





PRECISION ENGINEERING WORKS

#### **ABOUT US**

**Precision Engineering Works** known in short as "**PEW**" founded in 1974 by **Mr. Mahendra M. Patel,** with a small manufacturing set up of 800 sq. ft. area making Centrifugal Monoblock Pumps has grown to a full fledged manufacturing group spread over more than 60,000 sq. ft of production facilities, nearly 150 committed people and more than 400 different products.

The "PEW" group manufactures more than 500 varieties of Pumps for handling water used in Agriculture, Industrial, Domestic, Civil and Fire firefighting Applications.

We have a large range of Electric Motors i.e. Single and Three Phase Standard Motors & Flame proof motors, for different voltage & frequency, multispeed & many other applications.

The new production facility at Palghar allows us to add up all of our strengths as a base for seamlessly interlinking processes: right from Stamping cutting and Mechanical Production processes, via Assembly of complete pump sets and Performance Testing, to Packaging and Despatch.

Design, Manufacturing, Assembly, Sales and Marketing and Product Servicing have been awarded **ISO 9001:2008** Certification by ASCB(E), UK.

#### Core Purpose:

To simplify lives and surpass expectations.

#### Core Values:

- 1. Industry leading customer satisfaction.
- 2. Manufacture high quality & high performance products.
- 3. Easy to do business with.
- 4. Building long term partnership.
- 5. Always exploring new opportunities.
- 6. User friendly products.

#### Brand Promise:

Always 100% Customer Satisfaction.

The following details the salient characteristics where PEW products surpass others as regards various critical manufacturing processes:

Stampings: Low loss silicon stampings right from 63 to 280 frames-2, 4, 6, 8 pole (all designs) are completely processed in-house to maintain impeccable Quality and Consistency, the material being directly procured from SAIL. Stamping Division boasts of all 3 types of manufacturing processes i.e. Notching, Gang Slotting and Progressive Toolings for fast and Consistent Stators and Rotors. A 75 ton Cold Chamber Vertical Rotor Die-casting m/c and a Centrifugal die-cast m/c ensures solid, blowhole-free Rotors.

<u>Manufacturing</u>: "PEW" group manufacturers a number of components in-house and also procures from dedicated suppliers. Manufacturing facilities include a wide range of machines such as Lathes, Hydraulic Presses, Hydraulic Cylindrical Grinding m/c, CNC Turning Centres, CNC Lathes, Welding Unit and Winding Systems for complete range of Electric Motors and Pumpsets.

LEAN Mfg processes and Material Resource Planning (MRP) translate the management goals & priorities into Material, Men & Machine requirements. This helps in shorter lead times and on-time delivery.

Different steps of the manufacturing process take place in a single production unit & this helps in co-ordination of various activities, namely marketing to engineering & manufacturing to final testing

<u>Assembly</u>: Easy & fast assembly of components assures prompt delivery of the products. In addition, availability of large stock of components at any time guarantees timely supply of spares parts. Full fledged assembly facilities for motors and pumps are available including balancing machines, bearing presses and pneumatic tooling.

<u>Testing</u>: Computerized testing facilities are installed so as to test each and every pump and obtain test reports at a click. These facilities are also utilized for developmental purposes.

Full load testing of Electric Motors and Temperature rise test are carried using state of the art Dynamometer Testing setup, different setups for various range of HPs of motors. To make sure our customers always obtain the best possible products, each and every pump is tested thoroughly under real conditions with an eye for detail. After all our aim is to help our customers lead in their respective fields. Before a product leaves our factory, we make absolutely sure it meets the highest requirements in terms of safety and reliability. Each is therefore subjected to an extensive series of quality assurance tests.

<u>Painting</u>: The pumps and motors are painted according to the company specifications or to the customer's specification when order quantity is high. Painting is carried out in a Paint booth to ensure air inside the factory is clean and unadulterated.

<u>Packing:</u> is carefully done so as to protect the product and guarantee its perfect condition at delivery. Corrugated boxes are used for pumps and motors below 50kg and heavy duty wooden boxes are used for the rest.

#### **MILESTONES:**

- 1974 Started manufacturing of Monoblock pumps.
- 1981 Setting up of Stamping Division.
- 1985 Procured IS: 9079 for Monoblock pumps.
- 1986 Started manufacturing of Submersible pumps.
- 1988 Setting up rotor Die casting division.
- 1988 Procured IS: 8034 for Submersible pumps.
- 1994 Started manufacturing of horizontal Openwell Submersible pumps.
- 1995 Approval by DGS&D, a Central Govt. Institution for Quality Assurance.
- 1998 Set up of Cold Chamber Rotor Die casting machine for automatic rotor casting.
- 1999 Approval CMRI Certificate for Flameproof motors Fr.90 to 160
- 2000 High discharge self priming pumps up to 10HP with max head of 90m & max discharge of 400 LPM.

- 2001 Approval CMRI Certificate for single phase Flame proof motors upto 1.5 Hp, 2P & 4P.
- 2001 Automizing the stamping line with the help of Automatic press.
- 2001 Approval DGFASLI & IS:2148 for Flame proof Motors.
- 2002 Approval CCoE for Flameproof Motors & CMRI for Flame proof motors Fr. 63, 71, 80, 180.
- 2002 Started mfg of Fractional Horse Power (FHP) motors for single phase application (NEMA frame).
- 2003 Upgradation of Infrastructure at Submersible pumps division for manufacturing upto 120 hp.
- 2003 Procured IS: 325 for Three phase Induction Motors
- 2004 Setting up of Heavy Motors division at Palghar for manufacturing Standard & FLP Electric Motors upto 225 frame.
- 2004 Approval CMRI for FLP Motors for GAS group IIC & Temp Class T6 for frame 80 to 225.
- 2004 Installation of CNC Turning Centre and Vertical Turret Lathe at Heavy Motors Division, Palghar.
- 2004 Setting up of testing facility for Load Testing of Electric motors upto 60 H.P at Palghar.
- 2005 Installation of CNC Turning Centres at Palghar.
- 2006 Procured ISO 9001-2000 of DNV / UKAS.
- 2006 Increase of Self priming pump range to max head -90m & max discharge 620 LPM.
- 2006 Installation of Grinding, Milling, & Balancing machines at Palghar.
- 2007 Procured DGMS Certificate for FLP Motors suitable for Gas Group I.
- 2007 Procured IS: 14220 for Openwell Submersible pumps.
- 2007 Set up of Assembly line at Palghar.
- 2008 Inst of CNC Turning Centre for shaft machining.
- 2008 Introduction of FLP / NON FLP Motors upto 280 frame.
- 2009 Approval CMRI Certificate for single phase FLP motors upto 2 hp.
- 2011 Upgradation of manufacturing, assembly and testing facilities for Submersible pumps upto 150 hp.
- 2011 Procured Star rating certificate from BEE for Openwell submersible pumpsets.
- 2012 Supplied 8000 pumps to various Zilla Parishad across Maharashtra.
- 2012 Development of Submersible Dewatering/Sewage Pumps upto 10 hp.
- 2012 Development of Horizontal & Vertical Multistage Centrifugal Pumps upto 50 hp.
- 2013 Completion of full range of Back Pullout End Suction Pumps upto 300 hp for Fire-fighting & hydro pneumatic system applications.

- 2013 Designing and manufacturing of hydro-pneumatic systems using submersible & centrifugal pumps in vertical and horizontal construction.
- Completion of full range of Horizontal Single & Double stage Split Case Pumps upto 300 hp (Max. Flow 10000 Lpm.) for Fire-fighting applications.
- 2014 Development of Vertical Turbine Pumps with max flow upto 10000 Lpm.

Our monthly production ranges from 1500 to 2000 units as per seasonal variations. Each & every unit is tested and recorded. Products made as per customized requirements are tested under the same conditions (imposed on them by electrical & hydraulic variations) in which the product is to be operated on site. We believe in "The next process is the customer". Thus each employee is fully responsible for his actions.

We have more than 100 dealers across Maharashtra. Our dealer network also extends to Madhya Pradesh, Gujarat, Rajasthan, Andhra Pradesh, Karnataka & Chennai in the South, Kolkata, Durgapur, Guwahati in East & Delhi in North.

Being situated in Mumbai, we have a group of service engineers always on the move for providing solutions to customers within 12 working hours of receiving complaint.

### REGISTRATIONS

- Micro, Small and Medium Enterprise Development (MSMED)
- National Small Industries Corporation Ltd. (NSIC)
- Brihanmumbai Municipal Corporation. (BMC)
- Maharashtra Agro Industries Development Corporation Limited. (MAIDC)
- Maharashtra State Co -op. Marketing Federation Limited. (MSCMF)
- Maharashtra Housing & Development Association Ltd. (MHADA)
- Public Water Works Department (PWD).
- City & Industrial Development Corporation of Maharashtra. (CIDCO)

### **CERTIFICATIONS**

- ISO 9001:2008
- Bureau of Indian Standards (BIS)
- Bureau of Energy Efficiency (BEE)
- Central Institute of Mining & Fundamental Research (CIMFR)
- Petroleum & Explosive Testing Organisation (PESO)
- Director General of Mine Safety (DGMS)

#### **IMPORTANT CUSTOMERS**

#### **PUMPS MOTORS ONGC** DLH Ltd. Tata Housing Development Corpn. **IOCL** Ashray Housing Ltd. **BHEL** Dosti Realty Ltd. **SAIL** Rajesh Life Spaces. **BARC** Kalpataru Ltd. L & T Ltd. Hubtown Ltd. GAIL Ltd. Mayfair Housing Ltd. Sandoz Ltd.

Thermax Ltd.

IISCO Ltd.

Northern Coalfields Ltd.

- Waytair Housing Ltd.
- Sanghi Overseas.Saifee Hospital
- Hinduja Hospital & Research Center

# **INFRASTRUCTURE**



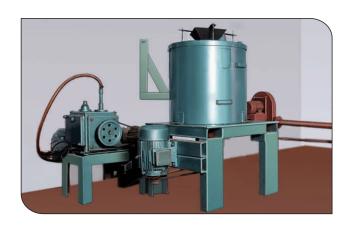
Submersible Pumps Division-Ahmedabad



Surface Pumps and Motors Division-Palghar



Storage area for Machined castings



Centrifugal Rotor diecast machine



Automatic Stamping Line



Vertical Cold chamber Rotor diecast machine



Dynamometer setup for Electric motor type testing



Hydraulic Cylindrical Grinding machine



Routine Testing of windings



**CNC Turning Centre** 



Vertical Turret Lathe

## LIST OF PRODUCTS & RANGE

1. Flame proof motors suitable for group IIA, IIB & IIC gases. All relevant statutory certification available.

2 pole & 4 Pole.

a. Single Phase - 0.12Hp to 2 Hp - (Frame 80 & 100 seamless pipe)

b. Three Phase - 0.12 Hp to 120 Hp- 2 Pole 63 to 280 frame - 0.12 HP to 120 HP- 4 Pole (C.I Construction) - 0.12 HP to 40 HP - 6 Pole

- 0.12 HP to 30 HP - 8 Pole

2. Standard Electric Motors

Three Phase - 0.12 HP to 120 HP- 2 Pole 63 to 280 frame - 0.12 HP to 120 HP- 4 Pole (C.I Construction) - 0.12 HP to 40 HP- 6 Pole

0.12 HP to 30 HP- 8 Pole

3. Centrifugal Monoblock Pumpset

**a.** Single Phase - 0.5 HP to 2 HP **b.** Three Phase - 0.5 HP to 15 HP

4. Self priming Monoblock Pumpset (I & II stage)

a. Single Phase
b. Three Phase
0.5 HP to 2 HP.
0.5 HP to 10 HP.

5. Borewell Submersible Pumpset ( 3", 4", 6", 7", 8" & 10")

a. Single Phase - 0.5 HP to 3 HP.b. Three Phase - 0.5 HP to 150 HP.

6. Openwell Submersible Monoblock Pumpset

a. Single Phaseb. Three Phase0.5 HP to 2 HP.0.5 HP to 15 HP.

7. Centrifugal Back Pullout End Suction Pumps

**a.** Three Phase - 10 HP to 300 HP.

8. Submersible Dewatering / Sewage Monoblock Pumpset

a. Single Phaseb. Three Phase0.5 HP to 2 HP.0.5 HP to 10 HP.

9. Horizontal & Vertical Multistage Centrifugal Pumpset -

a. Three Phase - 0.5 HP to 50 HP.

10. Horizontal Single & Double Stage Split Case Pumpset-

a. Three Phase - 30 HP to 300 HP.

11. Vertical Turbine Pumps

a. Three Phase - 7.5 Hp to 300 Hp.

12. Complete Packaged Systems

a. Hydro Pneumatic Systems

**b.** Fire Fighting Systems

**c.** Water Transfer Systems

13. Pump Accessories

a. Fully Automatic Control Panels.

**b.** Float Switches.

c. Mounting Stands / Base frames.

**d.** Diaphragm Tanks.



