



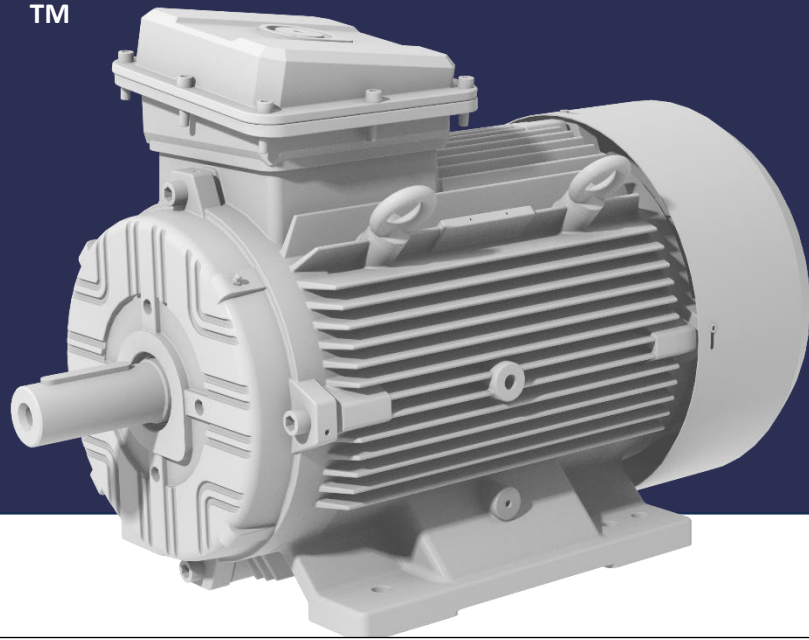
CASE STUDY

User: Not Disclosed

Location: Nagpur

Pumping 15KW 2940 RPM

Project Credits: SEETECH SOLUTIONS PVT. LTD



Statement of a problem

Pump used in effluent Treatment plant run almost 16 hours a day and 365 days a year. Said Pump-set was fitted with IE1/IE2 Motors for many years. Reducing electricity cost for profitable running of the Effluent Treatment Plant was need of an hour.

BEFORE IMPLEMENTATION

Horizontal separately coupled pump was fitted with IE1/IE2 efficiency 15KW 2-Pole Induction Motor. Motor was running using VFD.

Motor Input Power: 16.69KW

Flow : 126.2m³/Hr

Output pressure: 2Kg/cm²

Motor RPM: 2940



AFTER IMPLEMENTATION

Pump-set was retrofitted with ULTRAMATE™ Series IE5 Permanent magnet Synchronous Motor

Motor Input Power: 13.37KW

Flow: 132.3m³/Hr

Output pressure: 2Kg/cm²

Motor RPM: 2750



Key Takeaways

Achieved **19.89%** total energy savings by replacing outdated IE1/IE2 induction motors with the advanced ULTRAMATE™ Series IE5 motor.

Optimized pump performance by fine-tuning the operating point with precise control using a synchronous motor, contributing significantly to overall savings.