



WATER  
TRANSPORTATION

# World Heritage city



## A H M E D A B A D

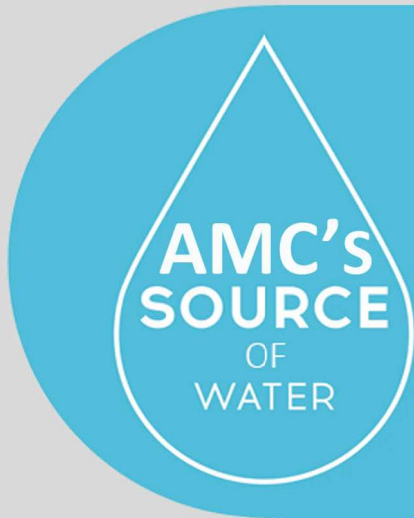
Ahmedabad is the largest city and former capital of the Indian state of Gujarat. It was referred to as the **“Manchester of the East”** in British Raj due to the fact that almost 77 out of 110 Textile Mills in India were based in Ahmedabad.

Its population of 6,357,693 (as per 2011 population census) makes it the fifth-most populous city in India. Ahmedabad has emerged as an important economic and industrial hub in India - it is the second-largest producer of cotton in India, and its stock exchange is the country's second oldest. It is home to Asia's best Business School (IIM A), IIT (Gandhinagar), NID, ISRO, PRL & many other National institutions.

The effects of liberalisation of the Indian economy have energised the city's economy towards tertiary sector activities such as commerce, communication and construction. Ahmedabad's increasing population has resulted in an increase in the construction and housing industries resulting in recent development of skyscrapers.

In 2010 Ahmedabad was ranked third in Forbes's list of fastest growing cities of the decade. In 2012, The Times of India chose Ahmedabad as India's best city to live in. As of 2014, Ahmedabad's estimated gross domestic product was \$64 billion.





- Kotarpur WTP : 825 MLD
- Jaspur WTP : 275 MLD
- Dudheshwar WTP : 70 MLD
- Raska WTP : 200 MLD
- Frenchwells : 170 MLD
- Borewells : 300 MLD
- Total : 1840 MLD**

\*AHMEDABAD MUNICIPAL CORPORATION

## KOTARPUR WTP: 864MLD Raw Water Intake P.S.



## Benefits of Aqua's Submerged Centrifugal Pumpsets:



### Maintenance Free

Requires No Consumables or Routine maintenance  
(No Priming, Oiling, Greasing, Gland Tightening, Shaft Alignment)



### Low Life Cycle Costs (LCC)

Highly Efficient, Minimal Maintenance, extremely Low Consumables and spare part requirements; Low down time



### Minimal Noise, Vibration & Heat Emission



### Robust & Reliable

Over-safe Design & Smart Protection Systems result in high Reliability



### Low Energy Cost

Wire to Water efficiency is at par with Centrifugal pumps & substantially higher than Water/ Oil filled Submersible, Polder/ Borewell pumps



### Weather Proof

No risk of cavitations - No damage due to Rains  
Withstands wide temperature variation (-5°C to 60°C)

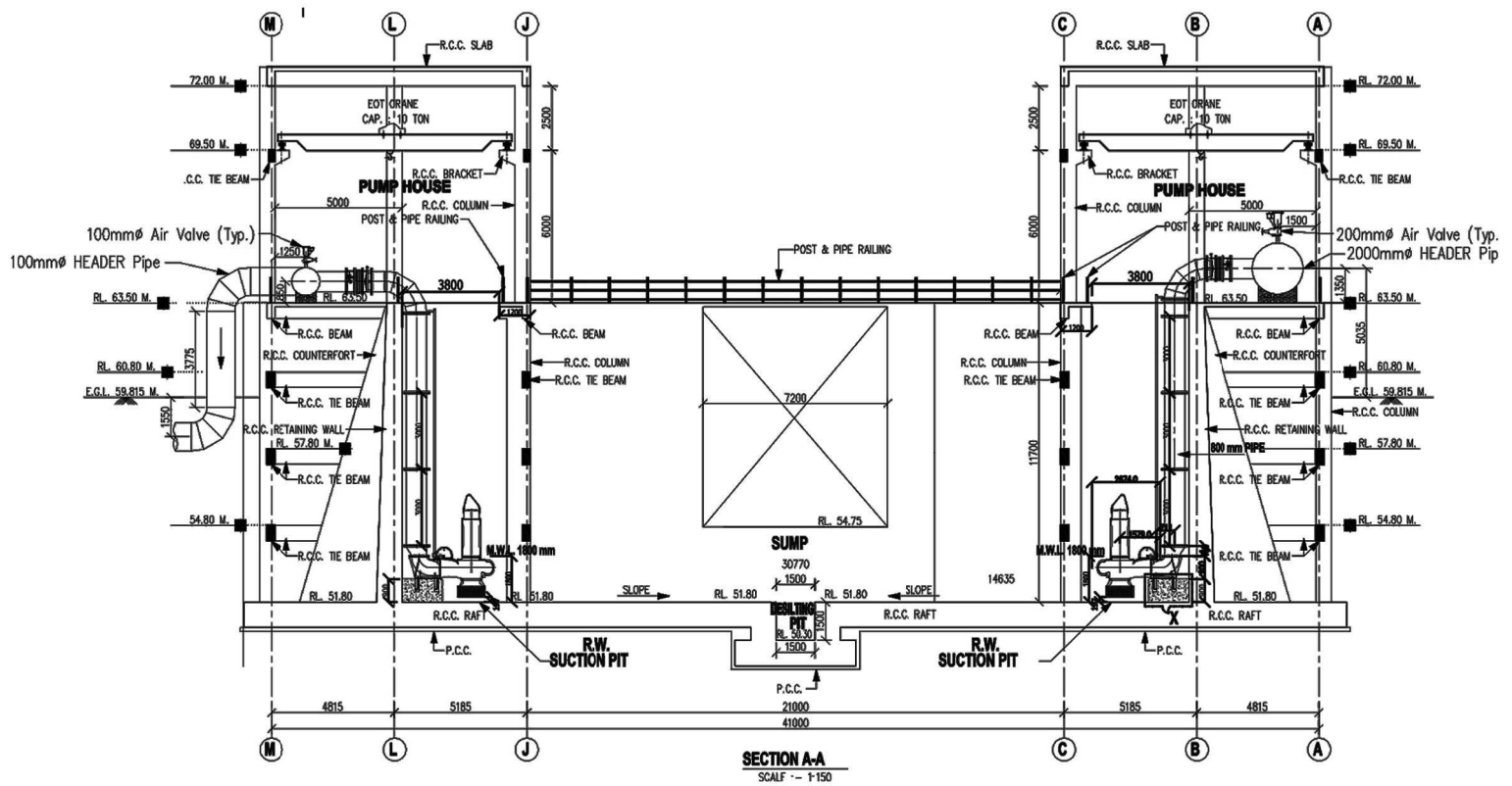
- All Thrusts are absorbed by Grease lubricated Anti Friction Bearings located deep inside the motor & inherently isolated from the pumped media - this makes the bearings fail proof even in case of increased silt levels.
- Shaft Sealing is by means of Two high quality Separate, Bi-Directional Mechanical Seals permitting reverse running due to accidental backflow. The primary seal is always of Silicon Carbide faces to withstand erosion due to increase silt content in water.
- Impeller is mounted directly on to the Extended Shaft of the motor hence eliminating alignment & vibration problems. CADesigned, CFD optimized; Multibladed Water Hydraulics ensures efficiency at par with Centrifugal / VT pumps.

The water of most water bodies in & around Gujarat is Silty but that does not adversely effect the performance of Submerged Centrifugal pumpsets as they don't have any Water Lubricated Bearings i.e. indeed that Basic Standards (ANSI HI 11.6) of these pumps build them to robust enough to be usable in Raw as well as Treated water.

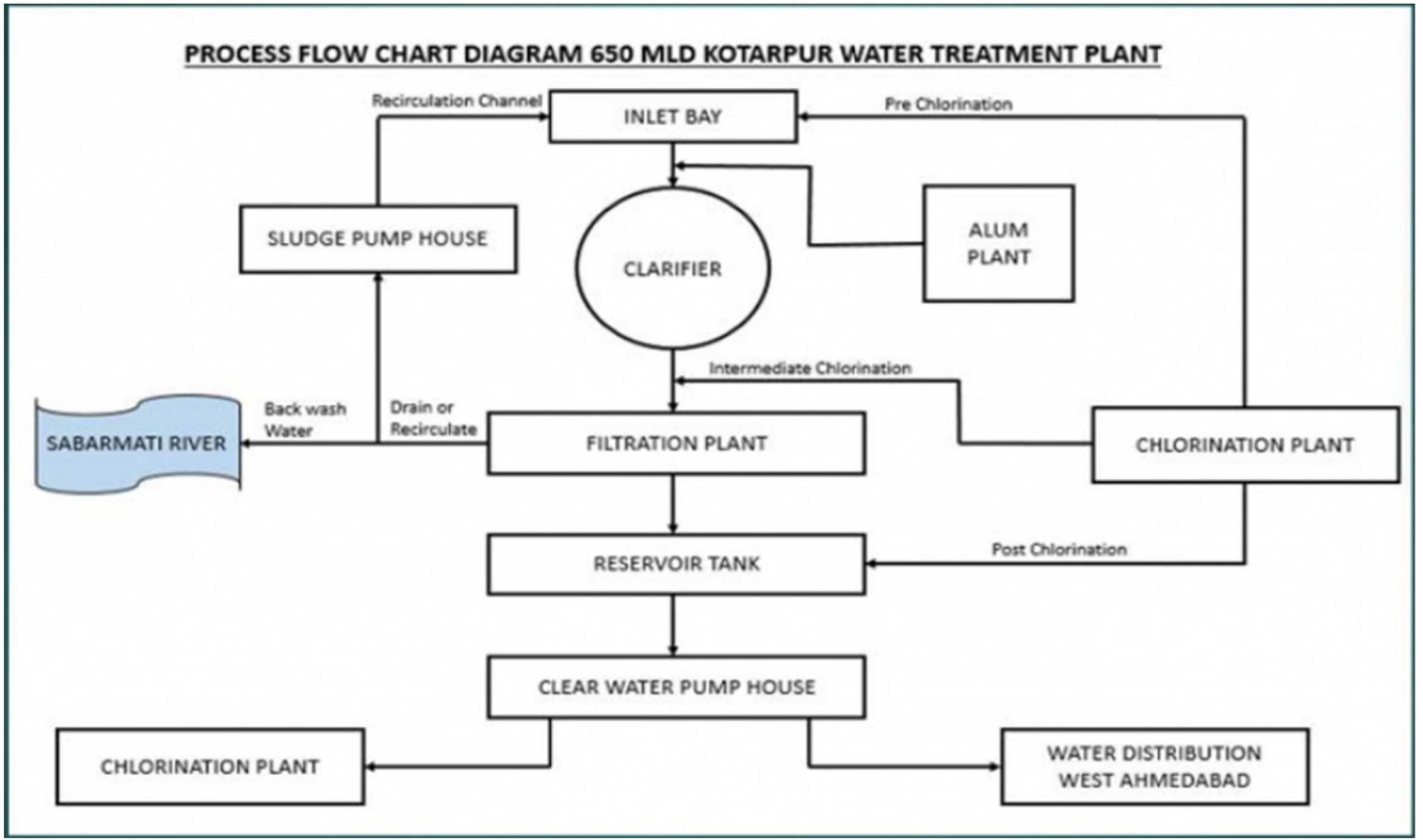
Each pump is rated for 4500m<sup>3</sup>/hr (~ 108 MLD) at 17m head & equipped with Low Speed (8-Pole) 315kW motors.

Despite being bulky, as these SubCF pumpsets are Bottom Rested (*vide DN600 Auto Coupling system*); they impose almost No Load onto the Civil Platform (*as is seen from the light duty frame work*) thereby reducing Cost & Complexity of civil works. Being bottom rested, also dampens pump vibrations much more effectively as compared to Vertically Suspended pumps.





**PROCESS FLOW CHART DIAGRAM 650 MLD KOTARPUR WATER TREATMENT PLANT**





# One of India's Largest WTP

## KOTARPUR WTP: 864MLD Raw Water Intake P.S.



**AQUA MACHINERIES PRIVATE LIMITED**

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