Owner : کارفرما :	Project :	Contractor : پیمانکار:	
Iran Water & Power Resources Development Co.	JAVEH PUMP STATION DESIGN , CONSTRUCTION, PURCHASING INSTALLATION & OPERATION	مهندسین مشاور گاماب / شرکت ساختمانی معتبر / tara engineering co. شرکت مهندسی تارا	
Consultant: مشاور: مشانیر / Aban Pazhouh Consulting Engineers Co.	طراحی ، اجرا ، خرید، نصب ، راه اندازی و بهره برداری از ایستگاه های پمپاژ ژاوه		
شماره مدرک JPS-D-ME-DS-18.3	PUMP STATION NO.2 PUMPS MECHANICAL DATA SHEET & SPECIFICATION	REV-00	شماره صفحه: 1 از 3

DOCUMENT TITLE:

مشخصات و برگه های اطلاعاتی پمپ های ایستگاه پمپاژ شماره ۲

PUMP STATION NO.2 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:	PROJECT:	CONTRACTOR:
Iran Water & Power Resources Development Co.	JAVEH PUMP STATION DESIGN, CONSTRUCTION, PURCHASING, INSTALLATION & OPERATION طراحی ، اجرا ، خرید، نصب ، راه اندازی و بهره برداری از ایستگاه های پمپاژ ژاوه	مهندسین مشاور گاماب / Gamaab Consulting Engineers Co. شرکت ساختمانی معتبر tara engineering co. شرکت مهندسی تارا
CONSULTANT: مشانیر Aban Pazhouh Consulting Engineers Co.		
DOC. NO. : JPS-D-ME-DS-18.3	DOC. TITLE: PUMP STATION NO. 2 PUMP MECHANICAL DATA SHEET	PAGE NO. : 1 OF 2

1	**PROCESS AND OPERATING CONDITIONS**					
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**	447	m
5	**Viscosity**	1.3	cp	**NPSH Available**	15	m
6	**Solids content**	100	ppm	**NPSH Required**	12.5	m
7	**Particle size**	0.5	mm	**NPSH 3 %**	-	m
8	**Vapour pressure**	0.13-0.43	m	**Differential Pressure**	480	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**	1630		**Relative Humidity**	17/83	%
13	**Ambient Conditions**	Dusty				
14	**TECHNICAL SPECIFICATION**					
15	**Pump Type**	Centerifugal - Split case		**Motor General Specification:**		
16	**Quantity**	5+1		**Motor Rated Power**	9500 kw	
17	**Manufacturer**	Termomechanica - Italy		**Motor Type**	Squirrrel 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 -743/879 mm		**Bearing Type-axial**	Pad	
23	**Impeller Diam. Designed**	816 -872 mm		**Bearing Type-radial**	Anti -Friction	
24	**Shaft Diameter**	ND 190		**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**	7916 kw				
29	**Direction of rotation**	One Side				
30	**Pump Moment Of Inercia**	265 $kg\text{-}m^2$				
31	**Pump Weight with Base plate**	20000 kg				
32	**ACCESSORIES**					
33	**Name Plate Including TAG**	Required		**Stator RTD**	Required	
34	**Transport packing**	Required		**Base Plate**	Required	
35	**Electromotor/ pump bearing RTD**	Required				

OWNER:	PROJECT:	CONTRACTOR:
Iran Water & Power Resources Development Co.	JAVEH PUMP STATION DESIGN, CONSTRUCTION, PURCHASING, INSTALLATION & OPERATION طراحی ، اجرا ، خرید، نصب ، راه اندازی و بهره برداری از ایستگاه های پمپاژ ژاوه	مهندسین مشاور گاماسیاب شرکت ساختمانی معتبر toro engineering co. شرکت مهندسی تـارا
CONSULTANT: مشانیر Aban Pazhouh Consulting Engineers Co.		
DOC. NO. : JPS-D-ME-DS-18.3	DOC. TITLE: PUMP STATION NO. 2 PUMP MECHANICAL DATA SHEET	PAGE NO. : 2 OF 2

36	**MATERIAL SPECIFICATION**			
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	**PERFORMANCE DATA**			
45	**Pump Efficiency (In working point)**	87.50%	**Minimum flow for continous operation**	-
46	**Pump Efficiency (Min/Max)**	-	**Minimum flow for starting**	-
47	**Pump Absorbed Power**	7916 kw	**Maximum Head**	578 m
48	**Drive Rated Power**	9200 kw	**Shut-off Head**	578 m
49	**CONSTRUCTION FEATURES**			
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 51 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	**TEST & CERTIFICATES**			
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.			