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Title: DATA SHEET FOR 1ST GAS PHASE REACTOR CENTRIFUGAL COMPRESSOR (CF-411)



DATA SHEET FOR 1ST GAS PHASE REACTOR CENTRIFUGAL COMPRESSOR (CF-411)

client:

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			<u>P</u>	rocess Data S	heet			DATE
			CENTRI	FUGAL CON	PRESSOR		Oct	ober 10, 202
PLANT:	PF-PP R&T	Arak Center	•=			AREA		Sheet
			000			400	3	OF
SERVICE		SE REACTOR COMPRES TRIFUGAL	SOR	Quantity:	2	ITEM	LF	-411
OCATION		DUTDOOR	JUNDER ROO		MEZZANI	IE		FLOOR
				SERVICE DAT	4 <u> </u>			
CONDITIONS	3		NORMAL	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	
POSITION								
	DR CASING ED GAS (SEE AI							
	C PRESSURE:	bar a						
	kg/h	bai a						
CAPACITY	std m ³ /h							
	m ³ /h AT INTAK	E CONDITIONS	509	509	509			
				NTAKE CONDITIO			r	
PRESSURE		bar a	25	25	19			
TEMPERATU		°C %	75	75	80			
OLAR MAS		% Kg/Kmol	35.7	41.5	37.6			
Cp/Cv (K1)			1.27	1.38	1.25		1	
DENSITY		Kg/m ³	37.5	49.5	27.4			
Z ₁ - COMPRE	ESSIBILITY FAC	FOR	0.82	0.72	0.86			
				SCHARGE CONDI				
PRESSURE		bara ACTUAI °C	25.5	25.6	19.5			
Cp/Cv (K2)	IRE EXPECTED	ACTUAL C						
1 ()	SSIBILITY FAC	ror						
-								
SURGE LIMI	FAT DES. CON). %						
COMPRESSI								
		m	112	104	123			
POWER REC		KW RPM	22					
DRIVER (1&4			-ELECTRIC MOTOR		STEAM TURBINE			
	,			GAS ANALYSIS				
CO	MPOSITION	MOLAR MASS	% MOLAR	% MOLAR	% MOLAR	% MOLAR	% MOLAR	% MOLA
1 Hydroge	n	2.0	18.00	2.40	0.50			
2 Ethylene		28.1	5.00	11.80	40.00			
3 Propylen		42.1	77.00	92.40	44.50			
4 Propane 5 Butene-1		44.1 56.1	77.00	83.10 2.70	15.00			
6	I	50.1		2.70				
7								
8								
Total			100.00	100.00	100.00			
NOTES ON G	BASES:	10 gr/m3 of polymer dus	t in process gas (m	ax particle size 500	um)			
	I CAUSED BY:		, , , , , , , , , , , , , , , , , , ,		,			
COMPRESS	OR SKETCH							
							<u></u>	
		<u>CAL MOTOR SHALL BE I</u> MOTOR ENCLOSURES S				LV NUTURS" DO	U.NU.900-5PC-A4-1	20005
		ONS & TEST PLANS SH				an for Centrifugal C	ompressors'	
1)								
1)		P-A4-RE-0004.			A4-PR-0006.			
1) 2)	ALL INSPECTI DOC.No.900-I	DITIONS MUST BE CONS	IDERED BASED ON	DOC.N0.900-3FC-				
1) 2) 3) 4)	ALL INSPECTI DOC.No.900-IT UTILITY CONE ALL ELECTRIC	DITIONS MUST BE CONS CAL MOTORS SHOULD E	E ACCORDANCE E	XPLOSION PROOF	STANDARD EXIIC	ГЗ.		
1) 2) 3) 4) 5)	ALL INSPECTI DOC.No.900-IT UTILITY CONE ALL ELECTRIC THE APPROP	DITIONS MUST BE CONS CAL MOTORS SHOULD E ATE STANDARD FOR CO	E ACCORDANCE E OMPRESSORS IS B	XPLOSION PROOF ASED ON API-617	STANDARD EXIIC	ГЗ.		
1) 2) 3) 4) 5) 6)	ALL INSPECTI DOC.No.900-IT UTILITY CONE ALL ELECTRIC THE APPROP TYPE OF COM	DITIONS MUST BE CONS CAL MOTORS SHOULD E ATE STANDARD FOR CO IPRESSOR IS ASSUMED	E ACCORDANCE E OMPRESSORS IS B TO BE SINGLE SH	XPLOSION PROOF ASED ON API-617 AFT TYPE.	STANDARD EXIIC	Γ3. 		
NOTES: 1) 2) 3) 4) 5) 6) 7) 8)	ALL INSPECTI DOC.No.900-I ^T UTILITY CONE ALL ELECTRIC THE APPROP TYPE OF COM TURNDOWN F	DITIONS MUST BE CONS CAL MOTORS SHOULD E ATE STANDARD FOR CO IPRESSOR IS ASSUMED RATIO FOR THESE TYPE	E ACCORDANCE E OMPRESSORS IS B TO BE SINGLE SH OF COMPRESSOR	XPLOSION PROOF ASED ON API-617 AFT TYPE. IS IS TO BE 60%.				DN ARF VITAI
1) 2) 3) 4) 5) 6)	ALL INSPECTI DOC.No.900-IT UTILITY CONE ALL ELECTRIC THE APPROP TYPE OF COM TURNDOWN F ALL PRINCIPL	DITIONS MUST BE CONS CAL MOTORS SHOULD E ATE STANDARD FOR CO IPRESSOR IS ASSUMED	E ACCORDANCE E OMPRESSORS IS B TO BE SINGLE SH OF COMPRESSOR RATION MONITORI	XPLOSION PROOF ASED ON API-617 AFT TYPE. IS IS TO BE 60%. NG, CAPACITY COI	NTROL, COOLING,	PROTECTION AND		

				Process Da	ta Sheet				DATE	
			CENT		OMPRESSO	DR		0	ctober 10,	2021
PLANT: PE-PP R&	T Arak Cent	er					AREA 400	4	SHEET OF	- 6
SERVICE 1st GAS PH	ASE REACTOR		SSOR				ITEM		F-411	
TYPE AND MODEL					ntity: 2			_		
LOCATION	DUTDOOR		JNDE	ENGINEERIN		ZZANINE		GROUNE) FLOOR	
COMPRESSOR SPEED	3000 R	PM shall be	preferred	RPM	CRITICAL SPE	EDS 1st			RPM	
MAX CONTINUOUS SPEEL			•	RPM	CRITICAL SPE				RPM	
SURGE LIMIT		m3/ł			IN CONDITIONS		% O	F DESIGN CAPAC	NTY	
DIRECTION OF ROTATION	I (COMPRESS	OR VIEWED		TERIALS AND C						
COMPRESSOR CASING	SPLIT					MATERIA	LS.S	304		
	THICKNESS	6			mm					mm
	MAX ALLOV	VABLE TEM	IP.		180 °C			S/HYDR.TEST	30	bar g
MPELLERS	TYPE		ENCLO	DSED	∠ DPEN	MATERIA	L Stair	nless steel S.S 30	4	
	CONSTRUC	TION	CAST		WELDED	RIVETED		MILLED		
DIAPHRAGMS	No.		YES	DIAN		MAX	1			
LABYRINTHS	COOLED RADIAL CLE		LITES		mm	MATERIA MATERIA				
SHAFT	DIAMETERS		R FIT)		mm	MATERIA				
RADIAL BEARINGS	HOUSING	_,		RAL	SEPARATE					
	TYPE			T METAL PLATED SHELL		-				
	LUBRICATIO		RING		FORCED			OIL PR		ba
THRUST BEARINGS	SPAN TYPE	mm					mm	CLEAR	-	1
SHAFT SEAL (NOTE 1)	LUBRICATIO	ON		SBURY SINGLE	KINGSBURY DOU	-	BALL	OIL PR	ROLLER ESS.	ba
BASEPLATE	TYPE						MECHANIC			
	TYPE			ED STEEL	CAST STEEL	-				
			RESSOR AND M	IOTOR	YES		√NO			
	SUPPLIED E	BY	√ ¢OMP	RESSOR MANUFACTURE					-	
COUPLING	POSITION MANUFACT	IIDED		GEAR MOTOR	COMPR	. MOTOR	CON	IPR. TURBINE	-	
	TYPE	UKEK							-	
		אר								
	LUDRICATIC									
COUPLING GUARD	TYPE	511	SHEET	T STEEL	NONSPARKING					
COUPLING GUARD				T STEEL RESSOR MANUFACTURE						
	TYPE								1	
OTHER PARTS:	TYPE SUPPLIED E	3Y			R					
	TYPE SUPPLIED E	3Y			R Kg MAX FOR MA					
OTHER PARTS: MASS: COMPRESSOR WI	TYPE SUPPLIED E THOUT BASE F G	BY		CONNECT	Kg MAX FOR MA Kg COMPRESSO TIONS	INTENANCE R WITH BASE	PLATE		· · · · · · · · · · · · · · · · · · ·	
OTHER PARTS: MASS: COMPRESSOR WI MASS: MAX TO MOUNTIN CONNECTION (a)	TYPE SUPPLIED E THOUT BASE F G	BY PLATE SIZE	CCMP RATING	CONNECT FACING	R MAX FOR MA Kg COMPRESSO TONS UPWARD	INTENANCE R WITH BASE	PLATE	RIGHT (b)		FT (b)
OTHER PARTS: MASS: COMPRESSOR WI MASS: MAX TO MOUNTIN CONNECTION (a) INTAKE PIPING	TYPE SUPPLIED E THOUT BASE F G	BY PLATE SIZE 5	RATING #300	CONNECT FACING	R MAX FOR MA Kg COMPRESSO TIONS	INTENANCE R WITH BASE	PLATE WARDS			
OTHER PARTS: MASS: COMPRESSOR WI MASS: MAX TO MOUNTIN CONNECTION (a)	TYPE SUPPLIED E THOUT BASE F G	BY PLATE SIZE	CCMP RATING	CONNECT FACING	R Kg MAX FOR MA Kg COMPRESSO TONS	INTENANCE R WITH BASE S DOWN	PLATE WARDS]]] [FT (b)
OTHER PARTS: MASS: COMPRESSOR WI MASS: MAX TO MOUNTIN CONNECTION (a) INTAKE PIPING	TYPE SUPPLIED E THOUT BASE F G	BY PLATE SIZE 5	RATING #300	CONNECT FACING	R MAX FOR MA Kg COMPRESSO TIONS	INTENANCE R WITH BASE	PLATE WARDS] []	FT (b)
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OTHER PARTS: MASS: COMPRESSOR WI MASS: MAX TO MOUNTING CONNECTION (a) INTAKE PIPING DELIVERY PIPING	TYPE SUPPLIED B THOUT BASE F G	BY PLATE SIZE 5	RATING #300	CONNECT FACING RF RF	R MAX FOR MA Kg COMPRESSO TONS UPWARDS	INTENANCE R WITH BASE DOWN C C C C C C C C C C C C C C C C C C C	PLATE WARDS]]]]]]]]]]	FT (b)
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			<u>P</u>	rocess Data S	neet			DATE
			CENTRI	FUGAL COM	PRESSOR			October 10, 2021
PLANT: PE	E-PP R&T Arak Cent	ter				AREA 400		SHEET 5 OF
SERVICE 1s	t GAS PHASE REACTO		SSOR			ITEM		5 UF
TYPE AND MODE				Quantity:	2	IT EW		
OCATION		UTDOOR		UNDER ROOF		MEZZANINE	√GF	OUND FLOOR
				ATION AND SEALIN	IG SYSTEM			
	MANUFACTURER WILL							
		OMPRESSOR		GEAR		DRIVER		ITHOUT SEAL OIL UNIT
	DING TO DIAGRAM FIG			SEPARATE FROM SEAL C			vv	THOUT SEAL OIL UNIT
	OIL SYSTEM	•		LUBRICATION	10.011		SEAL	
TYPE OF OIL US	ED							
WORKING PRES		bar g						
		bar g						
REQUIRED OIL F RESERVOIR: MO		m³/h	BASE PLATE	CONSOLE		BASE PLATE	CONS	SOLE.
CAPACITY	ONTED ON	m³	DAJE PLATE	CONSOLL		ASE PLATE		JOEL
RETENTION	ITIME	min						
	WITH HEATER		ELECTRIC	\$TEAM		ELECTRIC	STEA	M
MATERIAL								
MAIN PUMP; MAI								
TYPE-MODE CASING MA								
	SPEED-POWER		m ³ /h	RPM	KW	m³/h	1	RPM
MOUNTED			BASE PLATE	CONSOLE		BASE PLATE	CONS	
DRIVEN BY			SHAFT	MOTOR	TURBINE	SHAFT	MOTOR	TURBINE
STAND-BY PUMF	; MANUFACTURER							
TYPE-MODE								
CASING MA			3	DDM	1011	3		DDM
MOUNTED (SPEED-POWER		m ³ /h BASE PLATE		KW	m ³ /h BASE PLATE		RPM
DRIVEN BY			SHAFT	MOTOR	TURBINE	SHAFT	MOTOR	
AUTOMATIC	START		YES	NO		_	_	
ACTUATED	ON					∐ YES	NO	
PUMP SAFETY V	ALVES; SET PRESS.	bar g						
TYPE			NTEGRAL	SEPARATE		NTEGRAL	SEPA	
OIL COOLER MOUNTED (BASE PLATE			DUAL BASE PLATE		
COOLING M			PROETERTE	DONSOLL				
CONSTRUC			TEMA C			TEMA C		
SHELL MAT	ERIAL							
PIPE MATER								
EXCHANGIN	IG HEAT	KW						
FILTERS	URER -TYPE		\$INGLE	DUAL		SINGLE	DUAL	
FILTERING								
FILTERING			REPLACEABLE	CLEANING TYP	E	REPLACEABLE	CLEA	NING TYPE
BODY MATE	RIAL							
VALVES: BODY N					— <u> </u>			
OIL DRAINS: REC								3Y
MOUNTED O MAX SEAL O			BASE PLATE		CONSOLE		LITERS/DAY	,
	L OIL TANK: REQUIRED)	YES		NO		LITERS/DAT	
SUPPLIED B			COMPRESSOR I	MANUFACTURER				
PLACED			METERS ABO	/E COMPRESSOR (CENTERLINE			
CLARIFIER: REQ			YES		No			
SUPPLIED E	3Y			MANUFACTURER				
CAPACITY OIL PIPING MATE	RΙΔΙ		00% DAY		50% DAY			
			STAINLESS STE					
ORAIN OIL PIPIN	G MATERIAL		STAINLESS STE					
OTHER DATA								
NOTES:								

			S Data Sheet		DATE October 10, 2021
		CENTRIFUGA	L COMPRESSOR	AREA	SHEET
PLANT: PE-PP R&T	Arak Center			400	6 OF 6
	GAS PHASE REACTOR COM	PRESSOR		ITEM	
2 TYPE AND MODEL 3 LOCATION	DUTDOOR		Quantity: 2		
4	UTDOOR			NINE	GROUND FLOOR
5 INSTRUMENT READ OUT		METRIC UNITS		ENGLISH UNITS	
6 LOCAL PANEL FOR COMPR	ESSOR SUPPLIED BY	COMPR.MANUF.	PURCHASER	NOT REQUIRED	NOT NEEDED
	IENT CONNECTIONS SHALL	BE BROUGHT OUT TO			
B COMPR.MANUFACTURE	R D INDICATORS	MANL		TYPE A	AND SIZE
PRESSURE GAUGES					
1 THERMOMETERS					
3 SIGHT FLOW INDICATORS					
5 PRESSURE SWITCHES					
TEMPERATURE SWITCHES					
7 AXIAL DISPLACEMENT INDI					
SAFETY AND/OR RELIEF VA					
	-	L COMPRESSOR MANU	FACTURER SHALL SUPP		
1 PRESSURE GAUGES	LOCAL MOUNTED	PANEL MOUNTED	PROTECTIONS	v v	ALARM LOCK
2 OIL PUMP DISCHARGE	7	7	LUBE OIL LOW PRESSURE		
3 LUBE OIL EACH LEVEL 4 SEAL OIL EACH LEVEL			SEAL OIL LOW PRESSURE RESERVOIR OIL LOW LEV		
5 DIFFERENTIAL, SEAL OIL		<u> </u>	GOV. CONTROL OIL LOW		
6 DIFF. BEFORE/AFTER FILTE			OIL FILTERS DIFF. HIGH P		
7 GOV. CONTROL OIL	1	1	COMPR. DISCHARGE HIGH	H TEMP.	
8 COMPRESSOR DISCHARGE 9 COMPRESSOR SUCTION	-		ROTOR AXIAL POSITION		
0 INTERMEDIATE STAGES	<u> </u>	<u> </u>	STARTING OF AUXILIARY/		
1			HIGH TEMP. LUBE OIL		
2 THERMOMETERS:			HIGH TEMP EACH BEARIN	G	✓
3 OUTLET, EACH BEARING 4 OUTLET, EACH SEAL					
5 COOLER INLET/OUTLET		<u> </u>			
6 COMPR. SUCTION/DISCHAP		 I			
7			_		
8 REMOTE LOCKING 9 AXIAL POSITION CONTINUOU		CTRIC	PNEUMA	TIC	HYDRAULIC
	N EACH OIL OUTLET LINE FOR BEARIN	IGS-SEAL-COUPLINGS			
1 LEVEL GAUGES LUBE					
2					
3 4 TO ACTUATE ALARMS AND	LOCKS THE CONTACT WILL				
5 DPEN	CLOSE TO SOUND ALARM				
6 DPEN	CLOSE TO LOCK				
	TS WILL BE SEPARATE AND				
9			JBLE-THROW TYPE		
0			ONTROL		
1 METHOD	SPEED VARIATION	FROM TO	RPM	ON SUCTION	DISCHARGE
	BY-PASS	FROM TO	%	AUTOMATIC	MANUAL
3 CONTROL DEVICE 4 SIGNAL FROM	WITH PRESSURE SWITCH		RANGE		
5			EFFECT ON	VARIATION	
6 ANTISURGE CONTROL					
7 NOTES:					
3					
)					
1					
2					
4					
5					
6					
7 REV. 03					

PRC).JEC	T: PF	P-PE	PIL	тс	PLAN	Т
1 1/2							

Title: DATA SHEET FOR 2nd GAS PHASE REACTOR CENTRIFUGAL COMPRESSOR (CF-421)



DATA SHEET FOR 2nd GAS PHASE REACTOR CENTRIFUGAL COMPRESSOR (CF-421)

client:

Document No.: 400-DAS-A4-RE-0037	Rev.: 03
Owner Job No.:	Type: DAS
	Page 1

PROJEC	T: PI	P-PE	PILO [.]	T PLA	NT						client:						5		2	
Title: DA CENTRIF								TOR											ىركت ملى ت پژوهش	
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В	Х	Х	Х	Х																
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3	Х	Х	Х	Х																
4	Х	Х	Х	Х																
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			<u></u>	Process Data Sh	neet			DATE
			CENTRI	FUGAL COM	PRESSOR		0	ctober 10, 2021
PLANT:	PE-PP R&T Ara	ak Center				AREA		05
SERVICE	2nd GAS PHASE	REACTOR COMPRES	SOR			400	3	OF F-421
YPE AND M				Quantity: 1				
OCATION		TDOOR	JUNDER ROO		MEZZANIN	IE	GROUN	D FLOOR
				SERVICE DATA				
CONDITIONS	3		NORMAL	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE	4
POSITION								
COMPRESS		(2)2)						
	ED GAS (SEE ANAL	,						-
AROMETRI	C PRESSURE:	bar a						
CAPACITY	kg/h std m ³ /h							-
	m ³ /h AT INTAKE C		1031	1145	1145			
				INTAKE CONDITIO				
RESSURE		bar a	25	25	25			
EMPERATU	IRE	°C	75	80	75			
ELATIVE HU	UMIDITY	%						
IOLAR MAS	S	Kg/Kmol	28.1	39.27	42.35			
Cp/Cv (K1)			1.25	1.31	1.41			
DENSITY		Kg/m ³	26.8	42.8	51.8		ļ	
1 - COMPRE	SSIBILITY FACTOR	(0.90		0.71			
DECOUDE			25.4	SCHARGE CONDIT 25.7				
	IRE EXPECTED/AC	bara TUAL °C	20.4	20.1	25.8			+
EMPERATU Cp/Cv (K2)	INC LAFLUTED/AU							-
	SSIBILITY FACTOR	2						1
			I	L				
	FAT DES. COND.	%	[
OMPRESSI								
POLYTROPIC		m	150.34	164.93	156.84			
POWER REC		KW	55					
COMPRESSO		RPM						
DRIVER (1&4	-)			GAS ANALYSIS	STEAM TURBINE			
CON	MPOSITION	MOLAR MASS	% MOLAR	% MOLAR	% MOLAR	% MOLAR	% MOLAR	% MOLAF
1 Hydroge		2.0	28.50	4.70	0.70	70 WOLAR	70 WOLAR	70 WOLA
2 Ethylene		28.1	25.00	23.40	10.00			
3 Propylen		42.1						
4 Propane	1	44.1	46.50	64.40	88.00			
5 Butene-1	1	56.1		7.50	1.30			
6								
7								
8								
			100.00	100.00	100.00			
Total								_
Total					1			
Total								
Total								
	GASES:							
IOTES ON G	GASES: I CAUSED BY:							
IOTES ON G								
IOTES ON G	I CAUSED BY:							
IOTES ON G								
IOTES ON G ORROSION	I CAUSED BY:							
OTES ON G ORROSION OMPRESSO OTES:	I CAUSED BY: DR SKETCH THE ELECTRICAL	MOTOR SHALL BE I				R LV MOTORS " DO	DC.No.900-SPC-A	4-EE-0005 "
IOTES ON G CORROSION COMPRESSO IOTES: 1)	I CAUSED BY: DR SKETCH THE ELECTRICAL BY VENDOR, MO	TOR ENCLOSURES S	SHALL BE OF TOTA	LLY ENCLOSED FAN	N-COOLED (TEFC)			4-EE-0005 "
OTES ON G ORROSION OMPRESSO IOTES:	I CAUSED BY: DR SKETCH THE ELECTRICAL BY VENDOR, MOT ALL INSPECTION:	TOR ENCLOSURES S S & TEST PLANS SHA	SHALL BE OF TOTA	LLY ENCLOSED FAN	N-COOLED (TEFC)			4-EE-0005 "
IOTES ON G CORROSION COMPRESSO IOTES: 1) 2)	I CAUSED BY: DR SKETCH THE ELECTRICAL BY VENDOR, MOT ALL INSPECTION: DOC.No.900-ITP-F	TOR ENCLOSURES S S & TEST PLANS SHA \4-RE-0004.	SHALL BE OF TOTA ALL BE DONE IN AC	LLY ENCLOSED FAN CCORDANCE WITH 'I	N-COOLED (TEFC)			4-EE-0005 "
OTES ON G ORROSION OMPRESSO IOTES: 1) 2) 3)	I CAUSED BY: DR SKETCH THE ELECTRICAL BY VENDOR, MOT ALL INSPECTION: DOC.No.900-ITP-4 UTILITY CONDITION	TOR ENCLOSURES S S & TEST PLANS SH/ A4-RE-0004. DNS MUST BE CONS	SHALL BE OF TOTA ALL BE DONE IN AC	LLY ENCLOSED FAN CCORDANCE WITH 'I N DOC.No.900-SPC-A	N-COOLED (TEFC) Inspection & Test Pl A-PR-0006.	an for Centrifugal C		4-EE-0005 "
IOTES ON G CORROSION COMPRESSO IOTES: 1) 2) 3) 4)	I CAUSED BY: DR SKETCH THE ELECTRICAL BY VENDOR, MOT ALL INSPECTION: DOC.No.900-ITP-4 UTILITY CONDITION ALL ELECTRICAL	TOR ENCLOSURES S S & TEST PLANS SH/ A4-RE-0004. DNS MUST BE CONS MOTORS SHOULD E	SHALL BE OF TOTA ALL BE DONE IN AC IDERED BASED ON BE ACCORDANCE E	LLY ENCLOSED FAN CCORDANCE WITH 'I N DOC.No.900-SPC-A EXPLOSION PROOF	N-COOLED (TEFC) Inspection & Test Pl A-PR-0006.	an for Centrifugal C		4-EE-0005 "
IOTES ON G CORROSION COMPRESSO IOTES: 1) 2) 3) 4) 5)	I CAUSED BY: DR SKETCH THE ELECTRICAL BY VENDOR, MOT ALL INSPECTION: DOC.No.900-ITP-4 UTILITY CONDITIC ALL ELECTRICAL THE APPROPIATE	TOR ENCLOSURES S S & TEST PLANS SH/ A4-RE-0004. DNS MUST BE CONS MOTORS SHOULD E E STANDARD FOR CO	SHALL BE OF TOTA ALL BE DONE IN AC IDERED BASED ON BE ACCORDANCE E DMPRESSORS IS B	LLY ENCLOSED FAN CCORDANCE WITH 'I N DOC.No.900-SPC-A EXPLOSION PROOF BASED ON API-617	N-COOLED (TEFC) Inspection & Test Pl A-PR-0006.	an for Centrifugal C		4-EE-0005 "
NOTES ON G CORROSION	I CAUSED BY: DR SKETCH THE ELECTRICAL BY VENDOR, MO ALL INSPECTION: DOC.No.900-ITP-// UTILITY CONDITIC ALL ELECTRICAL THE APPROPIATE TYPE OF COMPR	TOR ENCLOSURES S S & TEST PLANS SH/ A4-RE-0004. DNS MUST BE CONS MOTORS SHOULD E	SHALL BE OF TOTA ALL BE DONE IN AC IDERED BASED ON BE ACCORDANCE E OMPRESSORS IS B D TO BE SINGLE SH	LLY ENCLOSED FAN COORDANCE WITH 'I N DOC.No.900-SPC-A EXPLOSION PROOF BASED ON API-617 IAFT TYPE.	N-COOLED (TEFC) Inspection & Test Pl A-PR-0006.	an for Centrifugal C		4-EE-0005 "
NOTES ON G CORROSION COMPRESSO NOTES: 1) 2) 3) 4) 5) 6)	I CAUSED BY: DR SKETCH THE ELECTRICAL BY VENDOR, MO ALL INSPECTION: DOC.NO.900-ITP-/ UTILITY CONDITION ALL ELECTRICAL THE APPROPIATE TYPE OF COMPR TURNDOWN RAT	TOR ENCLOSURES S S & TEST PLANS SH/ A4-RE-0004. DNS MUST BE CONS MOTORS SHOULD E E STANDARD FOR CO ESSOR IS ASSUMED	CALL BE OF TOTAL ALL BE DONE IN AC IDERED BASED ON BE ACCORDANCE E OMPRESSORS IS B TO BE SINGLE SH OF COMPRESSOR	LLY ENCLOSED FAN COORDANCE WITH 'I N DOC.No.900-SPC-A EXPLOSION PROOF BASED ON API-617 IAFT TYPE. RS IS TO BE 60%.	N-COOLED (TEFC) Inspection & Test Pl N4-PR-0006. STANDARD EXIIC1	an for Centrifugal C	ompressors'	
IOTES ON G CORROSION COMPRESSO IOTES: 1) 2) 3) 4) 5) 6) 7)	I CAUSED BY: DR SKETCH THE ELECTRICAL BY VENDOR, MO ALL INSPECTION: DOC.NO.900-ITP-/ UTILITY CONDITION ALL ELECTRICAL THE APPROPIATE TYPE OF COMPR TURNDOWN RAT ALL PRINCIPLES	TOR ENCLOSURES S S & TEST PLANS SH/ A4-RE-0004. DNS MUST BE CONS MOTORS SHOULD E E STANDARD FOR CO ESSOR IS ASSUMED IO FOR THESE TYPE	CALL BE OF TOTAL ALL BE DONE IN AC IDERED BASED ON BE ACCORDANCE E OMPRESSORS IS B TO BE SINGLE SH OF COMPRESSOR RATION MONITORI	LLY ENCLOSED FAN COORDANCE WITH 'I N DOC.No.900-SPC-A EXPLOSION PROOF BASED ON API-617 IAFT TYPE. RS IS TO BE 60%. ING, CAPACITY CON	N-COOLED (TEFC) Inspection & Test Pl M-PR-0006. STANDARD EXIICT TROL, COOLING, F	an for Centrifugal C 73. PROTECTION AND	ompressors'	ION ARE VITAL

				<u>F</u>	Process Dat	a S	Sheet						DATE	
			С	ENTRI	FUGAL C	ON	/IPRE	SSOR				Oct	ober 10,	2021
PLANT: PE-PP R	&T Ara	k Center								AREA 400		4	SHEET OF	
SERVICE 2nd GAS	PHASE R	EACTOR COMPR	ESSOR							400 ITEM			-421	6
TYPE AND MODEL					Quan	tity:	1			1				
LOCATION	Φυτι	DOOR		JUNDER RO			ΔΤΔ	MEZZAN	IINE			√GROUND	FLOOR	
COMPRESSOR SPEED		3000 RPM Shall b	be preffered	ł	RPM			L SPEED	S 1st				RPM	
MAX CONTINUOUS SPE			•		RPM			L SPEED					RPM	
SURGE LIMIT		ma			AT DESIG	NC	ONDITIO	NS		% O	F DESIGN	I CAPACI	ΤY	
DIRECTION OF ROTATIO	JN (COM	PRESSOR VIEWE	D FROM M		RIALS AND CO	ONS	TRUCTI	ON						
COMPRESSOR CASING	SPLI	IT	[VERTICAL		MATERIA	L SS.3	04			
		CKNESS					mm			SION ALLC				mm
IMPELLERS	MAX TYPI			tue ocro		180	-			OW.PRES			30	bar g
IMPELLERS				ENCLOSED		_	✓DPEN ✓WELDED				nless stee			
	No.			<u> </u>	DIAM				MAX					
DIAPHRAGMS		DLED		YES			NO		MATERIA					
		IAL CLEARANCE					mm		MATERIA					
SHAFT RADIAL BEARINGS		METERS (IMPELLI JSING		NTEGRAL			mm SEPARATI	F	MATERIA	AL.				
	TYPI				TAL PLATED SHELLS		_p∟r AKA II	<u> </u>						
		RICATION	-	√RING			FORCED					OIL PRE		ba
	SPA			DIAMETE		mm	_	LENGTH	•	mm		CLEARA		r
THRUST BEARINGS SHAFT SEAL (NOTE 1)	TYP	E RICATION			Y SINGLE		_kingsbu √Ring	RY DOUBLE		BALL		OIL PRE		ba
BASEPLATE	TYPI				4			ILM			AL	OILTRE		
	TYPI	E		WELDED S		_	CAST STE							
		MON WITH COM				_	YES			√NO				
COUPLING		PLIED BY			OR MANUFACTURE	2	сс	OMPR. MC		CON	/PR. TUR	BINE		
		IUFACTURER		01						000		DINE		
	TYP	E												
		RICATION								<u> </u>				
COUPLING GUARD	TYPI	PLIED BY		SHEET STE	EL For Manufacture		NONSPAR	RKING						
	001					-								
OTHER PARTS:														
MASS: COMPRESSOR V MASS: MAX TO MOUNT		BASE PLATE				5			ENANCE					
WASS: WAX TO WOUNT	NG				CONNECT	5		E350R W	IIII BASE	PLATE				
CONNECTION (a)		SIZE	RA	TING	FACING	-	UPW	VARDS	DOWN	WARDS	RIG	HT (b)	LEI	FT (b)
INTAKE PIPING		8"		300	RF]				
DELIVERY PIPING		6"	#3	300	RF		-			_		1		
														<u> </u>
							_						-	
							-]				
PURGE CONNECTIONS DRAIN CONNECTIONS	liquid u	JSED			SIZE			AND FAC			No.			
VENT CONNECTIONS					SIZE			AND FAC			No. No.			
NOTES:														
NOTE 1: It is recommend	led to be I	Face to Face Type	of Gas Sea	ıl										

	DATE	DATE					
	CENTRIF	CENTRIFUGAL COMPRESSOR				October 10, 2021	
PLANT: PE-PP R&T Arak Center				AREA	SHEET 5 OF	6	
SERVICE 2nd GAS PHASE REACTOR COMP	RESSOR						
TYPE AND MODEL		Quantity: 1					
		NDER ROOF	MEZZANI	NE	GROUND FLOOR		
COMPRESSOR MANUFACTURER WILL SUPPLY		TION AND SEALING SYSTEM	M				
			DRIVER				
	_	GEAR D					
SYSTEM ACCORDING TO DIAGRAM FIG.		OF API STANDARD No. 617			_		
OIL SYSTEM	/STEM LUBRICATION SEAL				SEAL		
TYPE OF OIL USED							
	ar g						
	ar g n ³ /h						
RESERVOIR: MOUNTED ON	BASE PLATE	CONSOLE	BAS	E PLATE	CONSOLE		
CAPACITY	m ³						
RETENTION TIME	min						
PROVIDED WITH HEATER	ELECTRIC	STEAM		CTRIC	\$TEAM		
MAIN PUMP; MANUFACTURER TYPE-MODEL							
CASING MATERIAL							
CAPACITY-SPEED-POWER	m³/h	RPM	KW	m³/h	RPM		
MOUNTED ON	BASE PLATE	CONSOLE		E PLATE	CONSOLE		
DRIVEN BY	_\$HAFT		\$H#	I FT		E	
STAND-BY PUMP; MANUFACTURER							
TYPE-MODEL							
CASING MATERIAL CAPACITY-SPEED-POWER	m ³ /h	RPM	KW	m³/h	RPM		
MOUNTED ON	BASE PLATE			E PLATE			
DRIVEN BY						E	
AUTOMATIC START	ΎES	NO					
ACTUATED ON			∐ YES		NO		
,	ar g						
TYPE OIL COOLER	DUAL	SEPARATE SINGLE		EGRAL	SEPARATE SINGLE		
MOUNTED ON	BASE PLATE			E PLATE			
COOLING MEDIUM							
CONSTRUCTION CODE	ТЕМА С		TEN	NA C			
SHELL MATERIAL							
PIPE MATERIAL EXCHANGING HEAT	10.11						
FILTERS		D UAL	_\$IN	CIE	DUAL		
MANUFACTURER -TYPE							
FILTERING DEGREE							
FILTERING ELEMENT	REPLACEABLE	CLEANING TYPE	REF	PLACEABLE	CLEANING TYPE		
BODY MATERIAL							
			ho				
OIL DRAINS: REQUIRED MOUNTED ON	YES BASE PLATE		NO CONSOLE	S	UPPLIED BY		
MAX SEAL OIL LEAK			PONJOLE	LITERS/DAY			
	YES		NO				
OVERHEAD SEAL OIL TANK: REQUIRED		NUFACTURER					
OVERHEAD SEAL OIL TANK: REQUIRED SUPPLIED BY		OOMPDEOOOD OFNITEDU					
SUPPLIED BY PLACED	METERS ABOVE	COMPRESSOR CENTERLIN					
SUPPLIED BY PLACED CLARIFIER: REQUIRED	METERS ABOVE		NO				
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY	METERS ABOVE Ves Compressor ma	NUFACTURER					
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY CAPACITY	METERS ABOVE	NUFACTURER					
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY CAPACITY	METERS ABOVE Ves Compressor ma	INUFACTURER] \$0% DAY				
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY CAPACITY OIL PIPING MATERIAL	METERS ABOVE	NUFACTURER] \$0% DAY				
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY CAPACITY OIL PIPING MATERIAL DRAIN OIL PIPING MATERIAL OTHER DATA	METERS ABOVE	NUFACTURER] \$0% DAY				
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY CAPACITY DIL PIPING MATERIAL DRAIN OIL PIPING MATERIAL DTHER DATA	METERS ABOVE	NUFACTURER] \$0% DAY				
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY CAPACITY OIL PIPING MATERIAL DRAIN OIL PIPING MATERIAL OTHER DATA	METERS ABOVE	NUFACTURER] \$0% DAY				
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY CAPACITY OIL PIPING MATERIAL DRAIN OIL PIPING MATERIAL OTHER DATA	METERS ABOVE	NUFACTURER] \$0% DAY				
PLACED CLARIFIER: REQUIRED SUPPLIED BY	METERS ABOVE	NUFACTURER] \$0% DAY				
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY CAPACITY OIL PIPING MATERIAL DRAIN OIL PIPING MATERIAL OTHER DATA	METERS ABOVE	NUFACTURER] \$0% DAY				
SUPPLIED BY PLACED CLARIFIER: REQUIRED SUPPLIED BY CAPACITY OIL PIPING MATERIAL DRAIN OIL PIPING MATERIAL OTHER DATA	METERS ABOVE	NUFACTURER] \$0% DAY				

		DATE								
	October 10, 2021									
PLANT: PE-PP R&T	Arak Center			AREA	SHEET 6 OF 6					
	GAS PHASE REACTOR CON	PRESSOR		ITEM						
2 TYPE AND MODEL			Quantity: 1 0							
BLOCATION DUTDOOR JINDER ROOF MEZZANINE SROUND FLOOR										
5 INSTRUMENT READ OUT			ANDTROTECTIONS	ENGLISH UNITS						
6 LOCAL PANEL FOR COMPR	ESSOR SUPPLIED BY	COMPR.MANUF.	PURCHASER	NOT REQUIRED	NOT NEEDED					
7 ELECTRICAL AND INSTRUM	IENT CONNECTIONS SHALL	BE BROUGHT OUT TO	TERMINAL BOXES BY:							
9 METERS AND 0 PRESSURE GAUGES	DINDICATORS	MAN	UFACTURER	I YPE A	AND SIZE					
1 THERMOMETERS										
2 LEVEL INDICATORS										
3 SIGHT FLOW INDICATORS										
4 TACHOMETERS										
5 PRESSURE SWITCHES 6 TEMPERATURE SWITCHES										
7 AXIAL DISPLACEMENT INDI										
8 SAFETY AND/OR RELIEF VA	ALVES									
9 POWER INDICATOR & REC										
0			JFACTURER SHALL SUPPL	V						
PRESSURE GAUGES	LOCAL MOUNTED	PANEL MOUNTED	PROTECTIONS LUBE OIL LOW PRESSURE		ALARM LOCK					
2 OIL PUMP DISCHARGE 3 LUBE OIL EACH LEVEL	<u> </u>	<u> </u>	SEAL OIL LOW PRESSURE							
4 SEAL OIL EACH LEVEL	 		RESERVOIR OIL LOW LEVE	L						
5 DIFFERENTIAL, SEAL OIL	7	 _	GOV. CONTROL OIL LOW P							
6 DIFF. BEFORE/AFTER FILTE		<u> </u>	OIL FILTERS DIFF. HIGH PR							
7 GOV. CONTROL OIL 18 COMPRESSOR DISCHARGE			COMPR. DISCHARGE HIGH ROTOR AXIAL POSITION	TEMP.						
9 COMPRESSOR SUCTION		<u> </u>	STARTING OF AUXILIARY/S	PARE PUMPS						
0 INTERMEDIATE STAGES	 	 	HIGH VIBRATIONS ON EAC							
1			HIGH TEMP. LUBE OIL							
2 THERMOMETERS:			HIGH TEMP EACH BEARING	3						
3 OUTLET, EACH BEARING 4 OUTLET, EACH SEAL		<u>্</u>								
5 COOLER INLET/OUTLET	 	 								
6 COMPR. SUCTION/DISCHAR										
7										
8 REMOTE LOCKING 9 AXIAL POSITION CONTINUOL		TRIC	PNEUMAT	IC	HYDRAULIC					
	N EACH OIL OUTLET LINE FOR BEARIN	IGS-SEAL-COUPLINGS								
2										
3 4 TO ACTUATE ALARMS AND	LOCKS THE CONTACT WILL									
	CLOSE TO SOUND ALARM	•								
6 DPEN	CLOSE TO LOCK									
	TS WILL BE SEPARATE AND									
B DNE-POLE DOUBLE-THROW TYPE										
0			ONTROL							
1 METHOD	SPEED VARIATION	FROM TO	RPM	ON SUCTION	DISCHARGE					
2	BY-PASS	FROM TO	%	AUTOMATIC	MANUAL					
3 CONTROL DEVICE	WITH PRESSURE SWITCH									
4 SIGNAL FROM 5		TTPE	RANGE EFFECT ON V	/ARIATION						
ANTISURGE CONTROL										
7 NOTES:										
8										
9										
1										
2										
3										
5										
6										
7 REV. 03										