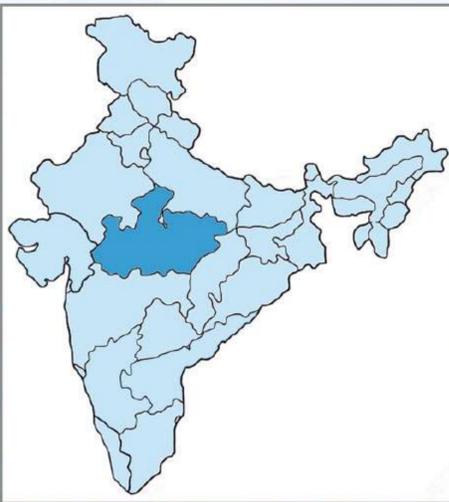


Chhindwara Water Supply Scheme



Chhindwara is a Municipal Corporation in Chhindwara district of Madhya Pradesh. It is one of the largest cities in the Satpura range and the largest district in terms of area in Madhya Pradesh.



It is on a plateau, surrounded by lush green fields, rivers and by dense forest with diverse flora and fauna. The town is built around the Bodri Stream, a tributary with the Kulbehra River & is the origin source of PENCH River which flows across PENCH National Park which includes PENCH Tiger Reserve, which is one of the reputed reserve for the Tiger Project of India.

Pench River

***Source of
Water Supply***



Situation

Water Supply Scheme was **hugely delayed due to constraints in Jackwell construction** - without Jackwell, Conventional VT Pumpsets Installation not feasible...!

Aqua studied on site & it's constraints & since water requirement was on very urgent basis; we took responsibility to provide



water in an Economical & Time Saving method to be worked out without any major civil construction.

Solution

Aqua proposed use of SubCF / SubVT pumpsets to cater this immediate requirement. We initially supplied 1 No. x **600hp** pumpset which was erected in a small Pit and Pumping was started. Finally 3 Nos. x **300hp** pumpsets were used for regular water supply.



Aqua guided the Contractor for total electromechanical job.

Pump Model: AVT_H_PS_4st_Bo_.2541_MQ_M_.300N_.415_NJ

Flow	Head	kW/hp	Qty.	Installation	Installed in	Pit Depth	Running from
460 m ³ /hr	105 m	224 / 300	3 Nos.	Horizontal Bottom Rested	Pit	3 m	2019

Customer: **LAXMI CIVIL ENGINEERING SERVICES PVT. LTD.**

Benefits of Aqua's Submerged Turbine Pumpsets (SubVT)



Saves (upto 40%) Land Requirement*



Saves (upto 66%) O&M Staff*



Saves (upto 75%) Spare Parts & Consumables*



Low Energy Cost : Due to Elimination of Ancillary & Auxiliaries; **Wire to Water Power Consumption** of Submerged Tubular Column Pump based Pumping Station is **slightly Lower** (compared to Conventional Bare Shaft Pump - Motor Set based Pumping Stations). *

**(refer marketing@aquapumps.com for additional white papers)*



Requires No Special Pre – Post / Ancillary-Auxillary Operations; like Operating & Maintaining the Forced Water Lubrication systems operation, No damage due to Flood or Rains.



No need for Frequent Periodic....



Shafts/Sleeves &/or Coupling

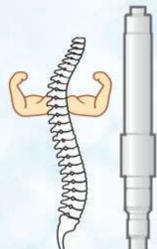


Gland Packing



Oil &/or Grease

A Strong, Mono Shaft for Fail Safe Operation

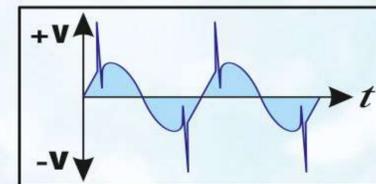


Single, Robust & oversized Shaft is Common between the motor & pump. It is (upto 1550kW 4P, 1200kW 6P, 900kW 8P) made from Stainless Steel & designed without any Sleeves (below the Mechanical Seals) thereby reducing maintenance problems & eliminating need of Costly Spare Parts.

Tolerates...



...Wide Voltage Variation



...Power Spikes & Surges



Minimal Noise, Vibration & Heat Emission; due to **elimination** of Auxiliary & Ancillary systems (like Forced Water Lubrication, Thrust Bearing Cooling system, Motor Heat Exchanger).



Low Life Cycle Costs (LCC)*

**(refer marketing@aquapumps.com for additional white papers)*

- Minimal Station Superstructure
- Simple Pipe Work
- Simple Foundation - conducive for Water Logged Terrain
- Quick Connection & Disconnection of Pumpset.
- Inherently Flood Proof

Customer's Delight

Water Supply Scheme to Chhindwara city was to commenced immediately !

SubCF Pump sets required very Simpler Civil Construction to install. Customer was delighted due to least time wastage in Civil construction & water supply started in just 1 month period. After completion of Jack well same Pump sets can be shifted to new Jack well with vertical installation.

Easy installation, reliable operation, very less routine maintenance and least spares inventory were additional benefits enjoyed by customer. This installed SCF Pump sets enabled immediate water supply in absence of Jackwell also.

**LAXMI CIVIL ENGINEERING SERVICES PVT. LTD.**

CIVIL, MECHANICAL, ELECTRICAL ENGINEERS AND CONTRACTORS

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Email : laxmikop@lcepl.com, Website: www.lcepl.com

CIN NO.: U74210PN2000PTCO14696



TO WHOMSOEVER IT MAY CONCERN

Date- 19.10.2019

This is to certify that M/s. Aqua Machineries Pvt. Ltd., Ahmedabad have supplied Submerged Centrifugal (Bowl Type) Pump set with Integral LT Submerged Motor for our Chhindwara water supply scheme, Chhindwara (Madhya Pradesh) Project.

The Pump set particulars are as follows:

Pump set Type	: Submerged Centrifugal Pump set with Integral motor (Sub VT Type)
Application	: Raw Water Handling
Pump Model	: AVT_H_PS_4st_Bo._.2541._MQ_M._.300N_.415_NJ
Head	: 105 meters
Discharge	: 460 m ³ /hr
No of Stage (Impeller)	: 4 No.
DN of Pump set	: 250 mm
Motor Rating	: 300 hp / 224 kW
Voltage	: 415 V
Motor Type & Cooling	: LT Submerged squirrel cage induction - Dry Air filled Totally Enclosed (IP68), Water Cooled (TEWC) (Complying to IC4A1W0 of IS 6362)
Qty	: 3 Nos.
Installation	: In Sump- Horizontally mounted.

Laxmi Civil Engineering Services Pvt Ltd. is executing prestigious project for chinndawara water supply, Madhya Pradesh from Macchugaura dam. Where water supply was to be commenced urgently, Aqua machinery pvt ltd, Ahmeadabad initially supplies 600 HP having duty parameters flow- 1250 m³/hr at head- 105 mtr pumpset & then Supplied 3 nos. 300 HP Pumpset having duty parameters flow- 460 m³/hr at Head- 105 mtr.

These pumpsets are commissioned satisfactorily & urgent requirement of water supply was catered. We appreciate technical & service support rendered by Aqua along with prompt response against this special requirement.


Shirish Doshi
(Director)



Regd. Office : 1148, E. Sykes Extension, Kolhapur-416001 (Maharashtra) India
Phone No. : +91 0231-2529199, 2527199, Fax : +91 0231-2668199

Aqua Machineries Private Limited

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