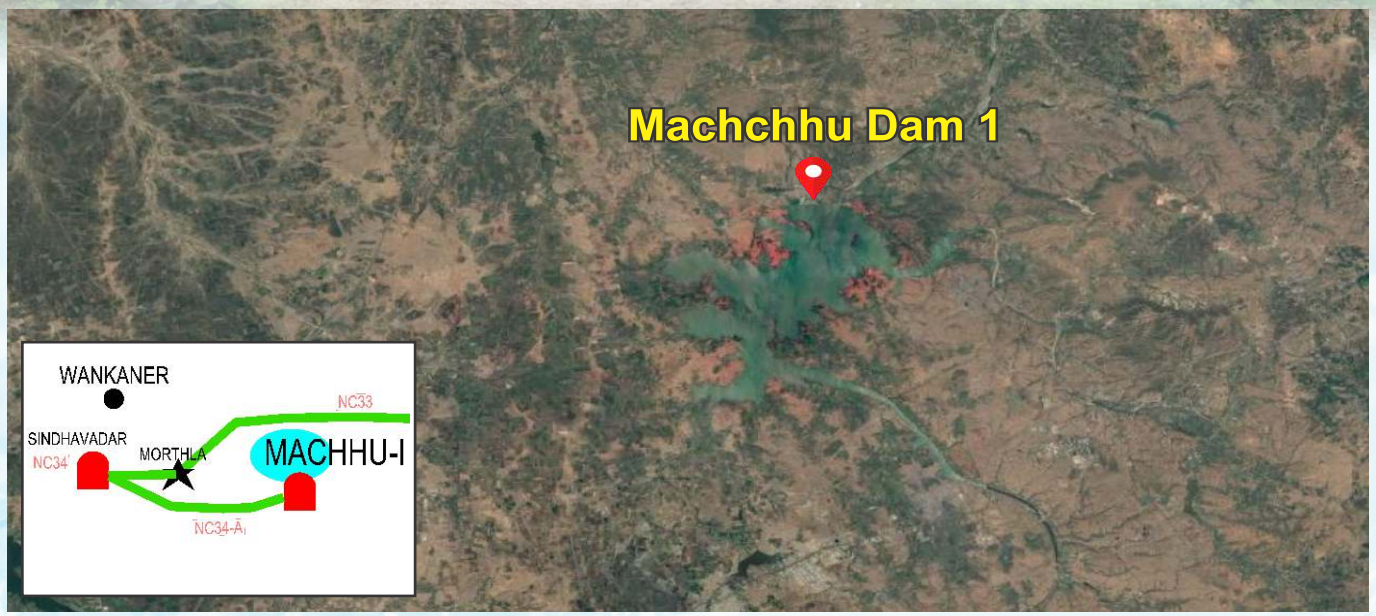
AQuA®©

WATER SUPPLY

Pontoon Mounted Submerged CF pumpset based Water Supply Schemes

are Quick & Economical to Commision,
require Low Maintenance & result in 365 day Water Extraction irrespective of Meandering water course / Depleting water levels in the worst summers

NC 34 MACCHU DAM 1



Situation :

Machcchu 1 dam is mainly used for Irrigation purpose in various areas of Morbi and Rajkot district. During the years 2017 and 2018 the rainfall in gujarat and especially in Saurashtra was abnormally low & all the drinking water sources were being depleted fast.

So it was decided to take and supply drinking water from the hitherto forbidden Irrigation water sources. M/s. GWIL, the Gujarat Government company involved in bulk transmission of drinking water in Gujarat came up with proposal to lift the **dead water** lying in Machchhu 1 dam and connect it to its existing water supply grid and augment it by new source of 57.6mld water.

AQUA's Solution :

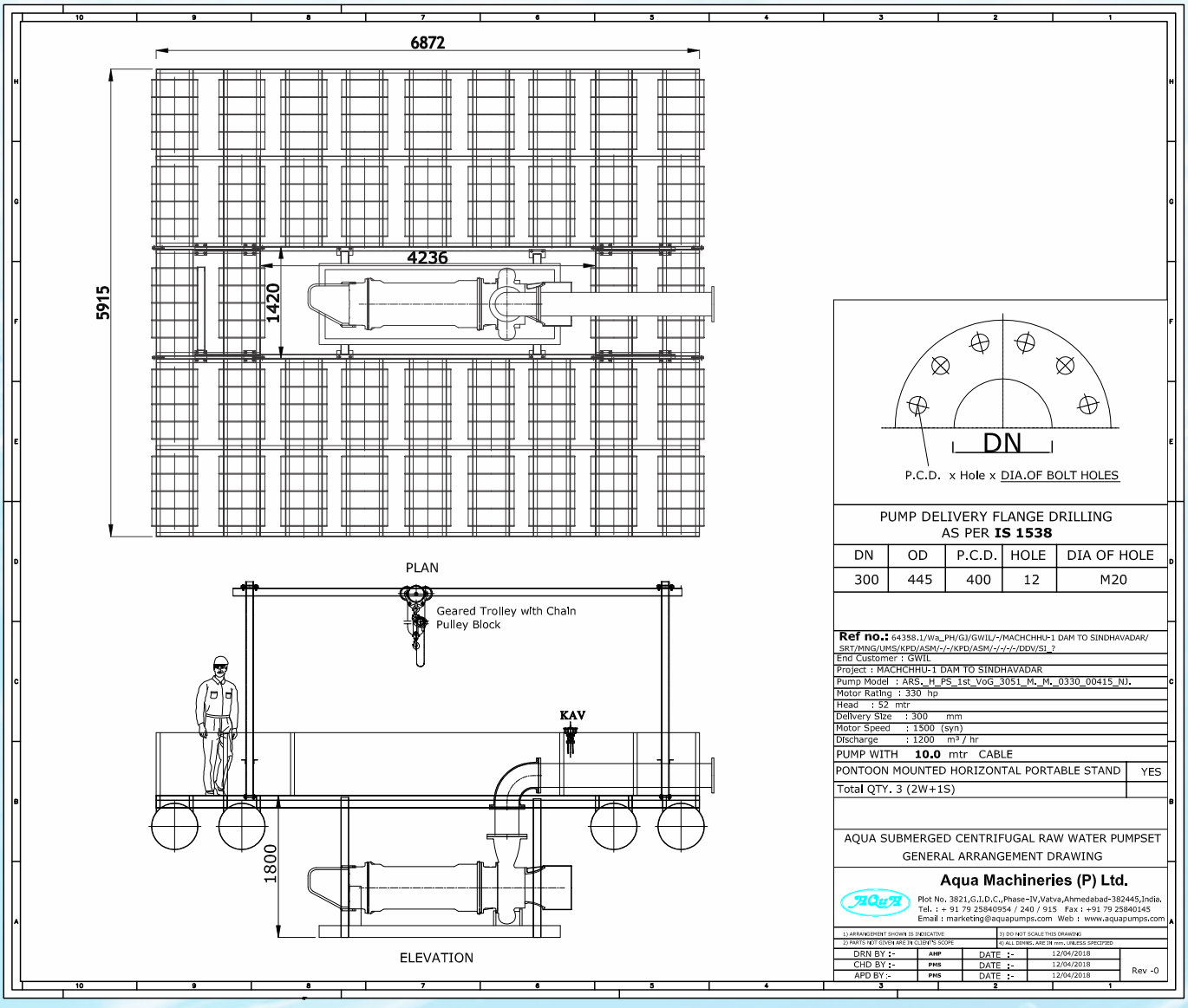
Submerged Pumpsets are mounted at the bottom of Pontoon; hence the centre of gravity is shifted downwards to ensuring stability.

Considering the Weight Balancing - Submerged Centrifugal Pump set is the most suitable solution form installation on Pontoon. The Pumpsets and pontoon was installed 300m deep in the dam on the opposite side of the gates of the dam, so Pontoons & Pumps had to be tightly secured & anchored and keep system working in conditions of heavy floods. *(which was regular phenomenon during rainfalls)*

Name of Work : Providing, Lowering & Laying of M.S./D.I. K-7 Pipeline along with Design, Engineering, Supply, Installation, Testing & Commissioning of Submerged Centrifugal Pump set on floating pontoon with accessories and all electrical equipments with post completion Comprehensive Operation & Maintenance for 5 years for Machchhu-1 Dam site to Sindhavadar hw (NC-34) project, Tal.: Wankaner, Dist. Morbi.

Situation Of Work : Machchhu 1 Dam

Authority : G.W.I.L.



PUMP DELIVERY FLANGE DRILLING
AS PER **IS 1538**

DN	OD	P.C.D.	HOLE	DIA OF HOLE
300	445	400	12	M20

Ref no.: 64358.1/Wa_PH/GJ/GWIL/-/MACHCHHU-1 DAM TO SINDHAVADAR/SRT/MNG/UMS/KPD/ASM/-/-/KPD/ASM/-/-/-/-/DDV/SI_?

End Customer : GWIL
Project : MACHCHHU-1 DAM TO SINDHAVADAR
Pump Model : ARS._H_PS_1st_VoG_3051_M._M._0330_00415_ND.
Motor Rating : 330 hp
Head : 52 mtr
Delivery Size : 300 mm
Motor Speed : 1500 (syn)
Discharge : 1200 m³ / hr
PUMP WITH **10.0** mtr CABLE
PONTOON MOUNTED HORIZONTAL PORTABLE STAND — YES
Total QTY. 3 (2W+1S)

AQUA SUBMERGED CENTRIFUGAL RAW WATER PUMPSET
GENERAL ARRANGEMENT DRAWING

Aqua Machineries (P) Ltd.
Plot No. 3821,G.I.D.C.,Phase-IV,Vatva,Ahmedabad-382445,India.
Tel. : + 91 79 25840954 / 240 / 915 Fax : +91 79 25840145
Email : marketing@aquapumps.com Web : www.aquapumps.com

1) ARRANGEMENT SHOWN IS INDICATIVE
2) PARTS NOT GIVEN ARE IN CLIENT'S SCOPE
3) DO NOT SCALE THIS DRAWING
4) ALL DIMNS. ARE IN mm., UNLESS SPECIFIED

DRN BY :-	AMP	DATE :-	12/04/2018	Rev -0
CHD BY :-	PNS	DATE :-	12/04/2018	
APD BY :-	PNS	DATE :-	12/04/2018	

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Vadodara City

Also known as Baroda, is the third largest city of Gujarat. The city is also known as SanskariNagari *(The Cultural City)* and Kala Nagari *(The City of Art)* – it got it's name because of the copious amount of Banyan *(Vad)* trees found in the city.

The city was founded by the Maratha Gaekwads & is home to the world famous Maharaja Sayajirao University.

VADODARA MUNICIPAL CORPORATION

An average of **240mld** *(or 190 litres/soul per day)* is provided to the city daily to meets its water requirement by Vadodara Municipal Corporation *(VMC)*.

Submerged CF Pump based
Pontton Pumping Station for Vadodara city
from

AJWA SAROVAR

For years, the British Officers were in search of a clean source of drinking water for the city - the solution to this problem was finally provided by Maharaja Sayajirao Gaekwad III after which the construction of the Ajwa Sarovar began in 1890. It was the main source of water to the erstwhile State of Vadodara & now the City.

The dam is about 5.5km long and 15 feet wide with 62 gates built on the Surya rivulet and the VaghaliNala at a distance of about 20km from Baroda.

At full level, the reservoir is supposed to have a catchment area of something close to 195sq km - the excess water in event of floods is dispatched to the Vishwamitri river.

Situation :

Due to low rainfall in Gujarat in year 2018, the water level in AjwaSarovar was very low & it could not drive sufficient water by gravity to the city to cater the need of drinking water of the Vadodara (2/3 population of the city was dependent on this reservoir). A means had to be evolved to force (pump) dead water from the existing reservoir via the existing (gravity) pipeline to sustain water supply to the city.

AQUA's Solution :

Aqua was decided to lift the dead water on war footing basis to fulfill the need of drinking water.

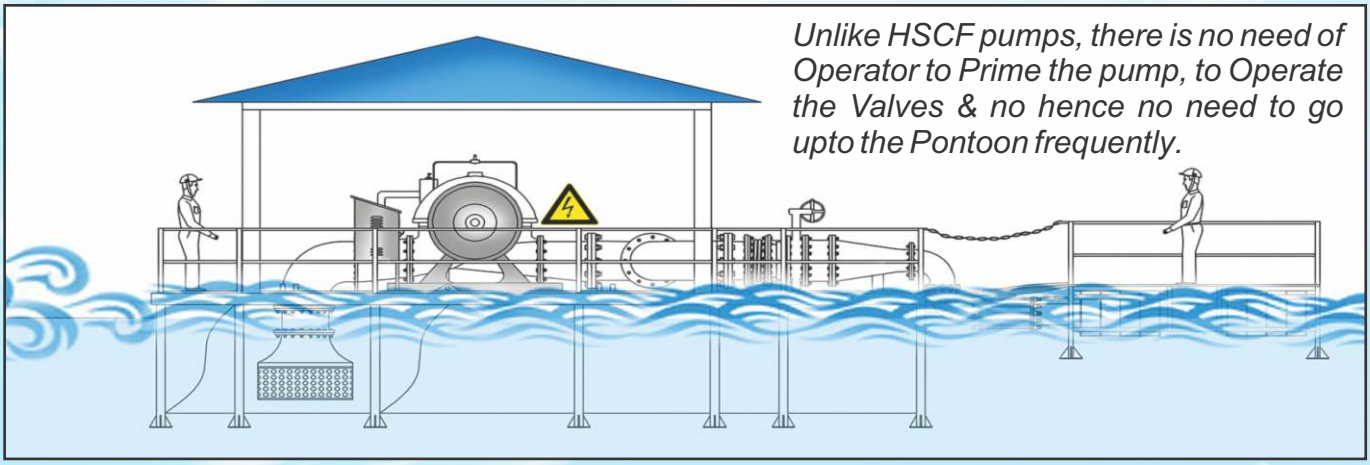
Name of Work : The work of Hydrological Survey, SITC of SCF Pumpsets on floating Pontoon, Panel Room and all Electro Mechanical Accessories including 3 months of Comprehensive O & M at "VMC AJWA SAROVAR".

Contractor : Aqua Machineries Pvt. Ltd.

Client : Vadodara Municipal Corporation, Vadodara.

The project ensured capability to extract dead water round the year.

- Project Engineer



Unlike HSCF pumps, there is no need of Operator to Prime the pump, to Operate the Valves & no hence no need to go upto the Pontoon frequently.

The entire electro mechanical work of the project was entrusted to Aqua by the Lead Civil Contractor & Aqua had completed this critical project in just 3 months of time period *(& later on its O & M was also carried out by Aqua)*

FORM NO. 3(A)

(Referred to in Rule No. 5 B (ii))

WORK WISE DETAILS OF WORK COMPLETED OR PROGRESS BY THE CONTRACTOR

1	Name of Contractor	:	Aqua Machineries Pvt. Ltd. Plot No. 3821, Phase-IV, G.I.D.C. Vatva, Ahmadabad
2	LoI / Work Order No. & Date	:	PO reference/OutwardNo:11175 Dtd 06/03/2019.
3	Name of Work	:	The work of Hydrological Survey, SITC of SCF Pump Sets on floating Pontoon, Panel Room and all Electro Mechanical Accessories Including 3 months of Comprehensive O & M at VMC AJWA SAROVAR"
4	Estimated Cost of Work put to Tender	:	Rs. 50324000.00
5	Tender Amount	:	Rs. 57800000.00 (SITC + O&M)
6	Date of Starting the Work	:	07.03.2019
7	Stipulated Date of Completion of Work	:	04.06.2019
8	Actual Date of Completion of work		18.06.2019
9	Amount of Work done up to Date 18.06.2019	:	Rs. 57798839.00

AQUA MACHINERIES PVT. LTD.

Signature of the Contractor

10	State whether the details as above given by the contractor are correct, if not state as to what is correct information	:	Yes
11	State whether the contractor has Executed the work in progress satisfactorily as per specifications. If not give the correct position of the work.	:	SITC works of the project were completed on 18.06.2019. Operation & Maintenance work was removed from scope of work
12	**Above works consisting one of the followings :** 1. 750m3/hr, 30m head cusecs, 90 kW X 3 Nos SCF pumpsets installed on 3 nos floating pontoons with necessary 120 mtr floating walkway. 2. 11KV /415V, 315 KVA transformer – 1 Nos. 3. Panel room having area 100 sqm - 1 nos. 4. D.G. set with panel – 400 KVA – 1 nos. 5. MS Pipes dia 300 mm, 400 mm and 700 mm with BFV, DPCV, EB – 1 lot 6. S.S. Double braided Flexible piping system 300 mm dia – 1 lot (6 m long – 72 nos) 7. Pipe Floaters – 1 lot 8. HT & LT Cable – 1 lot 9. 700 mm dia Electro magnetic Flow meter – 1 nos		

Place: Vadodara

Ref:

Date:

Ex. Engineer
Water Supply Department,
VMSS,
Vadodara

MUNICIPAL CORPORATION VADODARA

Executive Engineer
Water Supply Dept.

AQuA®©

WATER SUPPLY

Robust & Reliable
No breakdown even in high silt levels & rust proof bearings.

Zero Maintenance
Mechanical Shaft Seals are Silt & Rust resistant.
Bearings are Greased for Life.

Plug & Pump
No base Plate or Coupling to align;
No priming to startup

Low Life Cycle Costs (LCC)
Minimal Maintenance & Good Wire to Water Efficiency.

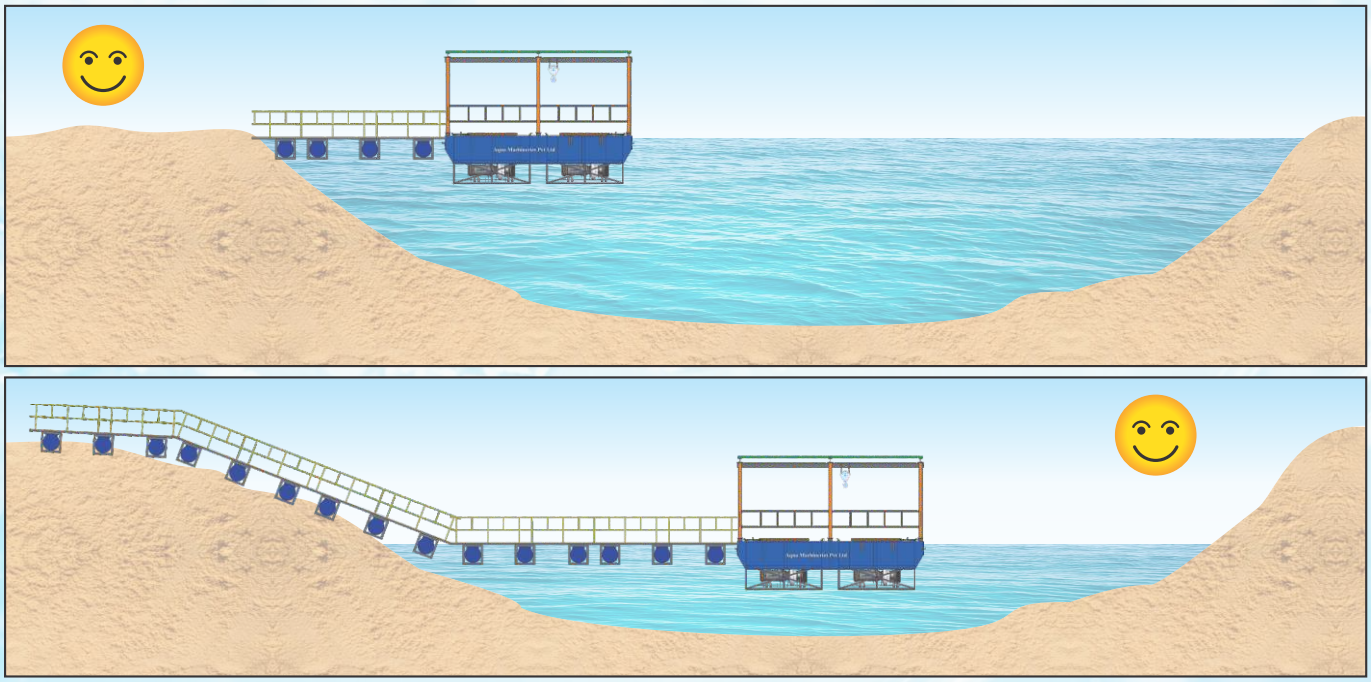
Ultra Low ManPower requirement

- **Requires No** Special Pre – Post / **Ancillary-Auxillary Operations** *(like Valve Opening-Closing, starting-stopping-monitoring Forced Water Lubrication systems operation etc.)*
- **Requires No Consumables** *(like Oil, Grease, Gland Ropes, Bush, Pins, Couplings, Sleeves, etc)*
- **Requires No Routine Maintenance** *(like Oiling, Greasing, Gland Tightening, Gland Rope replacement, Shaft Alignment etc.)*

Being safely tucked away **under water**, Submerged pumpsets are exposed to **Lower Risks of damage by Flying Debries loosened during blasting & excavation.**

Weather Proof
No Damage due to rain

Pontoon Mounted Submerged CF pumpset based Water Supply Schemes are result in Water Extraction irrespective of Meandering water course / Depleting water levels ...



Aqua Machineries Private Limited

www.aquapumps.com

Registered Office & Manufacturing Plant
Survey No. 504/1-2, 442/2, Near Haridarshan Estate, Near Express Highway, Ramol, Ahmedabad-382 445. Gujarat, India.
marketing@aquapumps.com