

COMPOSITE PIPING SYSTEMS

APPLICATIONS OF GRP PIPE

- Oil & Gas Industry-offshore & onshore such as crude oil transmission lines, water injection, multiphase fluids.
- Water transmission and distribution (Potable & Raw)
- Irrigation Pipe Systems
- Sewer & Drainage pipe Systems for Industrial, Chemical, Sanitary & Storm Water
- Firewater Systems
- Paper and Printing Industry
- Power & Desalination - Seawater Intake and Outfall, Cooling Water Lines, Brine

NEW AGE SOLUTIONS

The infrastructure is aging both domestically in India and in different parts of the world. Thousands of kilometers of water drainage and sewer pipes made of traditional materials need either replacement or rehabilitation due to the damage caused by corrosion - an irreversible process. Internally unprotected concrete sewer pipes or metallic pipes rapidly deteriorate due to the corrosive attack from materials such as acids present in the sewer system and the external soil conditions. Metallic pipes used for sea water services typically corrode within a very short period of time.

These problems can be totally eliminated by adopting a careful material selection process in which materials resistant to corrosion are chosen or the incorporation of a corrosion protection system into the pipeline design adopted. The solution to this problem is the use of Transpower's Composite Pipes.

ADVANTAGES OF GRP PIPE

- Durable and Corrosion Resistant
- No External or Internal Coatings required
- Flow efficiency allows down sizing
- Design Life of 50 years
- Low internal friction, resulting into low operating (pumping) costs Constant hydraulic characteristics overtime
- Low Life-cycle Costs
- UV Resistant
- Suitable for high service pressures and temperatures
- Suitable for underground and above ground applications

PIPE SIZES

The range of pipe dimensions offered by Transpower is wide, thereby allowing us to cater to a variety of applications and requirements. Nominal size of pipe is based on the internal diameter. Pipes are produced from : **Diameter 25 to 3000 mm**

pressure Class

GRP Pipes are classified according to the nominal pressure. Standard pressure classes offered are :

PN 3	PN 6	PN 9	PN 12
PN 16	PN 20	PN 25	PN 32

Where the number quoted is the maximum pressure in bars the pipe can support with water at 20°C.

PIPE STIFFNESS

GRP Pipes for underground service is classified according to the specific pipe stiffness, a function determined by the burial depth, soil characteristics, loads and negative pressure should it exist. Standard stiffness classes offered are :

ASTM/BS	IS	ASTM/BS	IS	ASTM/BS	IS	ASTM/BS	IS
1250 N/m ²	62 kPa	5000 N/m ²	248 kPa	2500 N/m ²	124 kPa	10000 N/m ²	496 kPa

TEMPERATURE

Transpower GRP pipes are suitable for temperatures up to 90°C, depending on the type of resin used, fluid medium and other service condition parameters.

PERFORMANCE STANDARDS

Transpower GRP Pipes are manufactured & tested in accordance with international and domestic standards such as AWWA, ASTM, BS and BIS to verify the longterm performance, visual, dimensional characteristics as well as their physical & mechanical properties before delivery. Kemrock is committed to high quality standards. All pipes are 100% pressure tested for twice their nominal service pressure, prior to delivery.



FRP WATER STORAGE TANK



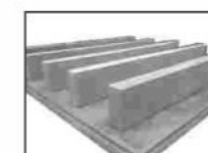
FEATURES

- Smooth inner & outer surface
- UV resistant material
- Lowest assembly time
- Thermally insulating
- Airtight, larger manhole
- Screened air vent
- Fire retardant & light weight

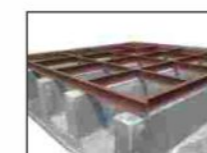
BENEFITS

- Healthiest option to store water
- Minimal algal deposition
- No painting required
- Less frequency of cleaning
- Least maintenance
- Longest life cycle
- Reduces project cost & time
- Useful for HVAC water storage
- Easy access to inside of tank
- No possibility of adulteration
- Less structural cost & safe

STANDARD INSTALLATION SEQUENCE



1



2



3



4