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An introduction to Pacific Pipes

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Pacific Pipe Systems Pvt Ltd

Pacific Pipe Systems is a Group Company of Doshion Limited, an Rs.350 Crore group providing a wide gamut of Products, Technologies and EPC Services in water and water treatment pertaining to industrial and municipal water needs. The company has been in the service of industry and public since 1977. With a 1500 strong workforce of qualified professionals, the group delivers seamless and integrated solutions for all water management needs.

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Pacific Pipe Systems

Pacific Pipe Systems, an Rs.150Cr joint venture based out of Ahmedabad, manufactures Glassfiber Reinforced Polyester (GRP) pipes for Water, Sewer and Industrial sectors. The plant has an initial annual capacity to produce 600 kms of DN600mm and 200 kms of DN1000mm GRP pipes in a diameter range from 100 to 3000 mm and in lengths of 6-12 Meters. Pressures classes from 1 to 32 kgs/cm² and stiffness classes 124, 248, 496 kPa. The joints are double bell Reka coupling with elastomeric rings or double O-ring bell & spigot. Lock joints and mechanical joints can be supplied for special project requirements.

All pipes, joints and fittings supplied meets or exceeds the requirements of AWWA C950 (AWWA Standard for Fiberglass Pressure Pipe), and ASTM D3517 (Standard Specification for Fiberglass Pressure Pipe). The Standards requires the manufacturer to design and manufacture pipes for 50 years of continuous operating conditions. A list of test methods applicable is listed in our inspection and test plan.



Pacific Pipes Systems offers:

Design & Engineering

Pipe Supply & Installation

Project Development

Operations & Maintenance

Providing cost efficient and appropriate solutions towards low cost water for the required application.

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Pacific Pipe Systems Pipes for Life

25% Installed cost savings against Steel/Ductile iron pipes.

25% Power cost savings over Metallic pipes through the operable life.

50 years - Guaranteed Corrosion free life.

Water is Life - we deliver 25% of it for free at the same cost of Steel

Pacific Pipes are a filament wound, structural composite material designed to convey fluids. The pipe is produced by combining glass fiber reinforcements, thermosetting polyester resin and specially selected fillers in determined portions. The main application areas are:

Raw Water pumping mains and Drinking Water supply pipelines

Sewerage Force mains and collection networks

Pipes for Penstocks and Power-plants

Industrial applications in Chemical plants and corrosive atmosphere

Intakes and outfalls

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Some of the key features of Pacific Pipe Systems

Ultimate Corrosion Resistant Material – Pacific GRP pipes use Glass fiber, Polyester Resin and Quartz as key raw materials. These are non-corrosive and the resultant pipe is an ultimate corrosion resistant material, hence not requiring any Painting / Coating / Lining / Cathodic Protection or any other form of Protection.

Seamless Pipes – Pacific GRP pipes are made using Industry's highest standards. The result is a seamless GRP pipe which eliminates any coating related damages at weld joints which are a common cause for accelerating pitting corrosion in Steel pipes. The need for periodic inspection and maintenance is eliminated, lifelong, in GRP pipes.

Joints – Pacific GRP pipe joints are also of GRP material using same raw materials and process as the manufacture of pipes. These joints ensure water tight joints which do not allow infiltration or exfiltration, thereby eliminating any maintenance or inspection.

No Slime Build-up – there's no scale build-up due to its smooth inner surface and hence results in near constant Interior surface through the design period of pipes, hence lower pumping and cleaning costs.

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Continuous Filament Winding Process, CFW

Continuous filament winding machine represents the most advanced state of the art technology in use, and is the foremost method of manufacturing glass fiber pipe. Simply, this manufacturing machine consists of a continuous steel band mandrel supported in a cylindrical shape by beams. As the beams turn, friction pulls the steel band around and roller bearings allow the band to move longitudinally so that the entire mandrel moves continuously in a spiral path towards the exit assembly. As the mandrel rotates, all composite materials are metered onto it in precise amounts. A programmable logic controller (PLC) unit precisely controls raw material feeding. Temperature sensors closely monitor pipe curing and the finished pipe thickness is continually metered using a controlled feed back system.

First, mould release film, followed by various forms and patterns of glass fibers, embedded in a polyester resin matrix. Inert filler can be interspersed within the structural laminate for some products. It is the continuous application of these materials onto the mandrel, which forms the pipe. After the pipe has been formed on the mandrel it is cured and later cut to required length.

As this is a continuously advancing mandrel filament winding machine process, once process parameters are adjusted & set, there is a continuous production of pipes with uniform properties.

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Helical Winding, wrapped or resin / glass pipes.

Helical winding is a traditional pipe manufacturing process which has evolved over the past 15 years where in Wrapped Pipe process has proven its effectiveness and reliability. In both cases we have chosen a company and technology that has a long track record of pipe supplies besides offering equipment and technology.

Helical Winding Machine consists of rail, head stock drive, tail stock, carriage, electric control system, resin distribution system and applicator, pneumatic rollers and Mylar support. The carriage follows mandrel spin to travel on rail back and forth. The electrical control system, resin contribution system, pneumatic rollers and Mylar support are installed on carriage that wraps all materials, to complete the pipe.

The process includes:

- Mandrel Preparation
- Pipe Liner Fabrication
- Pipe Structure Layer
- Extraction
- Pipe Joint Fabrication
- Finishing



Pacific GRP Pipe Systems

GRP pipes have a history spanning more than 60 years and with well proven and tested standards. The most commonly used are AWWA, ASTM and ISO standards and those are also the base for the Indian BIS standards. In the early days, due to the higher cost of raw materials, GRP pipes had a disadvantage against metallic pipes but even in this situation, GRP pipes were the fastest growing pipe material in the world in market share. It was supplied at a premium price due to the benefits in corrosion resistance and long term performance. Since then the raw material cost ratio has changed to the advantage of GRP pipes over metallic pipes. Now we supply a superior product at a more competitive price than traditional pipe materials.

Pacific Pipe Systems Pvt Ltd

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