"-PT			FN04		
PROCESS CONDITIONS	6	Fluid	Phase	GAS			Vapor			
	7	Flow:		Unit	Minimum	Normal	Maximum			
				Unit	12136.72	15170.9 (winter) / 17252.5 (summer)	20703	Kg/h		
	8	Temperature: Minimum	Normal	Maximum	Unit	59	60	61	°C	
	9	Pressure: Minimum	Normal	Maximum	Unit	48	53.9	57	barg	
	10	Design Temperature				Unit	148		°C	
	11	Design Pressure				Unit	F.V. / 62		barg	
	12	Full Scale Flow				Unit	-			
	13	Pressure Loss Maximum				Unit	-			
	14	Operating Density				Unit	57.70		kg/m3	
	15	Compressibility Factor (Z)					0.9863			
	16	Molecular Weight	Cp / Cv				24.56	1.219		
	17	Maximum Velocity				Unit	6		m/s	
	18	Quality % or Superheat (YES/NO)	Operating Viscosity				Unit	NO	0.01275	cp
	19	Vacuum Possibility (YES/NO)	Cold Service (YES/NO)				YES		NO	
	20	Comply with NACE MR0175 (YES/NO)					YES			
	21	Vapor Pressure				Unit	53.9			
	LINE	22	Material				ASTM A106 GR.B (NACE)			
23		Inside Diameter / Outside Diameter				146.329	168.275			
24		Piping Line Insulation				N/A				
BASIS	25	Type / Pressure Taps				Flange Tapping			2 TAPS	
	26	Flow Rate Range	Unit				0 - 22000		Kg/hr	
	27	Differential Pressure @ Full scale				0 ~ 250 mbar				
ORIFICE PLATE	28									
	29	Size and Flange Rating				6"	600#			
	30	Bore Diameter(d)				100.965 mm(VTC)				
	31	Diameter Ratio(beta=d/D)				0.6(VTC)				
	32	Material				316 SS(NACE)				
	33	Thickness				3.2 mm (VTC)				
	34	Ring Material and Type				N/A	N/A			
	35	Drain or Vent / Hole Size				Vent, Drain/2mm(VTC)				
ORIFICE FLANGES	36	Actual Pressure Loss	Unit				(VTC)		mbar	
	37	Applicable Standard				ISO-5167/5168				
	38	Type				Weld neck type				
	39	Size, Rating and Facing				6"	600# RF			
	40	Flange Face Finish				125-250 AARH				
	41	Flange Material				ASTM A105 (NACE)				
	42	Bolts and Nuts Material				STUD BOLTS TO ASTM A193 GR.B7M, NUTS TO ASTM A194 GR.2HM				
	43	Gasket Material				Spiral Wound, 4.45mm, S.S 316 Winding/Graphite Filler, C.S. Outer & S.S 316L Inner Ring, ASME B16.20				
METER RUN	44	Jack Screw Material				YES / ASTM A193-B7M				
	45	Nipple Type for Press. Tap	Material	Qty.				TBE (L-150mm) / 3000# / 1/2" NPTM	ASTM A106	2
	46	Pressure Taps Size	Orientation				1/2" NPTF	45° (upward)		
	47									
	48	Upstream Length / Downstream Length	Unit				N/A	N/A	mm	
PURCHASE	49	Material / End Connection				N/A	N/A			
	50	Straightening Vane				N/A				
	51	Manufacturer				Will be finalized later				
	52	Model				Will be finalized later				
	53	Requisition Number								
	54									

NOTES:
 1-Orifice tag number, material, nominal diameter and bore diameter shall be permanently stamped on the orifice plate handle.
 2- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable.

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		INSTRUMENT D.S. FOR FLOW ELEMENTS									
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۵ از ۵	
053 - 073 - 9184		BK	GCS	MF	120	IN	DS	0009	V00		
ORIFICE ASSEMBLY											
GENERAL	1	Tag Number	Item No.		D-FE-2103			1			
	2	P & ID No.	Page No.		BK-GCS-MF-120-PR-PI-0003			4/7			
	3	Service	STRIPPING GAS TO R100								
	4	Pipe Size	1"								
	5	Line No.	Piping Class	Line Schedule	FLG-111-0028-AN04-1"-PT			AN04			
PROCESS CONDITIONS	6	Fluid	Phase		FUEL GAS			Vapor			
	7	Flow:			Minimum	Normal		Maximum			
	8	Temperature:	Minimum	Normal	Maximum	Unit	36		45 (winter) / 60 (summer)	72	Kg/h
	9	Pressure:	Minimum	Normal	Maximum	Unit	15		19/36.78	43	°C
	10	Design Temperature			Unit	0.5		4.9	5.5	barg	
	11	Design Pressure			Unit	85				°C	
	12	Full Scale Flow			Unit	9				barg	
	13	Pressure Loss Maximum			Unit	-					
	14	Operating Density			Unit	4.015				kg/m3	
	15	Compressibility Factor (Z)			0.9863						
	16	Molecular Weight	Cp / Cv		24.53		1.219				
	17	Maximum Velocity			Unit	8				m/s	
	18	Quality % or Superheat (YES/NO)	Operating Viscosity		NO		0.01272				
	19	Vacuum Possibility (YES/NO)	Cold Service (YES/NO)		YES		NO				
	20	Comply with NACE MR0175 (YES/NO)			YES						
	21	Vapor Pressure			Unit	4.9					
	LINE	22	Material	ASTM A106 GR.B							
23		Inside Diameter / Outside Diameter			24.3		33.4				
24		Piping Line Insulation	N/A								
BASIS	25	Type / Pressure Taps			Flange Tapping		2 TAPS				
	26	Flow Rate Range			Unit	0 - 80				Kg/hr	
	27	Differential Pressure @ Full scale			0 - 250 mbar						
ORIFICE PLATE	28										
	29	Size and Flange Rating			1"		300#				
	30	Bore Diameter(d)			6.6132 mm(VTC)						
	31	Diameter Ratio(beta=d/D)			0.198(VTC)						
	32	Material			316 SS						
	33	Thickness			3.2 mm (VTC)						
	34	Ring Material and Type			N/A		N/A				
	35	Drain or Vent / Hole Size			Drain/2mm(VTC)						
	36	Actual Pressure Loss			Unit	(VTC)				mbar	
ORIFICE FLANGES	37	Applicable Standard			ISO-5167/5168						
	38	Type			Weld neck type						
	39	Size, Rating and Facing			1"		300# RF				
	40	Flange Face Finish			125-250 AARH						
	41	Flange Material			ASTM A105						
	42	Bolts and Nuts Material			STUD BOLTS TO ASTM A193 GR.B7M,NUTS TO ASTM A194 GR.2HM						
	43	Gasket Material			Spiral Wound, 4.45mm,S.S 316 Winding/Graphite Filler,C.S. Outer& S.S 316L Inner Ring , ASME B16.20						
	44	Jack Screw Material			YES / ASTM A193-B7M						
	45	Nipple Type for Press. Tap	Material	Qty.	TBE (L-150mm) /3000# /1/2" NPTM		ASTM A106 GR.B		2		
	46	Pressure Taps Size	Orientation		1/2" NPTF		45° (Downward)				
METER RUN	47										
	48	Upstream Length / Downstream Length			Unit	20D(VTA)		5D(VTA)		mm	
	49	Material / End Connection			316SS(NACE)		1", 300# RF				
PURCHASE	50	Straightening Vane	N/A								
	51	Manufacturer	Will be finalized later								
	52	Model	Will be finalized later								
	53	Requisition Number	-								
54											
NOTES: 1-Orifice tag number, material, nominal diameter and bore diameter shall be permanently stamped on the orifice plate handle. 2- VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable.											