

Design and installed by Local Government Engineering Department, Bangladesh :

Introduction :

- Low cost
- Local manufacture
- Minimal maintenance
- 20,000 of water per day at 4.0 m/s wind velocity

- 10 m head

Technical Data :

- Rotor dia 2.75m
- No of blades 24
- Starting wind speed 1.8 m/s
- Pump type semi rotor reciprocating suction pump
- Output 20,000 liters/day, 10m head at 4.0m/s wind velocity

Use of Windpump :

- Villages
- Schools
- Rural Clinics
- Farms (irrigation & Livestock)
- Small scale industries
- Nature/Wildlife reserves
- Land Drainage
- Salt Production
- Waste water treatment
- Aerations



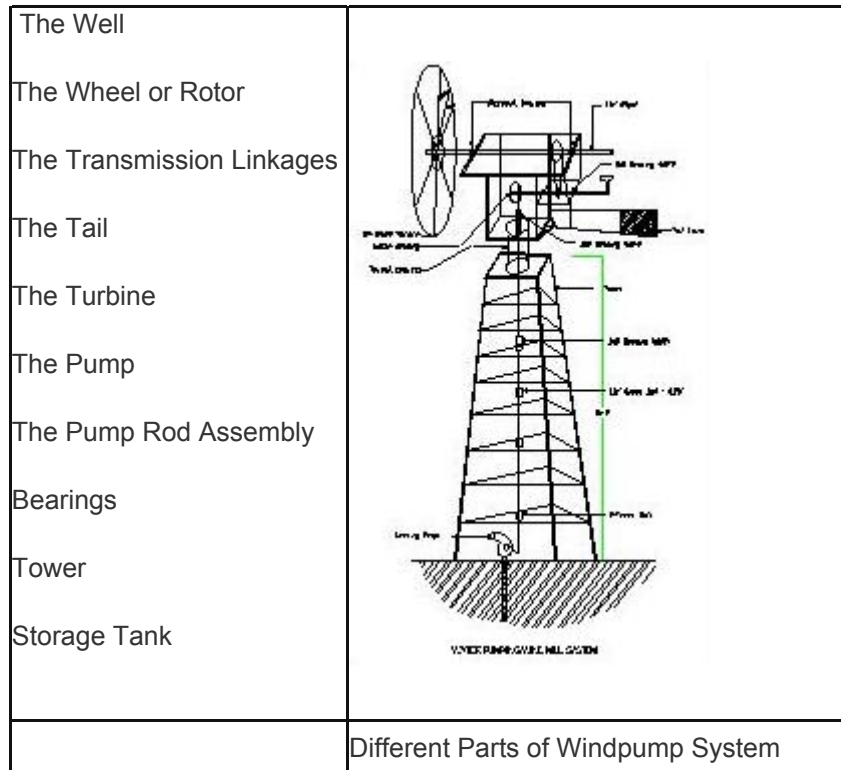
Typical Water pumping Windmill, Sherpur District

SL	Location	Average Wind Speed (M/S)	Sensor Height (M)	Data Acquisition Period
1	Kuakata	4.54	25	1996-97
2	Kutubdia	4.18	25	1996-97
3(a)	Char Fasson 1	3.28	10	1996-97
3(b)	Char Fasson 2	4.07	25	1996-97
4	Patenga	3.84	25	1996-97
5	Cox's Bazaar	3.34	25	1996-97
6	Noakhailil	2.96	25	1996-97
7	Teknaf	2.96	25	1996-97

Basic concept of windpump :

- Wind energy is converted into rotary mechanical motion of wind turbine
- Rotary motion of the wind turbine is converted into reciprocating motion
- The pump sucks water and delivers into storage tank

Different parts of a windpump system :



Materials & Manufacture :

- Most of the materials is steel angle sections, steel plates, chains with sprocket, G.I. Sheet etc.
- Few ball bearings and guides are required
- Little machining is required
- Few turning ,boring ,drilling and welding

Installation and Maintenance :

- Total weight of machine including the tower is under 800 kg
- Easy and safe installation using chain pulley mechanism and sometimes using a winch
- Maintenance is limited to greasing the ball bearings once a year
- Touching up or repainting every few year
- Servicing of pump (change seals only) every few years

Advantages :

- Low cost

- Low maintenance cost
- No fuel cost
- Minimal maintenance
- No pollution
- Ergonomic design

Conclusion :

- Proved functional to supply water in rural areas
- Should be disseminated in our country to meet the need of water to the rural people
- Design should be updated applying special thrust by observing its performance

Sustainable Rural Energy Project
Comp. 226 of SEMP
Local Government Engineering Department(LGED)
LGED HQ, Agargaon
Dhaka-1207
Bangladesh
Tel : +88-02-811 9138, 8114317-9, Ext. 34
Fax: +88-02-811 3144
E-mail sre@lged.org , sreproject@hotmail.com , sre@rein-lged.org
Web : www.lged-rein.org , www.lged.org