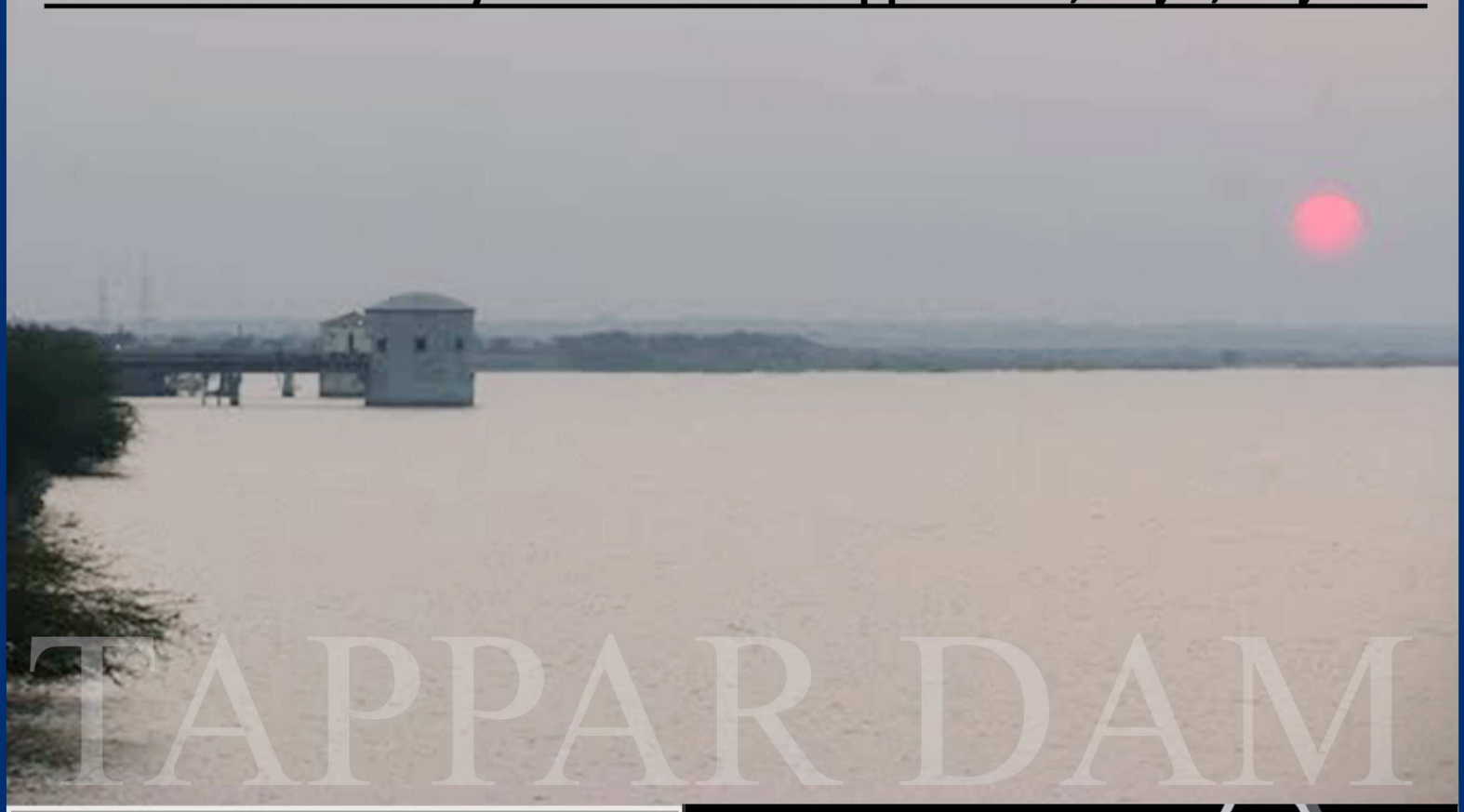
Augmenting an Existing Intake Well by 4.5 times yet with hugely Increased Reliability for GWSSB at Tappar dam, Anjar, Gujarat.

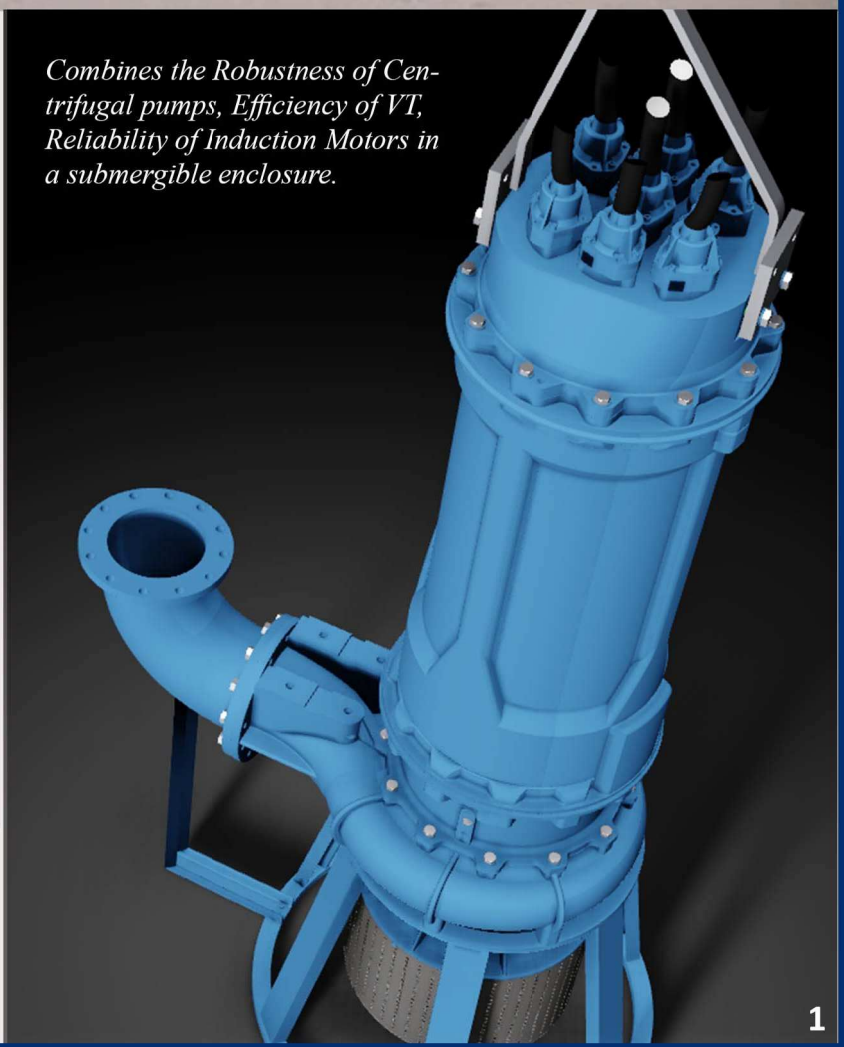


Geography

Kutch District, at 45,692 square kilometres, is the largest district in India & virtually an island, as it is surrounded by the Arabian Sea in the west; the Gulf of Kutch in south and southeast and Rann of Kutch in north and northeast - water remains a serious issue in Kutch. The 33m high Tappar dam owned by GWSSB blocks the flow of the rivers into Banni for Municipal & Industrial usage especially in the emerging industrial town of Gandhidham.

Project Capital Cost (₹)		
Type of pumpsets	Vertical Turbine	SubCF
Civil	9 Cr ₹ (New Intake well was Mandatory for VT pumps due to its Suspended loads)	0 ₹ (Same intake well is being sucessfully used)
Pumping Machineries	4.1	3.8
Total	13.1	3.8
	100%	29%

Combines the Robustness of Centrifugal pumps, Efficiency of VT, Reliability of Induction Motors in a submergible enclosure.



Project Data

Supply, installation,Testing & Commissioning of Submerged Centrifugal Pump-Sets at Tappar Dam site with five years Comprehensive Operation and Maintenance Work.

Project	End User	Pump Model	No.of Pumps	Flow (m3/hr)	Head (m)	hp
H M Engineers (Tappar Dam)	GWSSB	ARS 3052 MM 400	6	1400	52	400







Aqua's Economical Solution

Tappar Dam has 2 intake wells which were fitted with Vertical Turbine pumps. After the advent of Narmada waters planned to store in Tappar dam, it was desired to augment the pumping capacity from Tappar dam from 40mld to 180 MLD - i.e. increase of 450%.

Due to serious maintenance problems in VT pumpsets & the fact that SubCF pumpsets were GWSSB's preffered choice. More importantly, SubCF pumpsets do not impose their live load on the jack well floor; hence GWSSB decided to avoid construction of a new Jackwell mandatorily required for VT pumpsets.

Aqua's SubCF pumpsets are mounted directly into the Jack well & rest on the bottom plug thereby saving almost Rs. 8-10Cr in Capital cost of a new Intake well & atleast 18-24 months of Construction time.

Certificate of Excellence

GUJARAT WATER SUPPLY & SEWERAGE BOARD

Office Of the Executive Engineer
P.H.Mech. Division, Gujarat Water Supply & Sewe. Board. Jalsevanagar, Bhuj (Kutch)
Phone : 02832-220802/250751
Mail: eembuj@yahoo.co.in

CERTIFICATE
(To whom so ever it may concern)

This is to certify that since June 2012, we are using 6nos of "Aqua" make Submerged CF pumpsets (30mld / 1400m3/hr x 52m head, 400hp) for Raw water intake at our **180 MLD** Tappar dam based WSS (Taluka Anjar, District - Kutch).

The "Aqua" make Submerged CF pumpsets are installed into the Existing Intake well by replacing the VT pumpsets which gave frequent maintenance.

Based on the excellent performance so far, we recommend the use of "Aqua" make Sub CF pumps for energy conscious & maintenance free performance.

19/04/14
Executive Engineer
P.H.Mech. Division
Bhuj-Kutch

Conclusion :

Aqua was able to complete the project in the time frame due to its system Engineering and Application Engineering capabilitiessuppoted by strong manufacturing setup. Aqua's Concept to Commissioning approch was responsible for the end customer delight. Technically competent execution team, which is the strength of the Aqua, took timely accurate decision, made necessary recommendations to the stakeholders.There are the reasons how Aqua touches the new heights day by day by making new benchmarks, continuing in providing sustainable pumping solutions in any adverse condition.