	client:
PROJECT: PP-PE PILOT PLANT	۵.
	040K9
Title: DATA SHEET FOR 1ST GAS PHASE REACTOR	شرکت ملی صنایع پتروشیمی
CENTRIFUGAL COMPRESSOR (CF-411)	شرکت پژوهش و فناوری پتروشیمی

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Owner Job No.:	Type: DAS
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		PP-PE PILOT PLANT SHEET FOR 1ST GAS PHASE REACTOR															5		2	
itle: DAT ENTRIFU							REACTOF	R											ىركت ملى ئت پژوهش	
REV.	0	1	2	3	4	5	REV. PAGE	0	1	2	3	4	5	REV. PAGE	0	1	2	3	4	5
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В	Х	Х	Х																	
1	Х	Х	Х																	
2	Х	Х	Х																	
3	Х	Х	Х																	
4	X	X	X																	-
5 6	X X	X X	X X																	
0 7	X	X	^				<u> </u>													-
8	X	X																		
5																				
4																		<u> </u>		
3						14														
2		/10/20				K.A/					M.N				M.A H.R				AFC AFC	
1 0		/18/20				H.					A.A R.S				A.K				IFA	
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					Proc	ess Data S	neet				DATE		
				CEN	FRIFU	GAL COM	PRESSOR			Octo	ober 10, 20	-	
PLANT:	PE-PP R&T	Arak Center						AREA 400		3	Sheet OF	6	
SERVICE	1st GAS PHAS	SE REACTOR COMP	RESSOF	2				ITEM		CF-	411		
	-	ITRIFUGAL				No. OF UN	IITS 1						
LOCATIO	N	DUTDOOR		UND	ER ROOF		MEZZANII	NE		GROUND FI	LOOR		
						SERVICE DATA				 1			
CONDITIO				DESIGN	AL	TERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERN	NATIVE 4			
	N (SEE SKETCH) SSOR CASING												
	SSED GAS (SEE A				-								
	TRIC PRESSURE:		ar a		-								
B/ ITCOINE	kg/h												
CAPACIT													
	-	KE CONDITIONS		509		509	509						
					INT	AKE CONDITIC	NS			······································			
PRESSU	RE	ba	ar a	25		25	19						
TEMPER/	ATURE		°C	75		75	80				<u> </u>		
RELATIVE	E HUMIDITY		%										
MOLAR N	MASS	Kg/K	mol	35.7		41.5	37.6				J		
Cp/Cv (K1	1)		(3	1.27		1.38	1.25						
	PRESSIBILITY FAC		/m ³	37.5 0.82		49.5 0.72	27.4 0.86						
	RESSIDIENT FAC			0.02		IARGE CONDI							
PRESSU	RE	h	ar a	25.5		25.6	19.5						
	ATURE EXPECTED		°C						1				
Cp/Cv (K2	2)		-										
Z ₂ - COM	PRESSIBILITY FAC	TOR											
SURGE L	IMIT AT DES. CONI	D.	%										
COMPRE	SSION RATIO										ļ		
	OPIC HEAD		m	112		104	123						
			KW										
DRIVER (SSOR SPEED	R	PM	ECTRIC MOTO	20		CTEAM TUDDING						
	.1)		<u>⊡</u> ELI			AS ANALYSIS (STEAM TURBINE						
. (COMPOSITION	MOLAR MAS	s	% MOLAR		% MOLAR	% MOLAR	% MOLAR	% M0	OLAR	% MOI	AR	
1 Hydr		2.0	-	18.00		2.40	0.50		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,		
2 Ethyl	-	28.1		5.00		11.80	40.00						
3 Prop	ylene	42.1					44.50						
4 Prop	ane	44.1		77.00		83.10	15.00						
5 Buter	ne-1	56.1				2.70					L		
6													
7													
8 Tatal	1			10	0.00	100.00	100.00						
, Total				10	0.00	100.00	100.00						
	N GASES:	10 gr/m3 of polymer	dust in	process g	jas (max j	particle size 500	μm)						
	ION CAUSED BY:												
COMPRE	SSOR SKETCH												
NOTEO													
NOTES:				000000					00 NI- 000	000 44 5	- 0005		
(1)		ICAL MOTOR SHALL MOTOR ENCLOSUR							ю.1NO.900	-3rt-A4-E	2-0005		
	BI VENDUR,	WOTOR ENGLUSUR	L3 3NA		TALLY	LINGLUGED FA		1					
3													
	AFC	1	10/10/21	M.N	M.A								
	Issue for bidding			ļ									
DEV	First issue		D. 7-										
REV.	DESCRIPTION		DATE	BY	APP'D	1							

		Process Data Sheet										DATE	0004
				CEN	ITRIFU	GAL CON	MPRES	SSOR		AREA	Uci	tober 10, SHEET	
PLANT: PE	-PP R&T A	rak Center								400	4	OF	6
		REACTOR COM	PRESSOR	1					П	EM	CF	-411	
TYPE AND MODEL		UTDOOR				No. OF U	INITS	—					
LOCATION	<u>v</u>	JUTDOOR		UN		SINEERING D		MEZZANI	NE		GROUND	FLOOR	
COMPRESSOR SP	PEED	3000 RPM sh	all be pref	erred	2110	RPM	CRITICAL	SPEEDS	S 1st			RPM	
MAX CONTINUOU	S SPEED					RPM	CRITICAL	SPEEDS	S 2nd			RPM	
SURGE LIMIT			m3/h			AT DESIGN C	ONDITION	IS		% OF DE	SIGN CAPACI	TY	
DIRECTION OF RO	OTATION (CC	MPRESSOR VIE	WED FRC										
COMPRESSOR CA		PLIT				S AND CONS		JN	MATERIAL	Carbon S	teel SS.304		
		HICKNESS					mm			N ALLOWAN			mm
	М	AX ALLOWABLE	TEMP.			180	°C		MAX ALLO	V.PRESS/H	/DR.TEST	30	bar g
IMPELLERS		YPE			CLOSED		DPEN		MATERIAL	Stainless			
		ONSTRUCTION		□CA:	ST						MILLED		
DIAPHRAGMS	N	o. OOLED		[]YES	5	DIAMETE	=RS ⊡NO		MAX MATERIAL				
LABYRINTHS		ADIAL CLEARAN	CES		,		mm		MATERIAL				
SHAFT		IAMETERS (IMPI)			mm		MATERIAL				
RADIAL BEARING	S H	OUSING		∏ INT	EGRAL		SEPARATE						
		YPE			BBIT METAL PI		_						
		JBRICATION					FORCED				OIL PRE		bar g
THRUST BEARING		PAN YPE	mm		METER	mm				m ALL	CLEARA		mm
SHAFT SEAL	•	JBRICATION			RCED			TDOODLE		ALL	OIL PRE		bar g
BASEPLATE	T	YPE			BYRINTH		 LIQUID FIL	M	<u></u>	IECHANICAL		RING	
		YPE			ELDED STEEL		CAST STEE	EL.	1		Face to face	seal	
			OMPRESS				YES			0			
COUPLING		UPPLIED BY OSITION		[√L0		ANUFACTURER	CO	MPR. MO	TOR	COMPR.	TURBINE		
COUPLING		ANUFACTURER			OL/III		001		ion	0011111	TORDINE		
	T	YPE											
		JBRICATION											
COUPLING GUAR		YPE			EET STEEL		NONSPARK	ING					
	S	UPPLIED BY		Lco	MPRESSOR M	ANUFACTURER							
OTHER PARTS:													
MASS: COMPRES	SOR WITHO	UT BASE PLATE				Kg	MAX FOR	R MAINTEI	NANCE				Kg
MASS: MAX TO MO	OUNTING					Kg		SSOR WI	ITH BASE PL	.ATE			Kg
		0175		DATING				4000	DOWNIN			1	
CONNECTION (a) INTAKE PIPING		SIZE		RATING	,	FACING	UPW			ARDS	RIGHT (b)		FT (b)
DELIVERY PIPING	;							-					
													5
]				[
												-	
PURGE CONNECT					SIZE] AND FACI			No.		
DRAIN CONNECT		00000			SIZE		RATING A				No.		
VENT CONNECTIO	ONS				SIZE			AND FACI			No.		
NOTES:													
NOTEO													
NOTES:													
3													
2 AFC			10/10/21	M.N	M.A								
			10/10/21	M.N	M.A								

			Proc	ess Data S	Sheet				DATE	
		CEN	TRIFU	GAL CO	MPRESSOR			Octob	oer 10, 202	21
PLANT: PE-PP R&T Arak Center						ARE			SHEET	0
SERVICE 1st GAS PHASE REACTOR COMPRI	SSOF	2				400 ITEM)	5	OF	6
TYPE AND MODEL				No. OF L	INITS	IT EW				
LOCATION				ER ROOF		MEZZANINE	[GROUND FLO	OR	
				ON AND SEAL	NG SYSTEM					
COMPRESSOR MANUFACTURER WILL SUPPLY A	FORC	CED OIL L	UBRICATI	ON SYSTEM						
COMMON WITH COMPRESSOR			GEA			þriver	-			
COMBINED WITH SEAL OIL SYSTEM SYSTEM ACCORDING TO DIAGRAM FIG.			1	ARATE FROM SEAL			l	WITHOUT SE	AL OIL UNIT	
OIL SYSTEM				BRICATION	5 110. 017		SE	AL		
TYPE OF OIL USED										
WORKING PRESSURE bar	g									
MAX ALLOWABLE PRESSURE bar	-									
REQUIRED OIL FLOW RATE m ³ /						_				
RESERVOIR: MOUNTED ON CAPACITY m		ASE PLATE				BASE PLATE		ONSOLE		
CAPACITY n RETENTION TIME m	_									
PROVIDED WITH HEATER		LECTRIC		\$TEAM		ELECTRIC	_s	TEAM		
MATERIAL		-								
MAIN PUMP; MANUFACTURER										
TYPE-MODEL										
CASING MATERIAL			3				3			
CAPACITY-SPEED-POWER	-		m³/h		KW		l ³ /h ⊡r	RPM		ł
MOUNTED ON DRIVEN BY		ASE PLATE		CONSOLE 10TOR	TURBINE	BASE PLATE	C Motor	ONSOLE	TURBINE	
STAND-BY PUMP; MANUFACTURER	ھے		<u> 2</u>							
TYPE-MODEL										
CASING MATERIAL										
CAPACITY-SPEED-POWER			m³/h	RPM	KW	m	³ /h	RPM		ł
MOUNTED ON		ASE PLATE				BASE PLATE		ONSOLE	_	
DRIVEN BY		HAFT	1	10TOR		SHAFT	MOTOR			
AUTOMATIC START ACTUATED ON	Ľ	ES		NO		∏YES		10		
PUMP SAFETY VALVES; SET PRESS. bar	a						<u>'</u>	10		
TYPE	v	NTEGRAL		SEPARATE		INTEGRAL	_\$	EPARATE		
OIL COOLER		DUAL		\$INGLE		DUAL	_\$	INGLE		
MOUNTED ON	₿	ASE PLATE				BASE PLATE		ONSOLE		
	_									
CONSTRUCTION CODE SHELL MATERIAL		'EMA C				TEMA C				
PIPE MATERIAL										
EXCHANGING HEAT KV	v									
FILTERS		INGLE		DUAL		5INGLE		UAL		
MANUFACTURER -TYPE										
FILTERING DEGREE	_									
		EPLACEABLE	E	CLEANING TY	PE	REPLACEABLE		LEANING TYPE		
VALVES: BODY MATERIAL OIL DRAINS: REQUIRED		YES			NO		SUPPLIE	DBY		
MOUNTED ON		BASE P	LATE							
MAX SEAL OIL LEAK		-					LITERS/D	DAY		
OVERHEAD SEAL OIL TANK: REQUIRED		YES			NO					
SUPPLIED BY			RESSOR MANU							
PLACED			S ABOVE C	COMPRESSOR						
CLARIFIER: REQUIRED					NO					
SUPPLIED BY CAPACITY			RESSOR MANU DAY	JFACTURER						
OIL PIPING MATERIAL			L, CLEAN AN	D PICKLED						
			ESS STEEL							
DRAIN OIL PIPING MATERIAL			ESS STEEL							
OTHER DATA										
NOTES:										
3										
	/10/21	M.N	M.A							
1 Issue for bidding				<u> </u>						
0 First issue										
REV. DESCRIPTION	DATE	BY	APP'D				-			

			Proc	ess Data Sheet		C	DATE
		CEN	TRIFU	GAL COMPRESSOR			er 10, 2021
PLANT: PE-PP R& 7	T Arak Center				AREA 400		HEET OF 6
1 SERVICE 1st	GAS PHASE REACTOR CO	OMPRESSO	R		ITEM		
2 TYPE AND MODEL				No. OF UNITS 0			
3 LOCATION	DUTDOOR	μνι	DER ROOF	MEZZA	NINE	GROUND FLOO	R
4		11	ISTRUME	NT AND PROTECTIONS			
5 INSTRUMENT READ OUT		MET	RIC UNITS		ENGLISH UNITS		
6 LOCAL PANEL FOR COMPR]	IPR.MANUF.	PURCHASER	NOT REQUIRED		DT NEEDED
7 ELECTRICAL AND INSTRU		LL BE BROU	JGHT OUT				
8 COMPR.MANUFACTURE							
	DINDICATORS		M	ANUFACTURER	IYPE /	AND SIZE	
1 PRESSURE GAUGES							
2 LEVEL INDICATORS							
3 SIGHT FLOW INDICATORS							
4 TACHOMETERS							
5 PRESSURE SWITCHES							
6 TEMPERATURE SWITCHES	6						
7 AXIAL DISPLACEMENT IND	ICATORS						
8 SAFETY AND/OR RELIEF V							
9 POWER INDICATOR & REC							
20				NUFACTURER SHALL SUPP	PLY AS A MINIMUM		
1 PRESSURE GAUGES	LOCAL MOUNTED	D PANE	L MOUNTE			ALARM	LOCK
2 OIL PUMP DISCHARGE				LUBE OIL LOW PRESSURE			
				SEAL OIL LOW PRESSURE			
24 SEAL OIL EACH LEVEL 25 DIFFERENTIAL, SEAL OIL			<u> </u>	GOV. CONTROL OIL LOW			
26 DIFFERENTIAL, SEAL OIL 26 DIFF. BEFORE/AFTER FILT				OIL FILTERS DIFF. HIGH P			
7 GOV. CONTROL OIL	ERS			COMPR. DISCHARGE HIGH			
8 COMPRESSOR DISCHARG				ROTOR AXIAL POSITION			
9 COMPRESSOR SUCTION	<u> </u>			STARTING OF AUXILIARY/	SPARE PUMPS		
10 INTERMEDIATE STAGES				HIGH VIBRATIONS ON EAC			
31				HIGH TEMP. LUBE OIL			
2 THERMOMETERS:				HIGH TEMP EACH BEARIN	IG		
3 OUTLET, EACH BEARING							
34 OUTLET, EACH SEAL							
S COOLER INLET/OUTLET							
6 COMPR. SUCTION/DISCHA	RGE						
37 38 REMOTE LOCKING		ELECTRIC			тс	HYDRAULIC	
39 AXIAL POSITION CONTINUO		ELECTRIC			iiic		
	IN EACH OIL OUTLET LINE FOR BEA	ARINGS-SEAL-CO	OUPLINGS				
11 LEVEL GAUGES LUBE							
12							
13							
14 TO ACTUATE ALARMS AND	D LOCKS THE CONTACT W	ILL:				-	
15 DPEN	CLOSE TO SOUND ALARM						
16 DPEN	CLOSE TO LOCK						
7 ALARM AND LOCK CONTAG	CTS WILL BE SEPARATE A	ND:					
18				DOUBLE-THROW TYPE			
19			TWO-POL	DOUBLE-THROW TYPE			
		FROM		CONTROL			
1 METHOD		FROM FROM		TO RPM TO %			
32 53 CONTROL DEVICE	BY-PASS	FROIVI	WITH THEF			MANU	JAL
4 SIGNAL FROM		TYPE		RANGE			
55				EFFECT ON	VARIATION		
6 ANTISURGE CONTROL							
7 NOTES:							
8							
9						-	
60							
51							
62							
3 3							
AFC	10/10/	21 M.N	M.A				
5 1 Issue for bidding							
6 0 First issue							
7 REV. DESCRIPTION	DAT	E BY	APP'D				

PROJECT: PP-PE PILOT PLANT	client:
Title: DATA SHEET FOR 2nd GAS PHASE REACTOR CENTRIFUGAL COMPRESSOR (CF-421)	کی و

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PROJECT: PP-PE PILOT PLANT Title: DATA SHEET FOR 2nd GAS PHASE REACTOR CENTRIFUGAL COMPRESSOR									client:											
(CF-421)	A SHEE	ET FOR	2nd GA	S PHAS	EREAC	CTOR C		GAL CO	MPRES	SOR								ملی صنایع پتر هش و فناوری		
REV. PAGE	0	1	2	3	4	5	REV. PAGE	0	1	2	3	4	5	PAGE	0	1	2	3	4	5
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В	Х	Х																		
1	X	X	X																	
2	X	X	X																	
3 4	X X	X X	X X																	
4 5	X	X	X																	
6	X	X	X																	
7	X	X																		
8	X	X																		
-																				
																			-	
																		-	-	
F																				
5 4																				
4	1																			
2	11	0/10/20	21			K /	A / V.V					M.N					M.A			AFC
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						Proc	ess Data S	heet				DATE	
					CEN	TRIFU	GAL COM	IPRESSOR			October 10, 2021		
PLANT:			Arak Center						AREA 400		3	OF 6	
1 SERVICE			SE REACTOR COM	PRESSO	२				ITEM		CF-	421	
2 TYPE AN							No. OF UN						
3 LOCATIC	NC		JUTDOOR		<u>U</u> ND	ER ROOF		MEZZANII	NE		√GROUND F	LOOR	
4							SERVICE DATA			1			
5 CONDITI					DESIGN	AL	TERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERN	ATIVE 4		
Ŭ.		E SKETCH)											
·		CASING											
-		GAS (SEE A											
9 BAROME		PRESSURE:	b	ara									
0		kg/h											
		std m³/h											
2		m³/h AT INTAł	KE CONDITIONS		1031		1145	1145					
3						INI							
4 PRESSU		-	b	ara	25		25	25					
5 TEMPER				°C	75		80	75				}	
6 RELATIV		/IIUITY		%	20.4		20.07	40.05					
7 MOLAR N			Kg/l	Kmol	28.1		39.27	42.35				<u> </u>	
8 Cp/Cv (K 9 DENSITY	(1)			1.3	1.25		1.31	1.41				<u> </u>	
9 DENSITY	Y ADDEC		K	g/m ³	26.8		42.8	51.8					
	NPRES	SIBILITY FAC	IUK		0.90	DIGC		0.71		l		L	
1 2 PRESSU				are	25.4	DISCH	IARGE CONDI [®] 25.7						
				ar a °C	25.4		25.7	25.8					
		E EXPECTED	ACTUAL	-U									
4 Cp/Cv (K		SIBILITY FAC	TOP										
-	IPRES	SIBILITY FAC	IUR									L	
6			_	%		-				1			
		T DES. CON	D.	%									
8 COMPRE				-	150.34		464.02	156.84					
0				m	150.34		164.93	156.64					
0 POWER				KW RPM									
		SPEED	r		CTRIC MOTO	פר		TEAM TURBINE				L	
-	(1)			<u>-</u>	endenore		GAS ANALYSIS						
3	COME	POSITION	MOLAR MAS	s	% MOLAF		% MOLAR	% MOLAR	% MOLAR	% M(OLAR	% MOLAR	
		Comon	2.0		28.50		4.70	0.70	70 MIOL/11	70 101		70 WOE/ 41	
0.54			28.1		25.00		23.40	10.00					
6 2 Etny 7 3 Prop			42.1										
8 4 Prop	••		44.1		46.50		64.40	88.00					
9 5 Bute			56.1				7.50	1.30					
0 6													
1 7													
2 8													
3 Tota	al		1		10	00.00	100.00	100.00					
4				1		1				1			
5				1									
6				1									
7				1									
8 NOTES C	ON GA	SES:					•						
		AUSED BY:											
0													
1													
	ESSOF	R SKETCH											
3													
4													
5 NOTES:													
6 (1)		THE ELECTR	ICAL MOTOR SHALL	BE IN AG	CORDAN	ICE WITH	"TECHNICAL S	PECIFICATION FOR	R LV MOTORS " DO	C.No.900-	SPC-A4-E	E-0005 "	
7		BY VENDOR,	MOTOR ENCLOSUR	ES SHAL	L BE OF 1		ENCLOSED FAN	-COOLED (TEFC)					
8													
9													
0													
1	-					-							
2 3	1												
3 2	AFC			10/10/21	M.N	M.A							
4 1		for bidding											
5 0	First i												
6 REV.	DESC	CRIPTION		DATE	BY	APP'D	1						

Process Data Sheet

DATE October 10, 2021

			CE	NTRIFU	JGAL CO		October 10, 2021				
							-		•		
PLANT:	PE-PP R&1	Arak Center						AREA		SHEE	
								400	2	OF	6
		ASE REACTOR COMPRE	SSOR					ITEM		CF-421	
TYPE AND MO			_	-	No. OF						
LOCATION		DUTDOOR	L	UNDER ROOF		MEZZ	ANINE		<u></u> GRO	JND FLOOR	
				Er	IGINEERING						
COMPRESSO	-	3000 RPM Shall be	e preffered		RPM	CRITICAL SPEE				RPM	
MAX CONTINU	JOUS SPEED				RPM	CRITICAL SPEE	DS 2nd			RPM	
SURGE LIMIT		m3/			AT DESIGN	CONDITIONS		% C	OF DESIGN CAP	ACITY	
DIRECTION OF	ROTATION (COMPRESSOR VIEWED	FROM MOT			ISTRUCTION					
COMPRESSO		SPLIT			LS AND CO	NSTRUCTION	MATERIA	L SS.	204		
COMPRESSO	RCASING	THICKNESS		IORIZONTAL							
						mm		SION ALLO			mm
IMPELLERS		MAX ALLOWABLE TEN		NCLOSED	1	80 °C			SS/HYDR.TEST	30	bar g
INPELLERS		CONSTRUCTION	1				MATERIA	L Star			
				¢AST	DIAME				MILLED		
DIAPHRAGMS		No.		kr.c	DIAME		MAX				
		COOLED RADIAL CLEARANCES		ES		¶vo mm	MATERIA MATERIA				
SHAFT		DIAMETERS (IMPELLE					MATERIA				
RADIAL BEAR	INCE	HOUSING	,	NTEGRAL		mm	MATERIA				
RADIAL BEAR	11103	TYPE				SEPARATE					
		LUBRICATION			PLATED SHELLS	FORCED			01.1	PRESS.	bar
		SPAN mr			m	_		mm		ARANCE	mr
THRUST BEAF	RINGS	TYPE		AINGSBURY SI		KINGSBURY DOUB		BALL	CLL		
SHAFT SEAL				ORCED	NOLL				PRESS.	bar	
BASEPLATE		TYPE		ABYRINTH		IIIQUID FILM					bui
		ТҮРЕ		VELDED STEEL		CAST STEEL			Face to fac		
		COMMON WITH COMP			-	TYES			1 400 10 140		
		SUPPLIED BY			MANUFACTURER						
COUPLING		POSITION			RMOTOR	COMPR.	NOTOR	CO	MPR. TURBINE		
		MANUFACTURER									
		TYPE									
		LUBRICATION									
COUPLING GL	JARD	TYPE		HEET STEEL		NONSPARKING					
		SUPPLIED BY			MANUFACTURER						
				-							
OTHER PARTS	S:										
MASS: COMPF	RESSOR WITH	OUT BASE PLATE			K	MAX FOR MAIN	TENANCE				К
MASS: MAX TO	D MOUNTING				K	g COMPRESSOR	WITH BASE	PLATE			K
					CONNECTIO	ONS					
CONNECTION	(a)	SIZE	RATIN	NG	FACING	UPWARDS	DOWN	WARDS	RIGHT (b)	L	EFT (b)
INTAKE PIPINO	3										
DELIVERY PIP	ING		1				[]			
			1				[]			
							[]			
]			
PURGE CONN	IECTIONS LIQ	UID USED	·	SIZ	ZE	RATING AND F	ACING		No.		
DRAIN CONNE	CTIONS			SIZ	ZE	RATING AND F	ACING		No.		

47	PURGE C	CONNECTIONS LIQUID USED			SIZE	RATING AND FACING	No.
48 I	ORAIN CO	ONNECTIONS			SIZE	RATING AND FACING	No.
49	/ENT CC	NNECTIONS			SIZE	RATING AND FACING	No.
50							
51	NOTES:						
52							
53 I	NOTES:						
54							
55							
56							
57							
58							
59							
60							
61							
62							
63	3						
64		AFC	10/10/21	M.N	M.A		
65		Issue for bidding					
66	0	First issue					
67	REV.	DESCRIPTION	DATE	BY	APP'D		

Process Data Sheet

CENTRIFUGAL COMPRESSOR

PLANT: PE-PP R&T Arak Cei	nter						ARI	ΞA	5	SHEET OF	6
SERVICE 2nd GAS PHASE REACT	OR COMPRES	SOR					ITEM		J	0	0
TYPE AND MODEL				No. OF L	INITS						
	DUTDOOR		Γψνα	ER ROOF			IEZZANINE			LOOR	
	-	L		ON AND SEAL	NG SYST						
COMPRESSOR MANUFACTURER WILL	SUPPLY A FC										
COMMON WITH	OMPRESSOR		GEA	R		[RIVER				
COMBINED WITH SEAL OIL SYSTEM				ARATE FROM SEAL	OIL SYSTEM					SEAL OIL UNIT	
SYSTEM ACCORDING TO DIAGRAM FIG	i.			API STANDARI							
OIL SYSTEM			LU	BRICATION					SEAL		
TYPE OF OIL USED											
WORKING PRESSURE	bar g										
MAX ALLOWABLE PRESSURE	bar g										
REQUIRED OIL FLOW RATE	m³/h										
RESERVOIR: MOUNTED ON		BASE PLATE					BASE PLATE		CONSOLE		
CAPACITY	m ³										
RETENTION TIME	min										
PROVIDED WITH HEATER				STEAM					\$TEAM		
MATERIAL											
MAIN PUMP; MANUFACTURER											
TYPE-MODEL											
CASING MATERIAL			2					2			
CAPACITY-SPEED-POWER			m³/h	RPM		KW		n ³ /h	RPM		
MOUNTED ON		BASE PLATE					BASE PLATE				
DRIVEN BY		\$HAFT		IOTOR		NE	SHAFT	MOT	OR		
STAND-BY PUMP; MANUFACTURER											
TYPE-MODEL											
CASING MATERIAL			2.					a .			
CAPACITY-SPEED-POWER			m³/h	RPM		KW		n ³ /h	RPM		
MOUNTED ON		BASE PLATE					BASE PLATE				
DRIVEN BY				10TOR		NE	SHAFT	Пиот	OR		
		YES		No					NO		
	bor a						TES				
PUMP SAFETY VALVES; SET PRESS. TYPE	bar g	INTEGRAL		SEPARATE			INTEGRAL		SEPARATE		
OIL COOLER											
MOUNTED ON		BASE PLATE					BASE PLATE				
COOLING MEDIUM				Cronsorr			Linocitaria		Gougore		
CONSTRUCTION CODE		TEMA C					TEMA C				
SHELL MATERIAL											
PIPE MATERIAL											
EXCHANGING HEAT	KW										
FILTERS		SINGLE		DUAL			SINGLE		D UAL		
MANUFACTURER -TYPE											
FILTERING DEGREE											
FILTERING ELEMENT		REPLACEABL		LEANING TY	PE		REPLACEABLE		CLEANING TY	ΈE	
BODY MATERIAL											
VALVES: BODY MATERIAL							-				
OIL DRAINS: REQUIRED		TES				No		SUPPL	IED BY		
MOUNTED ON		BASE P	LATE								
MAX SEAL OIL LEAK								LITERS	S/DAY		
OVERHEAD SEAL OIL TANK: REQUIRE)	TES				No					
SUPPLIED BY		C COMPR	ESSOR MANU	JFACTURER							
PLACED		METERS	ABOVE C	OMPRESSOR	CENTER	LINE					
CLARIFIER: REQUIRED		YES				No					
SUPPLIED BY			ESSOR MANU	JFACTURER							
CAPACITY		00%	DAY			0% DAY					
OIL PIPING MATERIAL		¢-STEE	L, CLEAN AN	D PICKLED							
		_ \$TAINI	ESS STEEL								
DRAIN OIL PIPING MATERIAL		STAINI	ESS STEEL								
OTHER DATA											
NOTES:											
											_
3											
2 AFC	10/10)/21 M.N	M.A								
1 Issue for bidding											
			1								
0 First issue REV. DESCRIPTION			APP'D								

Process Data Sheet

DATE October 10, 2021

PLANT:	PE-PP R&T Arak Center					AREA	SHEET 6 OF 6
SERVICE	2nd GAS PHASE RE	ACTOR CON	IPRESSO	2		ITEM	
TYPE AN	ID MODEL				No. OF UNITS 0		
LOCATIC	N OUTDOOR			ER ROOF		ZZANINE	GROUND FLOOR
					NT AND PROTECTIONS		
				RIC UNITS	RURCHASER		NOT NEEDED
	ANEL FOR COMPRESSOR SUPPLIE			PR.MANUF.		NOT REQUIRED	
	ICAL AND INSTRUMENT CONNECTIO	UNS SHALL I	SE BROUG	SHIUUII			
	METERS AND INDICATORS			М	ANUFACTURER	T	PE AND SIZE
PRESSU	RE GAUGES						
THERMO	METERS						
	IDICATORS						
	LOW INDICATORS						
TACHOM							
	RE SWITCHES ATURE SWITCHES						
	SPLACEMENT INDICATORS						
	AND/OR RELIEF VALVES						
	INDICATOR & RECORDER						
		RUMENTS	COMPRE	SSOR MA	NUFACTURER SHALL SU	JPPLY AS A MINIMUM	
PRESSU		MOUNTED		MOUNTE			ALARM LOCK
OIL PUM	P DISCHARGE				LUBE OIL LOW PRESS	URE	
					SEAL OIL LOW PRESSU		
					RESERVOIR OIL LOW L		
	INTIAL, SEAL OIL				GOV. CONTROL OIL LO		
				<u> </u>	OIL FILTERS DIFF. HIGH		
					COMPR. DISCHARGE H ROTOR AXIAL POSITIO		
					STARTING OF AUXILIA		
				H	HIGH VIBRATIONS ON I		
					HIGH TEMP. LUBE OIL		
THERMO	DMETERS:				HIGH TEMP EACH BEA	RING	
OUTLET,	, EACH BEARING						
OUTLET,	, EACH SEAL						
	SUCTION/DISCHARGE						
REM	OTE LOCKING	ELEC	TRIC			UMATIC	HYDRAULIC
	L POSITION CONTINUOUS INDICATOR	Linc	TRIC			UNATIC	
<u> </u>	JAL FLOW INDICATOR ON EACH OIL OUTLET I	LINE FOR BEARI	NGS-SEAL-CC	UPLINGS			
	EL GAUGES LUBE						
	JATE ALARMS AND LOCKS THE CON						
PEI) ALARM					
	AND LOCK CONTACTS WILL BE SEP			DNE-POIE	DOUBLE-THROW TYPE		
					E DOUBLE-THROW TYPE		
					CONTROL		
METHOD) SPEED VARIATIO	N	FROM		TO RPM	ON SUCTION	DISCHARGE
	BY-PASS		FROM		TO %		
	DL DEVICE WITH PRESSURE	SWITCH		VITH THEF	MOSTAT		
SIGNAL I	FROM		TYPE		RANGE		
					EFFECT	ON VARIATION	
ANTISUR	RGE CONTROL						
NOTES:							
-							
3							
2	AFC	10/10/21	M.N	M.A			
1	Issue for bidding						
0	First issue	DATE	DV/				
REV.	DESCRIPTION	DATE	BY	APP'D			

	client:
ROJECT: PP-PE PILOT PLANT	۵
	en ore
Title: DATA SHEET FOR 1ST GAS PHASE REACTOR	شرکت ملی صنایع پتروشیمی
CENTRIFUGAL COMPRESSOR (CF-411)	شرکت پژوهش و فناوری پتروشیمی

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