













Owner :  Iran Water & Power Resources Development Co.	Project : JAVEH PUMP STATION DESIGN , CONSTRUCTION, PURCHASING INSTALLATION & OPERATION	Contractor :  مهندسین شاور گاماسب Gamasab Consulting Engineers Co.  شرکت ساختمانی معتبر  Safar engineering co. شرکت مهندسی سافار
Consultant:  مشاور  Ahan Pazhouh Consulting Engineers Co.	طراحی ، اجرا ، خرید ، نصب ، راه اندازی و بهره برداری از ایستگاه های پمپاژ ژاوه	
شماره مدرک JPS-D-ME-DS-18.2	PUMP STATION NO.1 PUMPS MECHANICAL DATA SHEET & SPECIFICATION	REV-00 شماره صفحه: 1 از 3

DOCUMENT TITLE:

مشفحات و برگه های اطلاعاتی پمپ های ایستگاه پمپاژ شماره ۱

PUMP STATION NO.1 PUMPS MECHANICAL DATA SHEET & SPECIFICATION

REVISION	DESCRIPTION	DATE	PREAPARED BY	CHECKED BY	APPROVED BY
00	ISSUE FOR COMMENT	1397.11.15	M.QOBADI	N.HOSEINZADEH	M.MADDAH

OWNER:  Iran Water & Power Resources Development Co.		PROJECT: JAVEH PUMP STATION DESIGN, CONSTRUCTION, PURCHASING, INSTALLATION & OPERATION طراحی ، اجرا ، خرید ، نصب ، راه اندازی و بهره برداری از ایستگاه های پمپاژ زاوه		CONTRACTOR:  مهندسین مشاور گامسیاب Gamasiah Consulting Engineers Co.  شرکت ساختمانی معتمد  tara engineering co. شرکت مهندسی تارا	
CONSULTANT:  مشاورین  Aban Pazhouh Consulting Engineers Co.					
DOC. NO. : JPS-D-ME-DS-18.2		DOC. TITLE: PUMP STATION NO.1 PUMP MECHANICAL DATA SHEET		PAGE NO. : 1 OF 2	
PROCESS AND OPERATING CONDITIONS					
1					
2	Liquid	Raw water Form Intake Dam	Capacity (Each pump)	1500	lit/s
3	Density	0.977 -0.981 Kg/dm ³	Max./ Min. Capacity (Each pump)	450 / 1800	lit/s
4	PH value	6.5-8	Static Head	340	m
5	Viscosity	1.3 cp	NPSH Available	13	m
6	Solids content	100 ppm	NPSH Required	10.8	m
7	Particle size	0.5 mm	NPSH 3 %	-	m
8	Vapour pressure	0.13-0.43 m	Differential Pressure	383	m
9	Liquid Temperature (Min/Norm/Max)	5/20/30 °C	Pump Service	continuous	-
10	Indoor Temperature (Min/Max)	-5 / 40 °C	Pump Operation	Parallel	-
11	Ambient Temperature(Min/Max)	-15 / 45 (Outdoor)	Location	Indoor	-
12	Elevation from Sea Level	1300	Relative Humidity	17/83	%
13	Ambient Conditions	Dusty			
TECHNICAL SPECIFICATION					
14					
15	Pump Type	Centerifugal - Split case	Motor General Specification:		
16	Quantity	5+1	Motor Rated Power	7500	kw
17	Manufacturer	Termomechanica - Italy	Motor Type	Squirrel Cage Rotor	
18	Model	500 DD2D 80	Motor Rated Voltage	11 KV	
19	Arrangement	Horizental	Frequency	50 HZ	
20	No. of Stages	Two stage, First Stage Double Entry	Motor Speed	1485 rpm	
21	Impeller Type	Radial Flow, Double Entry	Bearing General Specification:		
22	Impeller Diam. Min/Max	688/863 - 678/832 mm	Bearing Type-axial	Pad	
23	Impeller Diam. Designed	821 -795 mm	Bearing Type-radial	Anti -Friction	
24	Shaft Diameter	ND 180	Bearing Lubrication/Lub Type	Forced Lubricated	
25	Suction Size /standard	24 inch ANSI B 16.5 150 lbs RF			
26	Discharge Size /standard	20 inch ANSI B 16.5 150 lbs RF			
27	Pump Speed	1485 rpm			
28	Required Power	6286 kw			
29	Direction of rotation	One Side			
30	Pump Moment Of Inertia	278 kg-m ²			
31	Pump Weight with Base plate	20000 kg			
ACCESSORIES					
32					
33	Name Plate Including TAG	Required	Stator RTD	Required	
34	Transport packing	Required	Base Plate	Required	
35	Electromotor/ pump bearing RTD	Required			

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CONSULTANT:  مشانیر  Aban Pazhouh Consulting Engineers Co.					
DOC. NO. : JPS-D-ME-DS-18.2		DOC. TITLE: PUMP STATION NO.1 PUMP MECHANICAL DATA SHEET		PAGE NO. : 2 OF 2	
36	<u>MATERIAL SPECIFICATION</u>				
37	Casing	Cast Iron - ASTM A216 WCB	Impeller Wear ring	ASTM 420	
38	Shaft	Stainless steel ASTM A276 Tp. 420	Bearing bracket	ASTM A216 WCB	
39	Impeller	ASTM A890 1B	Flanges	Cast Iron - ASTM A216 WCB	
40	Shaft sleeve	ASTM 420	Auxiliary piping	Carbon Steel	
41	Int-stage sleeve/bush	ASTM 420	Bolts and nuts	Carbon Steel	
42	Base plate	CS Welded			
43	Casing wear ring	ASTM 420			
44	<u>PERFORMANCE DATA</u>				
45	Pump Efficiency (In working point)	87.90%	Minimum flow for continous operation	-	
46	Pump Efficiency (Min/Max)	-	Minimum flow for starting	-	
47	Pump Absorbed Power	6286 kw	Maximum Head	500 m	
48	Drive Rated Power	7100 kw	Shut-off Head	500 m	
49	<u>CONSTRUCTION FEATURES</u>				
50	Casing Design	Between Bearing	Radial Bearing Type	Anti -Friction	
51	Volute Type	Double Volute	Axial Bearing Type	Pad	
52	Suction Type	Double Suction	Coupling Type	Spacer Type	
53	Casing Split	Axially Split	Coupling Model	Tooth Type	
54	Casing Support Type	Foot or Near centerline mounted	Coupling Manufacturer	By Vendor	
55	Design Pressure	MAWP 52 Bar	Coupling Guard	Required	
56	Test Pressure	MAWP 60 Bar	Shaft Dia. at Coupling End	-	
57	Shaft Sealing	Single Catridge Mechanical Seal with Plan 11	Thrust Balancing Method	Thrust Bearing	
58	Seal Manufacturer & Model	By Vendor	Wear ring Type	-	
59	<u>TEST & CERTIFICATES</u>				
60	Performance	Witness +Certificated	Material	UW +Certificated	
61	Vibration	Witness +Certificated	Hydrostatic	Witness +Certificated	
62	NPSH	Witness +Certificated	Bearing Temp. Rise	Witness +Certificated	
63	Shop	UW +Certificated	Dimensional	UW +Certificated	
64	Note 1 :Performance Test according to ISO9906 Class 1B is done for one pump.				