AQuA®

WATER SUPPLY

# Reliable pumping by SubVT pumpsets even at 30m depth

## Koppal, Karnataka.

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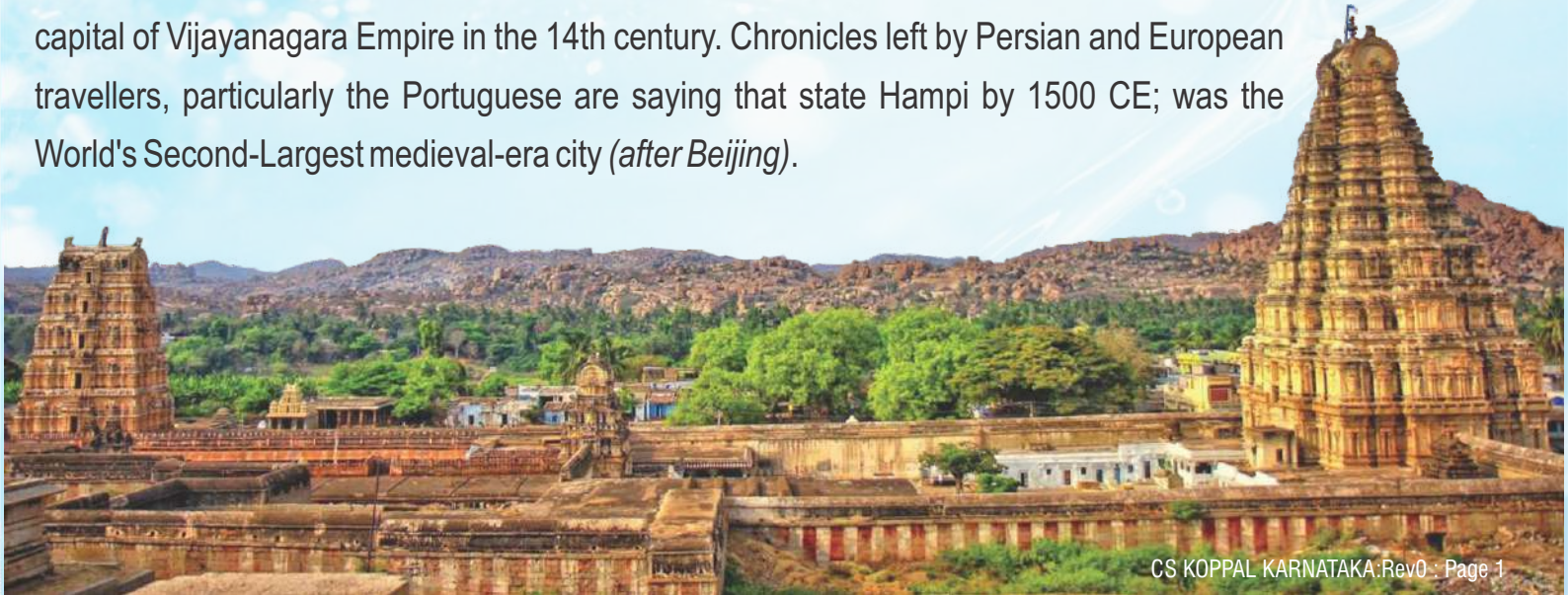
**Koppal District** located in the northern interior of Karnataka having an area of 8,458sq- km is surrounded by Raichur district in the east, Gadag district in the West, Bagalkot district in the north, Bellary district in the south.

Koppal is closest to the UNESCO World Heritage site of HAMPI - the capital of Vijayanagara Empire in the 14th century. Chronicles left by Persian and European travellers, particularly the Portuguese are saying that state Hampi by 1500 CE; was the World's Second-Largest medieval-era city *(after Beijing)*.



Geographically, **Koppal** is a stretch of rocky terrain on one side and acres of dry land on the other hence water storage was always a problem & water lean crops like Jowar, Ground-nuts etc were grown.


But now, after the Thunga-Bhadra river waters from the neighbouring town of Munirabad *(20kms away)* have been dammed up with a huge Dam - i.e. TungaBhadra dam; water availability is not a problem - indeed high-tech irrigational Farming *(pomegranates, grapes, figs, etc)* are being now cultivated by gravity irrigation & Koppal district is the best seed production center in the country.

But despite water availability in the dam; this also poses problems for Lifing water via pumpsets - the depth of column pipes is almost 30m & 24m water level variation *(between Monsoon & Summer)* means very robust pumps are required...!

TB dam has very high silt inflow & most of it is ferrite rich - i.e. abrasive in nature !

## WSS Koppal District :

| | | |
|---|---|---|
| **End customer** | : | Karnataka Urban Water Supply & Sewage Board |
| **Type of Pump** | : | HT Submerged Turbine pump installed in Jack well |
| **Suspension Length** | : | ~30m |
| **Location** | : | Tungabhadra dam near Hospet |

## Robust & Reliable

- Minimum breakdown even in High Silt levels
- No breakdown for Deeper Column Lengths even upto 120m due to the Elimination of Couplings, Fragile Line Shafts & its Water Lubricated Line Shaft Bearings, Spiders, etc.
- Over-safe Design & Smart Protection Systems result in high Reliability

## Ultra Low Maintenance

Requires neither Consumables nor Routine Maintenance *(like Priming, Oiling, Greasing, Gland Tightening, Shaft Alignment, Dry Run prevention, Forced Water Lubrication systems, etc.)*

## Simple & Quick to Commission

Due to mono block design; **No need** to align shafts, couplings, thrust bearing, spiders; set up forced water lubrication, oiling, thrust bearing cooling system; etc.

## Minimal Noise, Vibration & Heat Emission

Due to elimination of Auxiliary & Ancillary systems like Forced Water Lubrication, Thrust Bearing Cooling system, Motor Heat Exchanger.

**Long Maintenance Free Bearing Life** Heavy duty, Anti Friction, Thrust Ball cum Radial Bearings are designed for **L10H life** in excess of **1,00,000 hours.**

Factory filled with extremely Long Life, Synthetic Grease obviating the need of subsequent ReGreasing for atleast **50,000 hours &/or 5 years.**

As the Bearings, Mechanical Seals, Impeller Securing Keys, etc are **Bi-directional**; there are no major mechanical problems arising out of accidental Reverse Rotation & hence **Non Reverse Ratchet** is not required eliminating its huge maintenance as well

## Installing / Removal of SubVT is very Simple, Time Saving & doesn't require elaborate skills

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD,
Office of the Executive Engineer Division Fort, Ballari-583102
Phone 08392 267762
Email: eekwbbellary@yahoo.co.in

No. KWB/EE/BLY/AS/Work Done/2018-19/ 2749 Date: 20.12.18

**TO WHOMSOEVER IT MAY CONCERN**

This is Certify that M/s. **Aqua** Machineries Pvt. Ltd., Ahmedabad have supplied Submerged Vertical Turbine (Bowl Type) Pump set with Integral HT Submerged Motor for our Koppal water supply scheme Project . Through M/s SBM Projects & Engineerings, Pune

**The Pump set particular are as follows:**

| | | |
|---|---|---|
| Pump set Type | : | **Submerged Vertical** Turbine Pump set with Integral motor ( SubVT Type ) |
| Application | : | RAW WATER Handling |
| Pump Model | : | AVT._V_Su_3st_Bo._3043_M._M._0536_03300_NJ. |
| Head | : | 114 mwc |
| Discharge | : | 936 m3/hr |
| No of Stage (Impeller) | : | 3 Nos |
| DN of Pump set | : | 300 mm |
| Motor Rating | : | **536 hp / 400 kW** |
| Voltage | : | **3300 V** |
| Motor Type & Cooling | : | **HT Submerged** squirrel cage induction - Dry Air filled Totally Enclosed ( IP68 ), Self frame Surface Water Cooled ( **TESWC** ) (Complying to **IC4A1W0 of IS 6362)** |
| Qty | : | **2 Nos (1w + 1s)** |
| Installation | : | @ Koppal in Jack Well, Suspended from TOP with **Suspension length = 30m** |

These Pump sets were commissioned in April **2018** and are working Satisfactorily Till date .

Executive Engineer
KUWS&DB, Division, Ballari

## Noise & Vibration Free, Clean & Spacious Pumproom *(as motor is immersed under water)*

*"As compared to Vertical Turbine pumpsets; these Sub VT pumps are much more easy to operate & maintain"*

**- Malesh Naik,**
S.D.O., Koppal Sub. Div. 2

# Aqua Machineries Private Limited

www.aquapumps.com

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