



# Sadulka - The Engineering Marvel

The Open Canal Pumping System on Dhangadra Branch Canal, Gujarat.

## The Situation

Though the rain may or may not come in the sufficient quantity, every year the non availability of water in Saurashtra in peak of Summer is experienced. Every Time and again analyzed and put forward that the distribution system in cities and town needs a drastic improvements, and absence of efficient distribution system always blames the bulk supplier (GWIL/GWSSB).

## The Outcome

Due to poor rainfall in 2012-13, the Western part of Saurashtra was facing acute water scarcity including Rajkot. The Government of Gujarat wanted to augment the supply by adding the source of water to this region. The committee were frame to analyze and monitor the situations. The chief general manager was send along with other two Chief Engineer by Govt. to see the availability in MACHCHHU Dam. Neither water in the dam was sufficient nor the pipeline was in order to convey pumped water. To resolve this issue, water supply department was asked to install a pumping machinery based on the water which was to be made available through DHANGADRA BRANCH CANAL SSNL speeded up the works of its Dhrangadhra branch canal while WS dept. under took an hitherto unheard of challenge - to setup a 300mld raw water pumping station in just 40days at the end of DBC near the village SADULKA.



**" A 300 MLD water offtake pumping station commissioned in just 40 days at just 1/14<sup>th</sup> time duration, 1/5<sup>th</sup> the capital cost & 1/3<sup>rd</sup> the life cycle cost "**

*\*compared to earlier projects based on old technology*





It was seen that the same may completed on or before the arrival of water to SADULKA, the construction of pumping station, and erection of pumping machinery after making HR and intake arrangement on the canal was obviously going to take time, with the administrative zeal & Engineering Technology come to the rescue of millions of souls of Water Starved Saurashtra.

### **Pump sets Data :**

300 MLD, 13 Nos. (10 Working + 3 Standby) of Vertically Auto coupled SubCF Pumpsets each having 1364 m<sup>3</sup>/hr flow rate and 110 hp.

### **Project Data**

- Customer : GWSSB  
[Gujarat Water Supply and Sewerage Board ]
- End Customer : GWSSB  
[Gujarat Water Supply and Sewerage Board ]

### **The effective Aqua's solution**

Having such desirous of making minimum land acquisitions; Aqua designed Sadulka PS with Submerged Centrifugal technology which saves substantial Capital Cost, no need of land for construction of Sump - only minimum space is required and it managed on SSNL's premises for electrical room, operation and maintenance free of grease lubricating and gland packing. With a missionary zeal AQUA has commissioned the entire project in 40days - This is an unparallel project, which has resulted in Huge Capital, Social & Life Cycle Cost benefits.



**The project was commissioned on 20/10/2012, only in 40days of execution as the work was started on 11/9/2012.**

