LOW COST WIND MILL FOR POWER GENERATION

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INNOVATOR

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PROBLEM ADDRESSED

Interrupted power supply, unavailability of infrastructure to supply electricity to every house hold is a major challenge in rural areas. An average individual cannot afford to lay infrastructure to receive electricity for his home. The challenging situation made the innovator to develop low cost wind mill.

PRODUCT

Innovative wind turbine produces electricity sufficient for a household(1 kVA) and can be installed near house or on the roof with an RCC construction.

TECHNICAL DETAILS

- Wind turbine mounted on a shaft through hub,
- Five blades of aluminum (5 ft long, thickness 4 mm)
- Tail made of MS (2 mm thickness), gear box (1: 6),
- Alternator (permanent magnet type having 18.5 gauge copper winding in star configuration -4.5 kg),
- Braking arrangement (comprising a motor and worm gear),
- Mounting post of 34 ft height,
- 4 inches diameter pipe with ropes for providing support from three sides, electric cable, AC/DC Converter (rectifier)
- Voltage stabilizer and batteries for storing the electric power
- The weight of turbine, gearbox and alternator is 120 kg and that of post is 90 kg.

SALIENT FEATURES

- This is a Cost effective windmill and very competitive in price to the other windmills with similar efficiency.
- Can be used for electricity generation and direct coupling for mechanical works like water lifting
- Can replace fuel guzzling generator sets and can help in reducing pollution by thermal power plants