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IMP

IMP POWERS LTD.

IMP POWERS LTD. introduces "HYDRO KINETIC TURBINES"

A Revolutionary Technology

Under licensing agreement with SHP, Germany

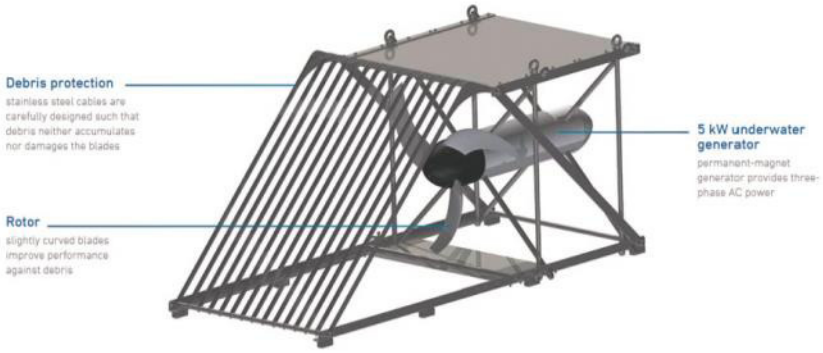
INTRODUCTION

*IMP POWERS LTD., India under licensing agreement with Smart Hydro Power, Germany introduces "**SMART HYDRO KINETIC TURBINES**" in India. Smart Turbine is based on 5kW underwater generator which is gearless, driven by 3 blade rotor. They are powered by kinetic energy instead of potential energy, so are also called as zero-head turbines. The output of turbine is velocity dependent & reaches a peak production of 5kW at velocities of 3.1m/sec or 2.4 m/s depending upon flow conditions of partially or fully constrained.*

***"A BREAK-THROUGH TECHNOLOGY"** introduced first time in India which will partly substitute conventional energy sources for sustainable development of country, providing a complete renewable energy solution for the best possible cost benefit. This proprietary technology is standardized and easily scalable. It can be used for decentralized electrification of remote villages where grid extension is not feasible.*

SMART TURBINES - THE HEART OF THE SMART HYDRO SYSTEM

- BASELOAD SUPPLY
- NO AUDIO DISTURBANCE
- HIGHLY COMPACT
- EASY INSTALLATION AND O&M
- NO ENVIRONMENTAL IMPACT



SPECIFICATIONS OF TURBINE

- Output : 250-5000 W
- Dimensions (LxWxH) : 2.6x1.2x1.2 (in m)
- Rotational speed : 90-230 rpm
- Weight : 300 kg

BASIC REQUIREMENTS OF TURBINE

- Minimum velocity of water : 2.7m/s
- Minimum depth of flowing water : 1.5 m
- Discharge required : 3-4 cumecs

IMP POWERS LTD.

Corporate Office: 35/C, 2nd floor, Popular Press Building, Pt. M. M. Malviya road, Tardeo, Mumbai - 400 034, India

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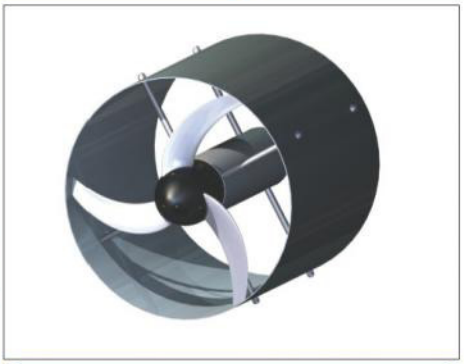
WIDE SERIES OF TURBINES

MONOFLOAT TURBINE

FREE-STREAM TURBINE



ROHR TURBINE

AREA OF APPLICATION

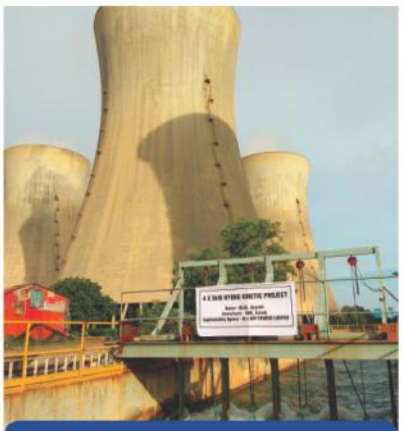
1. River beds & irrigation canals
2. Cooling canals of Thermal power stations
3. Tail races of existing hydro power station
4. Exit channels of sewage treatment plants

MODES OF APPLICATION

The Smart Turbine is capable of operating in –

1. Grid Tie system
2. Off-Grid systems
3. Hybrid systems with Solar-Hydro combination

PILOT PROJECT at Neyveli Lignite Corporation India Ltd.



Upstream view of project at NLC

- **"4 x 5kW hydro-kinetic project"** is a unique project where renewable energy from flowing water is extracted for the first time in India.
- The project consists of 4 units of 5kW each powered by running water coming from cooling towers of Thermal power plant and the generated power is fed to the grid.
- The Project is under RnD initiative of CARD, NLC India Limited and is generating above 110,000 units per annum.
- It was successfully commissioned on 12th of October, 2017.

Automatic Braking incorporated

ABOUT IMP POWERS LTD.

IMP POWERS LTD. India, is a $150 Million company of "IMP - Mangalam" Group initiated in 1961 & is a leading Indian brand for quality **EHV, Power, Distribution, Special Purpose, Furnace, Thyristor Duty Transformers up to 315 MVA in 400 kV class** with a rich experience of more than five decades. It has presently an installed base of **over 35,000 transformers** (approx. 100,000 MVA) in India and across the globe.

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