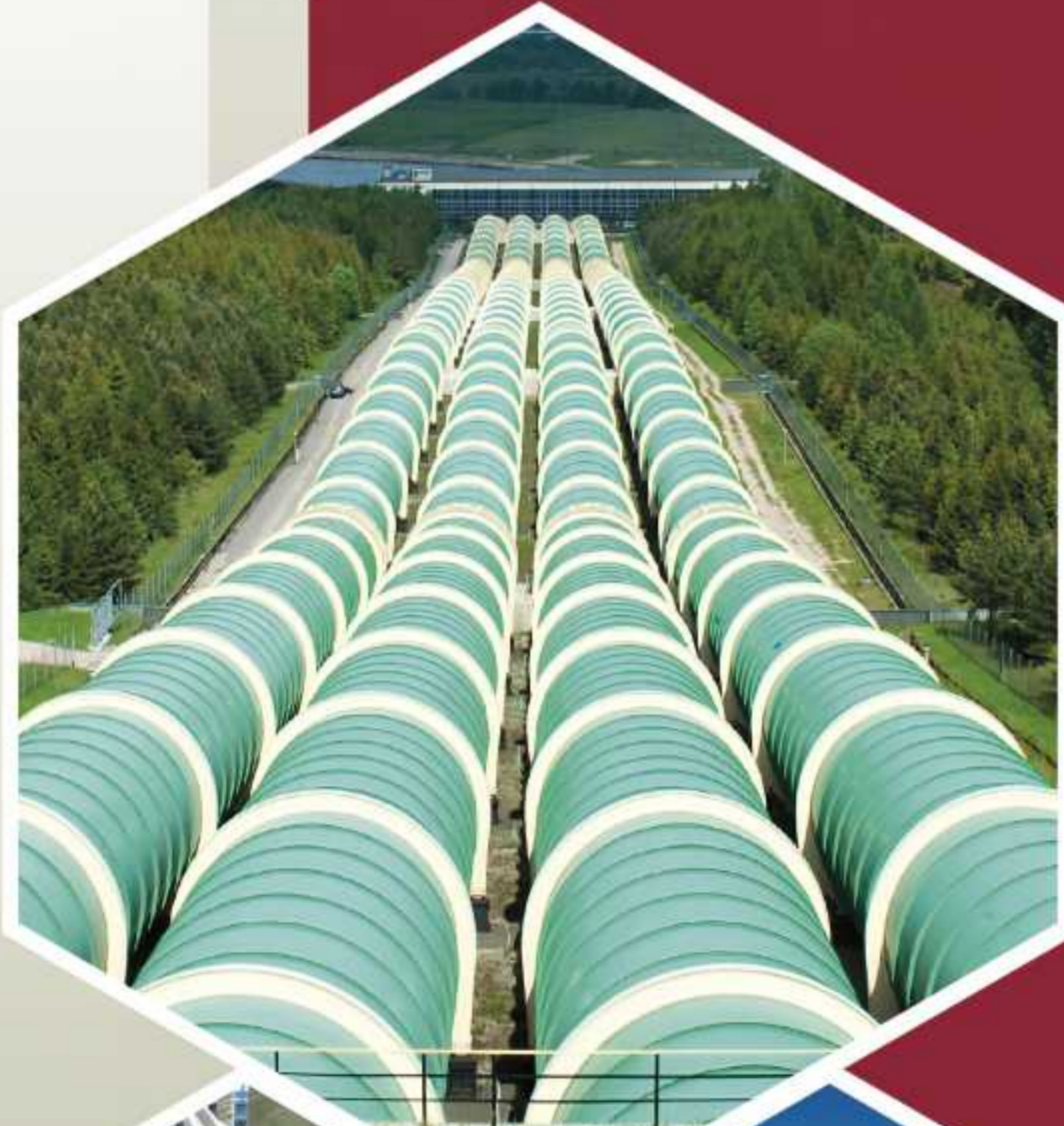




**REINFORCING THE FUTURE**



MANUFACTURER OF:

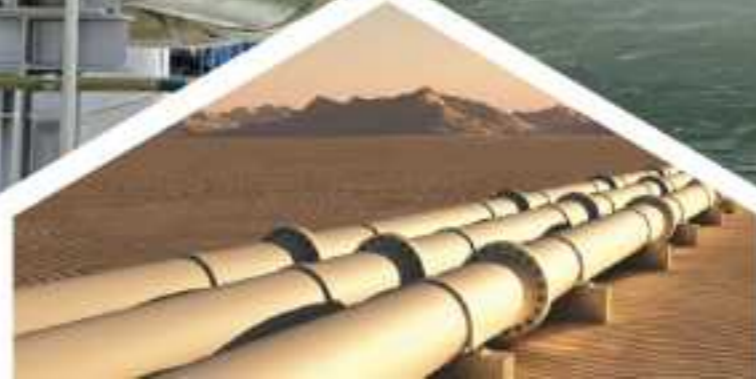
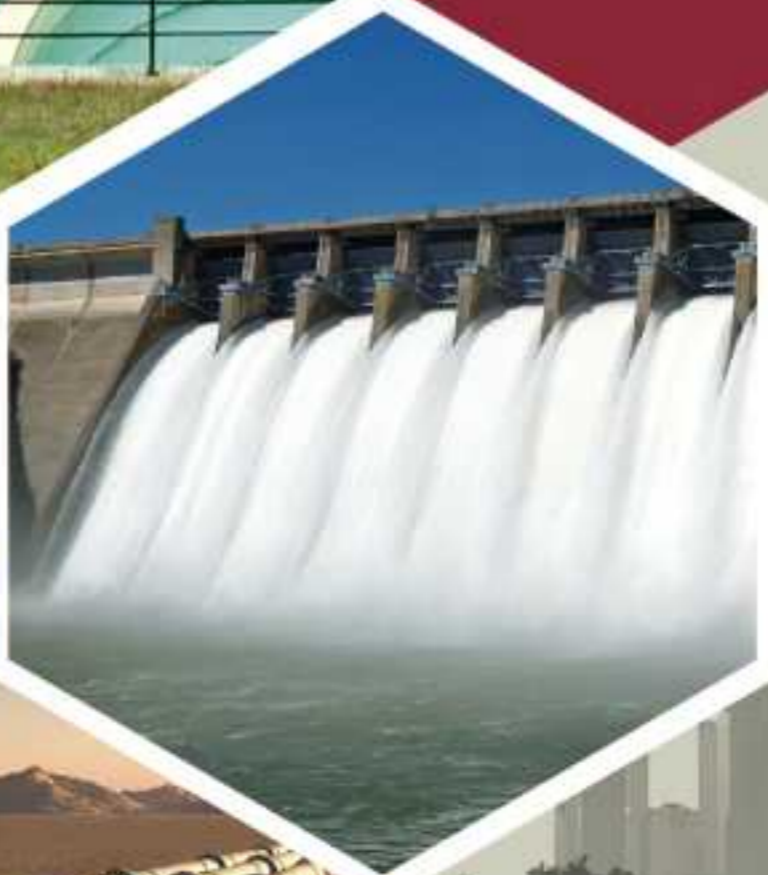
RTRP / GRP /  
GRVE / GRE PIPES

FITTINGS

TANKS

COMPOSITE  
MANHOLE COVERS

SPECIALS &  
PRESSURE FILTERS





Smithline Reinforced Composites is an established manufacturer of RTRP/FRP/GRP/GRVE/GRE pipes, fittings, composite manhole covers etc. since 2005 in Ras Al Khaimah Free Zone. Our pipes are manufactured by automated CNC Machines by helical winding method. We use mechatronic technology that is employed to provide high degrees of reliability and flexibility.

Our product range includes 20 various products with State-of-the-art expertise from all over the world. We have a motivated work force of about 180 employees most of whom are well experienced and trained in the field of GRP. Our output is around 1000 tons/month of production. We use frontline technology with world class machinery. We also have a state of the art Equipment for testing and quality control.

Smithline has ISO accreditation with regards to design, development, manufacturing and installation of GRE/GRVE/GRP pipes and fittings. Smithline also provides consultancy services for specialized projects.



JEC Innovation Award Winner, 2013



KM 670931



GRP-1706505  
GRV-1706506, GRE-1706510



An ISO 9001:2015 certified company



API 15HR-15HR-0102  
API 15LR-15LR-0103

**Codes and Standards:** AWWA C950, ASTM D 2996, ASTM D 3517, ASTM D 3262, ASTM D 4161, ASTM D5421, ASTM D 3754, API- 15LR, API-15HR, BS 5480:1990, BS EN 1796:2006, BS EN 14364:2006, ISO 14692:2002, BSEN 124 and many other International Standards are applicable.

## SRC PIPES BASED ON RESIN

PROPERTIES	FRP/GRP/RTRP POLYESTER PIPING	FRP/GRP/RTRP VINYLESTER PIPING	GRE EPOXY PIPING
Resin	Polyester	Vinylester	Epoxy
Range of Diameter	25 to 4000	25 to 4000	25 to 2400
Temperature	Up to 70°C	Up to 90°C	Up to 120°C
Pressure*	Gravity to 32 Bar/Full Vacuum	Gravity to 40 Bar/Full Vacuum	Gravity to 50 Bar/Full Vacuum
Medium of Transport	All Moderate Corrosive Fluids	All Moderate Corrosive Fluids	All High Corrosive Fluids

\* Pressure class varies according to pipe diameter

## Our Pipes & Fittings can be used for all types of fluids

- Water Distribution
- Fire Fighting
- Sewage Treatment
- Above Ground Pipes
- Storm Water Drainage
- Irrigation Lines
- Water Transmission
- Sub Aqueous Piping
- Sea Water Intake & Outfall
- Forced Main Sewers
- Pressure Sewers
- Distillate Water
- Pipe Jacking
- Hot Water Lines
- Suited for more than 400 Chemicals
- Tunneling
- Portable Water
- Cooling Lines
- Chemical Plants
- Hydro-Electric Plants
- Slurry Transportation
- Air Ventilation
- Drainage





Structure

### Dual Helical Filament Winding:

Standard pipe manufacturing process in which the fiber glass roving is wetted with resin and is wound on steel mandrel at pre-calculated winding angles. The dual helical winding pattern is responsible for providing the composite product with maximum mechanical durability.

### Liner layer:

The inner-most layer mostly impregnated with Vinyl Ester resin (90%) to provide maximum chemical resistance. The resin used will decide the extent of its chemical and temperature resistance.



GRE Liner



GRP Liner

### Structure:

The structural wall is generally 70% glass and 30% resin providing it the optimum mechanical strength. The entire process is controlled via software in which we determine the winding angles as well as the number of layers to be wound on to the product. More the winding angle, greater the elasticity of the pipe.

Use of ovens help in fastening the curing process and also makes sure the bonding takes place well. Once the pipes are extracted, they are calibrated at the ends if required (flexible joint).



Filament Winding

# Pipes & Fittings

- **Standard Fittings:**  
The standard fittings include Flanges, Couplings, Elbows, Tees, Wyes, Reducers, Saddles, Crosses and End Caps.
- GRP/GRV/GRE Tanks
- Pressure vessels, Filters etc
- Customizable GRP Products like AC Covers, Air Vents, Air Ducts etc
- GRP/GRV/GRE Lamination kit materials
- Site Erection, Installation and Testing

## Joints:

- PL/PL : Plain end/Plain End lamination joint
- SO/SP : Socket Spigot flexible joint
- FL/FL : Flanged / Flanged joint / Rigid joint
- LJSO/LJSP: Lock Joint Socket/Spigot joint
- CB/CS : Adhesive Bonded Cement Bell/Spigot joint
- TB/TS : Adhesive Bonded Tapered Bell/Spigot joint
- THB/THS : Adhesive Bonded Threaded joints

## Industries & Markets:

The primary markets for our products are:

- **Water Distribution** : Sea Water, Potable Water, Irrigation
- **Sewage systems** : Sanitary Sewage, Drainage, Industrial waste
- **Industrial** : Desalination, Power Generation, Petrochemical, Oil and Gas, Other production plants



# Quality Control



Smithline Reinforced Composites has a well established Quality Control Laboratory where all our raw materials and finished goods are put through various tests of quality control to ensure only the products of highest quality leave our factory.

The different tests carried out include:

## Quality Control Tests on Raw Materials

### Glass:

- Solid Contents
- Texture

### Resin:

- Moisture Content
- Reactivity & Viscosity
- Glass Transition

## Quality Control Tests on Finished Products:

### Long Term Type Tests:

- Long Term Stiffness & Creep factor (Pic 4)
- Strain Corrosion based on ASTM D 3681 & BS EN 14364 (Pic 9)
- Hydrostatic Design Basis (HDB) (Pic 7)

### Control Tests:

- Impact resistance
- Curing – Barcol hardness
- Loss on ignition based on ASTM D2584 (Pic 5)
- Visual inspection & Dimensional control
- Hydrostatic pressure test according to AWWA C 950 (Pic 3)
- Stiffness Test based on BS EN 1228 & ASTM D2412 (Pic 6)
- Hoop Tensile Strength based on ASTM D2290 & BS EN 1394 (Pic 2)
- Longitudinal Tensile Strength based on ASTM D638 & BS EN 1393 (Pic 1)
- Differential Scanning Calorimeter (DSC) based on ASTM D 3418 (Pic 8)



# Services / Projects

- Manufacturing, Supply and installation of GRP, GRE and GRV pipes and fittings.
- GRP, GRE and GRV piping maintenance service and emergency repair works.
- Supply and installation of valves, flange, dismantling joints and other steel fittings connected to GRP/GRV/GRE piping.
- Site supervision for SRC products Installation.
- Total engineering solutions for GRP/GRE/GRVE piping, which includes preparation of drawings, Stress analysis and surge analysis.
- Supply of raw materials for field joints.
- SRC had already undergone the various projects in all sectors by contributing more than 300 kilometer of pipes including fittings of the size from 1inch ( 25 mm) to 80 inch( 2000mm) and storage tanks of capacity of 50,000 us gallon.
- SRC also serving the industry with versatile products in GRP industries such as foam concentrate tanks, pressure vessels, and GRP cable trays from multi-purpose directional winding machines.
- SRC also offers consultancy for specialized projects with local municipality, water & power and oil sector in GCC area.



Sea Water Processing Line



GRP Piping Works



Fresh Water Supply GRE Line



Ducts



Cooling tower pumping station



Distillate Line



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