


**3rd REFINERY PHASE 4&5
OFF GAS COMRESSOR
2nd Stage Piston rod
TI-36915**



Compressor	Nouvo Pignone
Request No	9240765
Request item number	24
MESC	2258369153
Contract No	96SD-005
Project No	S5501
Part name	Piston Rod
Original part number	SPR 668100011
BARON part number	B36915P1PR#00
Batch number	085BRN9712#02
Product date	April-18

0	April-18	Issued for comment	S.Hosseini	B.Akabeti	B.Barani
REV	DATE	DESCRIPTION	By	Controlled	Approved
QUALITY IDENTIFICATION					
Prepared by: QC		Checked by: QC Manager		Approved By:	

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

Doc: TI-36915 -02

Item	Description	Page
0	Revise page	3
1	compressor datasheet	4
2	Part List(including description)	5
3	Drawing	6
4	Table of material	26
5	Coding sheet	27
6	Deviation	28
7	Material report	29
	7/1 Chemical Composition	30
	7/2 NDT	33
	7/3 Physical Properties	34
8	Guarantee	35
10	Clearance	36
11	Maintenance & Installation	37
12	Index	38
	12/1 leakage test record	39

Prepared	Controlled	Approved
Quality Control	Management	Client inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

Doc: TI-36915 -03

Table of Revise page																		
Page	Rev									Page	Rev							
	0	1	2	3	4	5	6	7			0	1	2	3	4	5	6	7
1										31								
2										32								
3										33								
4										34								
5										35								
6										36								
7										37								
8										38								
9										39								
10										40								
11										41								
12										42								
13										43								
14										44								
15										45								
16										46								
17										47								
18										48								
19										49								
20										50								
21										51								
22										52								
23										53								
24										54								
25										55								
26										56								
27										57								
28										58								
29										59								
30										60								

Prepared	Controlled	Approved
Quality Control	Management	Client inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

Doc: TI-36915 -04

RECIPROCATING COMPRESSOR DATA SHEET				
		VENDOR DATA	UNIT	rev
1	SERVICE	OFF-GAS	-	
2	DUTY		-	
3	DRIVER TYPE	ELC	-	
4	MODEL	4HF/2	-	
5	DRIVER SYSTEM	DIRECT COUPLED	-	
6	FRAM RATING AT RATED SPEED		KW/rpm	
7	CYLINDERS (LUBRICATION TYPE)		-	
8	COMPRESSION STAGE	2	-	
9	INLET CONDITION		-	
10	inlet Pressure	8/55	bar a.	
11	Discharge Pressure	26/26	bar a.	
12	Temperature	30	C	
13	Inlet volume		m3/h	
14	DISCHARGE CONDITION		-	
15	Pressure @ outlet from cylinder		bar a.	
16	Flow Required Capacity		m3/h	
17	Temperature adiabatic	89	C	
18	Temperature predicted	92	C	

Prepared	Controlled	Approved
Quality Control	Management	Client inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

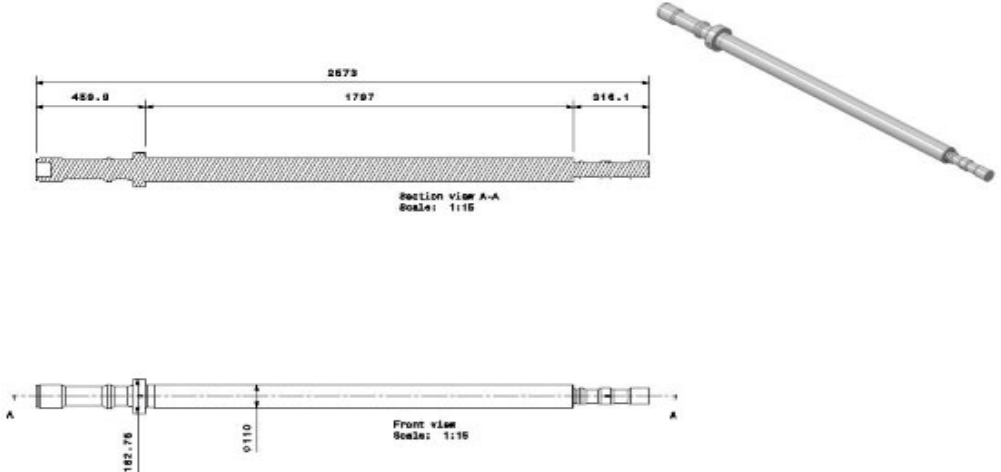


Doc: TI-36915 -05

<i>Part list</i>			
No	Description	Part/No	Technical Data
1	Piston Rod	SNO8479708	TI-36031-06

Prepared	Controlled	Approved
Quality Control	Management	Client inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

Doc: TI-36915 -06

		Part name:		Piston Rod
		Part Number:		SPR 668100011
 		Stage:		1
		Compressor:		Nouvo Pignone
		Unit service:		OFF GAS
		Date:		
		Manufacturer:		BARON Co.
Prepared by:		M.Asadi		
Controlled by:		R.Mazaheri		
Approved by:		SH.Barani		
rev:				
Note:				

Prepared	Checked	Approved
Quality Control	Management	Client inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011


Doc: TI-36915 -27

Part MESC & Part No			
OEM	Part name	Piston Rod	
	Part number:	SPR 668100011	
	MESC:	2258369153	
BARON	Part name	Piston Rod	
	Part number:	B36915P1PR#00	
	MESC:	2258369153	
MESC changed to local manufacturer			
Guarantee Description			
Doc No.TI-36031-??			
Product/Delivery Date:April 2018			

Prepared	Choked	Approved
Quality Control	Management	Clent inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

Doc: TI-36915 -28

<i>Deviation</i>		
Compressor	Nouvo Pignone	
Tag number	103-201 A/B	
Mechanis name	Valve Mechanism	
Part name	Piston Rod	
MESC	2258369153	
Part Number:	SPR 668100011	
Note:		
Drawing deviation		
Doc No.:		
Material deviation		
Doc No.		
Modification		
Doc No:		
Inspection Time		
Doc No.:		
Life Cycle Time Steamate		
Doc No.:		

Prepared	Choked	Approved
Quality Control	Management	Clent inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

Doc: TI-36915 -29

Material Report

Prepared	Checked	Approved
Quality Control	Management	Client inspector
Date	Date	Date
Sign	Sign	Sign

Material Certificate

No	Name	P/N	SAMPLE	BARON
1	Piston Rod	B36031P1DV101	AISI 410	AISI 410



ASTM
American Society for Testing and Materials

مستشاران آزمایشگاهی (آزمایشگاه)
Azmoonch Technical Consulting Eng Co.
Chemical analysis results



Test No. : Date : 3481-12.06.99
 Report No. : Date : (A/T) 049-14.06.99
 Specimen Type : (22×125×10mm) سیمه آرمه

Page : 3 of 3
 Applicant : سازمان آبرسانی و فاضلاب
 R.0.37% Temp: 21 °C

Specimen: 3481 no.7

	Fe	C	Si	Mn	P	S	Cu	Mg
Ave	85.2	0.139	0.482	0.493	0.0247	0.0005	12.9	0.3433

	Al	As	Ca	Co	Cr	K	Ni	Nb
Ave	0.494	0.0010	0.0004	0.045	0.0010	0.0010	0.0135	0.0020

	Se	Sn	W	Cu	Mo	Sr	Zn	Ti
Ave	0.0010	0.0000	0.0001	0.0015	0.0000	0.0020	0.0010	0.0040

محدود است	2	3	4	5	6	7	8	9	10	11	12
WPC-075	-	-	-	-	-	-	-	-	-	-	-
WPC-075	-	-	-	-	-	-	-	-	-	-	-
WPC-075	-	-	-	-	-	-	-	-	-	-	-
WPC-075	-	-	-	-	-	-	-	-	-	-	-
WPC-075	-	-	-	-	-	-	-	-	-	-	-

Remark 1: We certify that the materials in this report are correct and that the test equipment were properly and tested in accordance with the requirements of ASTM E588-04.

یادآوری: ما گواهی می‌دهیم که اطلاعات در این گزارش صحیح است و تجهیزات مورد استفاده در این آزمایشگاه مطابق با الزامات استاندارد ASTM E588-04 بوده است.

According to the request No. : Date : 1354/5/21.04.10.99

Tested by:



Confirmed by:



Manager of department:
A.S. Ghazvini



1- این گزارش صرفاً جهت اطلاع و پیگیری می‌باشد و هیچگونه تعهدی را ایجاد نمی‌کند.

2- این گزارش تنها جهت اطلاع و پیگیری می‌باشد و هیچگونه تعهدی را ایجاد نمی‌کند.

3- این گزارش صرفاً جهت اطلاع و پیگیری می‌باشد و هیچگونه تعهدی را ایجاد نمی‌کند.

4- این گزارش صرفاً جهت اطلاع و پیگیری می‌باشد و هیچگونه تعهدی را ایجاد نمی‌کند.

Prepared	Checked	Approved
Quality Control	Management	Client inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

Doc: TI-36915 -33

NDT				
PART		ROUGHNEESS(μm)	Hardness (HRC)	Stiffness(N/m)
Rider Ring	result	-	20~22	-
	Heat treatment cycle	-	TI-36031-55(page 55)	-

Prepared	Choked	Approved
Quality Control	Management	Clent inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

Doc: TI-36915 -34

Physical Properties					
Part	General Data				
Valve stop, Seat , Shim , Stud	Group	Subgroup	Equivalent Material		Comment
	Stainlesss and heat Resisting Steels	SAE AMS-QQ-S-763	Standard	Code	Martensitic Stainlees Steel
			DIN	X12Cr13	
			WN	1/4006	
			SAE	410	
	Mechanical Propertice				
	Diminsion / Heat Treatment		Yield Stress(Mpa)		Tensile Stress (Mpa)
	>12.5 mm,Bar-Intermediate temper		(Min)552		(Min)689
>12.5 mm,Forging- Hard temper		(Min)621		(Min)827	
Ring	Propertice		Unit	Method	Data
	Density		g / cm3	ASTM D792	2.05-2.11
	hardness-Shore D		-	ASTM D2240	>=64
	Wear Factor		-	ASTM D3702	0.010-.020
	Service Temperature(min-max)		C 0	-	-200 / +260
	Thermal expansion coefficient (linear) 25-100			Similar to ASTM D696	10-12
Spring	Physical Constants		Unit	Data	Note:
	Density		g / cm3	8/28	
	Melting Range		C 0	1393-1427	

Prepared	Choked	Approved
Quality Control	Management	Clent inspector
Date	Date	Date
Sign	Sign	Sign

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Request No:	9240765	MESC:	2258369153
Request item::	24	Part no:	SPR 668100011

Doc: TI-36915 -35

Guarantee sheet#		###0670 07 2016###	
Part name	Piston Rod	/ #0670 07 2016	#0670 07 2016
Part no	SPR 668100011	SPR#446/...//	#0670 07 2016
Product date	January-18	/174+/. .	# 0670 07 2016
Delivery date	February-18	/174+//	#0670 07 2016
Operation date		# 'Y' 0670 07 2016	1 #. 0670 07 2016
Expire date		#0670 07 2016	#0670 07 2016
Guarantee condition		#0670 07 2016	
8months		0670 07 2016	
6000 hour		# 0670 07 2016	
Each pass		#0670 07 2016	

Warranty condition :

This certificate that part NO SNO 8479708 product by Baron company and
Its warranty for 6000 hours.

This guarantee is limited by parts that are meet folowing condition :

A: before use

- Resitiation warranty
- Uploading permite and assembly inspection
- Uploading compressore and cuse & effects ensuring mainted report for part replace out of hours service.

B: After use

Uploading compressor performance and cuse & effects of defect contact
 BARON Co after sales service

Email: info@baronco.com

767/1322/500) ###0670 07 2016
 .1/234216330, 0670 07 2016
 #0670 07 2016
 2210 0670 07 2016

Prepared	Choked	Approved
Quality Control	Management	Clent inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
Tag No:	103-201 A/B		Part name:	Piston Rod
Request No:	9240765		MESC:	2258369153
Request item::	24		Part no:	SPR 668100011

Doc: TI-36915 -36

<i>Clearance</i>	
Compressor	Nouvo Pignone
Mechanism name	Cylinder mechanism
Tag number	103-201 A/B
Part Num.	SPR 668100011
Part name	Piston Rod
MESC	2258369153

Project specification


Location: Asalouyeh-Bushehr-IRAN

Plant: Reciprocating Compressor

Client: SPGC

Contractor: Baron.Co

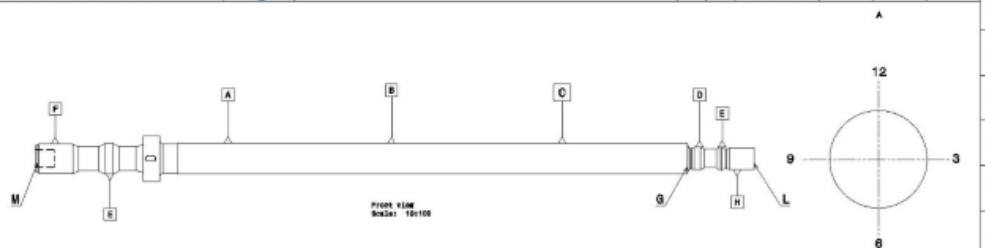
Project Number: T93P10001



Compressor Piston rod inspection form

BARON Technical Office

REV.	Date	Description	By	Checked	Approved




Piston View
Scale: 1:200

Packing				
	A	B	C	Drawing Size
Vertical 6-12				Limits
Horizontal 3-9				U=-0.05 O=-0.02 T=-0.02

Piston Rod Runout							
F	A	B	C	G	D	E	H
Limit +-0.025							

Piston Fit				
	D	E	Drawing Size	Limits
Vertical 6-12				+-0.025
Horizontal 3-9				


G	L	M	0.025	
---	---	---	-------	---

Note: U=Undersize; O=Out Round; T= Taper

Prepared	Checked	Approved
Quality Control	Management	Client inspector
Date	Date	Date
Sign	Sign	Sign

Refinery	3rd PHASE 4&5		Project No.:	S5501
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Doc: TI-36915 -37

<i>Maintenance</i>		
Compressor:	Nouvo Pignone	
Tag number	103-201 A/B	
Part number.	SPR 668100011	
Mechanism name:	Valve Mechanism	
Part name:	Piston Rod	
MESC:	2258369153	
Maintenance of parts		
Time	Action	
1000 h		
4000 h		
8000 h		
<i>Rod piston</i>		
<i>Instalation</i>		

Prepared	Choked	Approved
Quality Control	Management	Clent inspector
Date	Date	Date
Sign	Sign	Sign