

# GRP EQUIPMENT

OUR JOB IS OUR PASSION



Chemical process  
Water treatment  
Sewage treatment  
Petroleum  
Environment  
Mining  
Industrial & Process  
Food processing  
Pharmaceutical



# GRP EQUIPMENT



Chemical process - Water treatment  
Sewage treatment - Petroleum  
Environment - Mining  
Industrial & Process - Food processing  
Pharmaceutical



GRP Gas washer for sanitation Unit  
Customer : Groupe chimique tunisien  
Country : Tunisia

## ADVANTAGES



GRP Gas washer for sanitation unit  
Customer : IET  
Country : Tunisia

- Corrosion resistance
- Lightweight,
- Low maintenance costs
- Long service life
- Complex shapes
- High mechanical strength
- UV resistant
- Good thermal insulation properties

Other advantages for specific applications :

- Suitable for storing all kinds of foods,
- Resistance to abrasion,
- Fire resistance,
- Conductivity.



GRP scrubber  
Customer : Groupe chimique tunisien  
Country : Tunisia

## RAW MATERIALS

Depending on the exposure to fluid and temperature, GCER offers the following material :

- GRP : Different types of resins can be used for fabrication of GRP ;
  - Isophthalic polyester ;
  - Vinilyster.
- Dual laminate : GRP with thermoplastic liner ;
  - PP, U-PVC, C-PVC, PE, PVDF, ECTFE, FEP, PFA.



GRP ducts and venturi for ROSIER plant in netherland  
Customer : CITP  
Country : France

## PRODUCT RANGE

GCER is specialized in the following products :

- Tanks ;
- Ducts, hoods, and Stacks ;
- Process equipment : Scrubber, Quench, reactor, Absorber , Venturi, separator ;
- Silo ;
- Filters ;
- Fan housing ;
- Special shapes.

### TANKS

GCER manufactures a wide range of storage tanks, vertical, horizontal, underground, double wall and rectangular tanks.

Tanks are designed for non-pressure storage of liquid fluids.



Storage tanks of sodium hypochlorite  
Customer : EJM  
Country : Tunisia



GRP storage tanks of chloric acid  
Customer : SARL SASKO  
Country : Algeria



Vertical Tanks of hydrochloric acid  
Customer : Adwan Chemicals Algeria  
Country : Algeria

## VERTICAL TANKS

Standard tank is composed of tank has been designed with, cylindrical shell, GRC roof and flat bottom.

Depending on the design tanks are also available in the following options :

- With conical, GRC or slopping bottom
- With hemispherical, conical, flat or partial roof.

The shell is manufactured using filament winding process, top and bottom by simultaneous projection and nozzles by contact molding.

GCER offers a wide range of diameters and capacities :

- The standard capacity varies from 1 to 300 m<sup>3</sup>,
- The diameter can reach 6000 mm.



Ferric chloride tanks  
Customer : ADWAN CHEMICAL  
Country : Algeria



Storage Vertical Tank in GRP of Zink Sulfate  
Customer : ALZINK  
Country : Algeria



Vertical Tanks OF sodium hypochlorite  
Customer : HENKEL  
Country : ALGERIA



GRP Separator for the phosphate fertilizer industry  
Customer : Groupe chimique tunisien  
Country : Tunisia



Dual laminate GRP scrubber  
Customer : SARL SASKO  
Country : Algeria



GRP Filter basket  
Customer : Groupe chimique tunisien  
Country : Tunisia

## HORIZONTAL TANKS

This is the most suitable type of tank for surface installation that have a height limitation.

Standard tanks are normally provided with saddles in GRP or carbon steel.

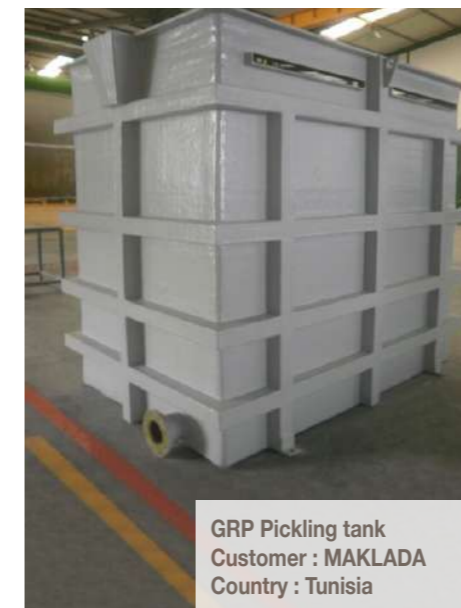
## UNDERGROUND TANKS

GRP is the ideal material where soil corrosion can shorten the life of tanks.

## RECTANGULAR TANKS

Rectangular tanks are usually used in industrial projects for special applications including processing and storage.

When it is permissible, the walls of tanks can be reinforced with steel profile.



GRP Pickling tank  
Customer : MAKLADA  
Country : Tunisia



GRP Horizontal Tanks  
Customer : SKB  
Country : Poland

## DOUBLE WALL TANKS

According to customer's request, tanks can be equipped with double wall.



GRP Double wall tank  
Customer : ERCTC  
Country : Guadeloupe

## ROAD TANKS

GRP tank can be used to transport large volume of chemical product.

GCER tanks are designed for safe and reliable transport.

This tank design provides a competitive alternative to traditional material.

Road tank can deliver up to 10,000, 15,000 and 30,000 litres per load.

Some tank trucks are able to carry multiple products at once due to compartmentalization of the tank.



Road tanks of phosphoric acid  
Customer : SMTT  
Country : Tunisia



Road tanks of sodium hypochlorite  
Customer : SARL SASKO  
Country : Algeria

Tanks can be equipped with specific accessories, such as:

- Suction pump
- Piping
- Valves
- Instrument
- Steel structure



Road tanks of sodium hypochlorite  
Customer : SMTT  
Country : Tunisia

## SILO

GCER offers a wide range of silos with steelwork support or integral GRP skirts.



GRP decanter  
Customer : ECI  
Country : Algeria

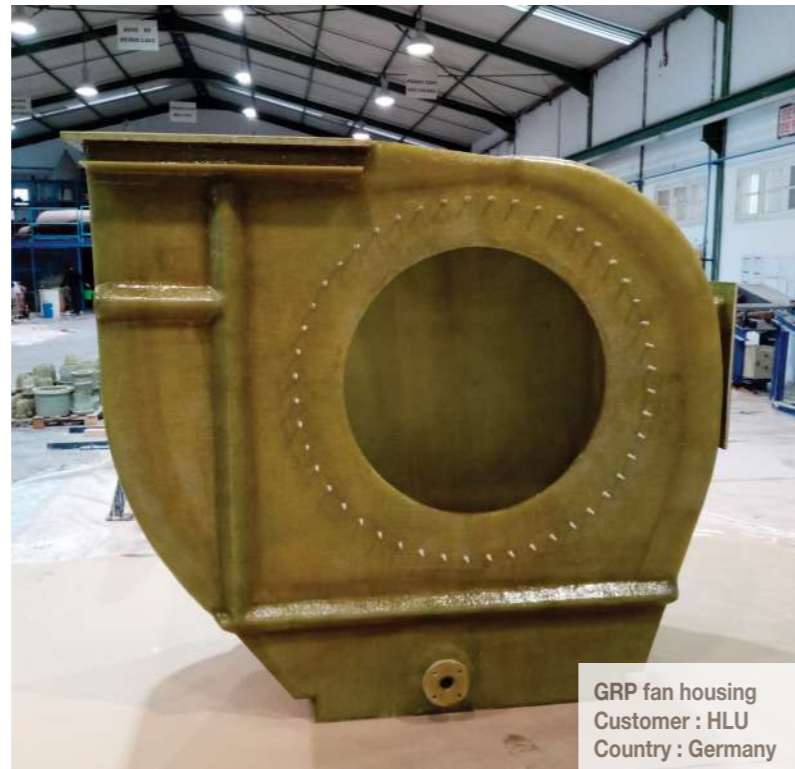


GRP Silo  
Customer : SESPI  
Country : Tunisia

## FAN HOUSING

GRP is the ideal material for fume fan housing system.

The fiberglass housing provides for low maintenance, rust free, corrosion free, easy cleaning, extremely smooth inside and high performance.



GRP fan housing  
Customer : HLU  
Country : Germany

## SPECIAL SHAPES

GRP is ideal material for making complex shape.



GRP cage for suction pumps  
Customer : Tunisie sucre  
Country : Tunisia



Honey comb fuse  
Customer : CMI  
Country : France

## PROCESS EQUIPMENT

Scrubber, Quench, reactor, Absorber, Venturi and separator

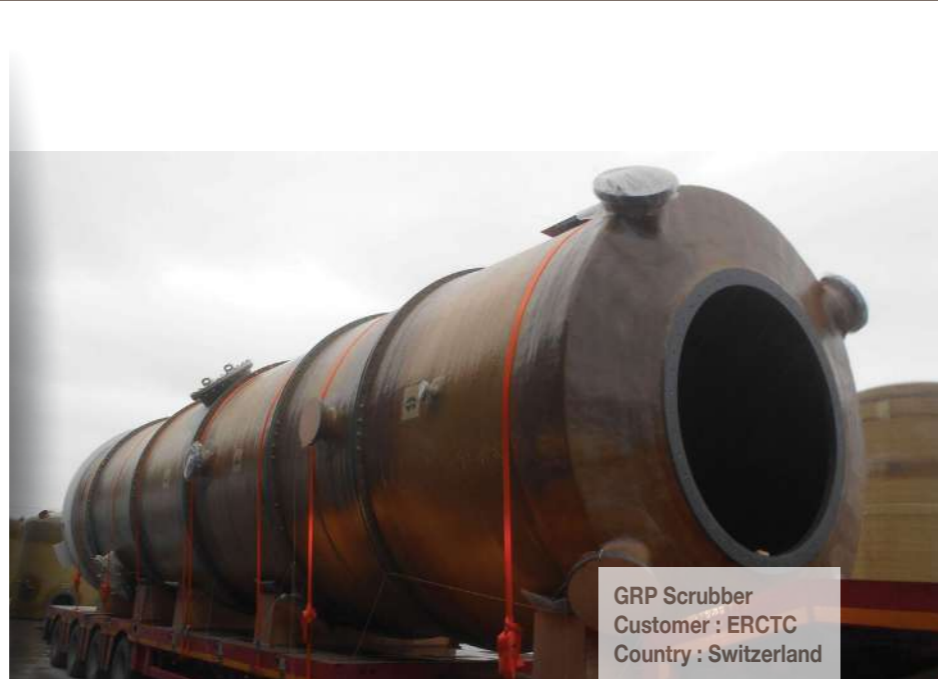
At any height and a wide range of diameters : 1000, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 2000, 2200, 2400, 2500, 2800, 3000, 3200, 3500, 4000, 4500, 5000, 6000 mm.

Other diameter sizes are available upon request.



Data required for detail engineering of process equipment :

- Preliminary drawing with dimensions
- Design pressure and operating pressure
- Design temperature and operating temperature
- Site condition : Wind / earthquake / Rainfall
- Applicable loads
- Code and specification



GRP Scrubber  
Customer : ERCTC  
Country : Switzerland



GRP Scrubber  
Customer : Plasticon  
Country : Netherland



GRP Separator  
Customer : Delaunay plasturgie  
Country : France



Project : GRP Quench  
Customer : LAB  
Country : Herning Danemark



GRP reactor  
Customer : Paques  
Country : Netherland



GRP scrubber  
Customer : Groupe chimique tunisien  
Country : Tunisia



Oxidation column  
Customer : SONEDE  
Country : Tunisia



GRP Chimney of 45m height and Ø 3500  
Customer : Groupe chimique tunisien  
Country : Tunisia



GRP Ducts and piping for OCP safi plant  
Customer : CMI  
Country : Morocco

### DUCTS, HOODS AND STACKS

GCER produces a complete range of ducting with stack including, bends, tees, flanges, reducers, special pieces, and other accessories.

GRP ducts Resist perfectly to temperature, pressure, vacuum and corrosive gases.



Rectangular duct  
Customer : ERCTC  
Country : France



GRP Ducts and piping for OCP safi plant  
Customer : CMI  
Country : Morocco



GRP duct DN2200  
Customer : LAB  
Country : Denmark



GRP ducts and venturi for ROSIER plant in netherland  
Customer : CITP  
Country : France

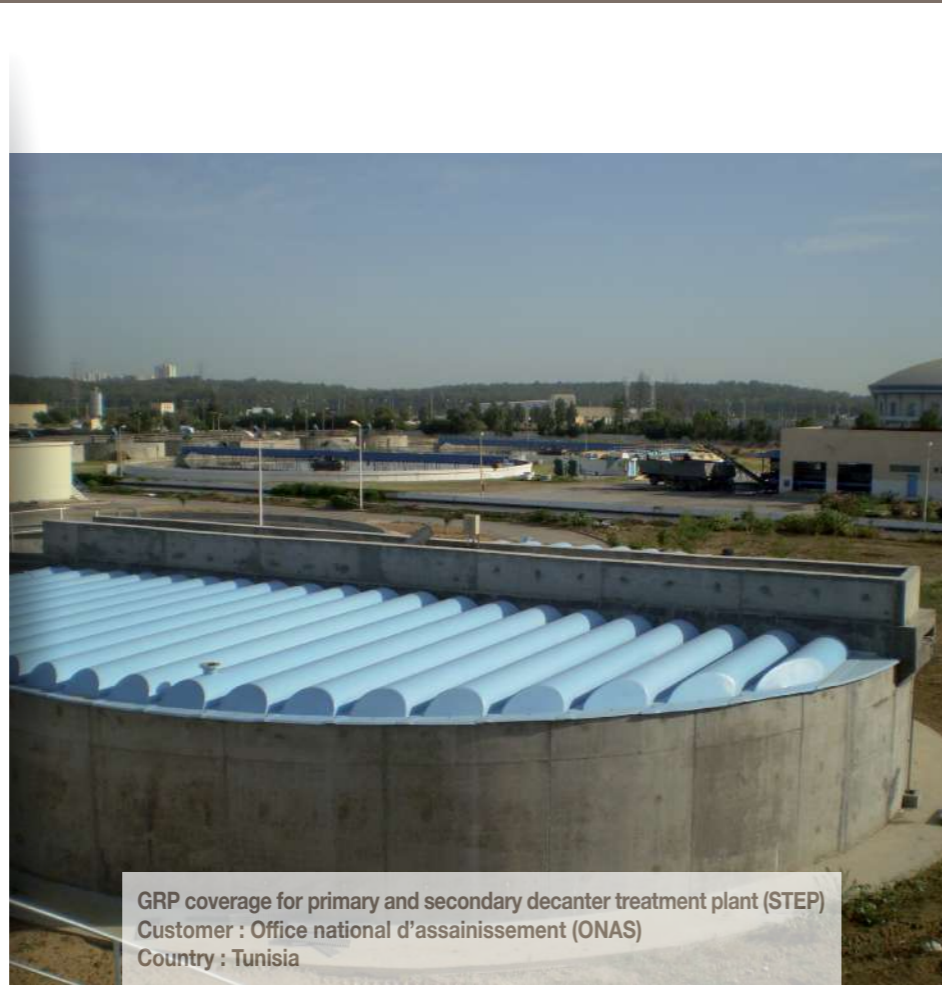
## SELF-SUPPORTING COVERS

GCER designs and manufactures self-supporting modular covers in cylindrical form (until the  $\varnothing 30$  m) and in rectangular form (until the 25 meters of light) for tanks, decanters, digesters and thickeners of muds with civil engineering.

The covers can be equipped with :

- Gateways
- Central Pillars
- Inspection pits
- Vents
- Painting

The dimensioning of these covers is done on the basis of plates theory with a checking by the finite element method of calculation.



## FILTERS

GCER is global leader in manufacturing of GRP housing for cartridge filters, basket filters and bag filters on behalf of Piedmont pacific.  
All filters are produced according to standard design.

Other type of filters are available such us sand filter and active carbon filters.





GRP filters  
Customer : Piedmont  
Country : Spain



GRP filters  
Customer : Piedmont  
Country : Spain



GRP filters  
Customer : Piedmont  
Country : Spain



Basket Filter  
Customer : Groupe Chimique Tunisien  
Country : Tunisia



## EQUIPMENT WORKSHOP

GCER equipment workshop covers an area of 6000 m<sup>2</sup> and it is equipped with the following machines :

- 2 Filament winding machines
- 1 CNC pipe saw machine
- 2 Beveling machines
- 4 Cranes of 20 tones
- Several mandrills



Filament winding machine



# DESIGN AND ENGINEERING



GRP equipment construction  
Customer : LAB  
Country : Denmark



Bache water for condenser



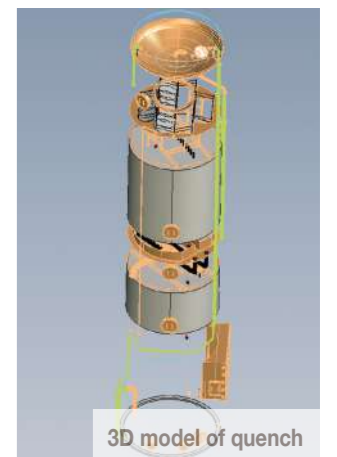
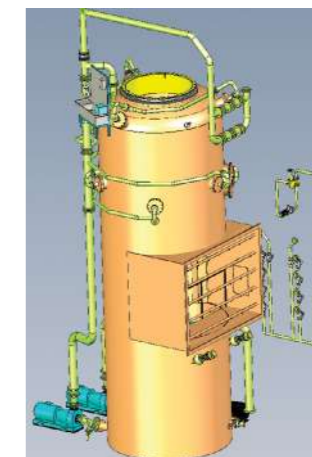
GCER provides high quality engineering services including :

- 3D model and 2D drawing,
- Finite element analysis FEA,
- Fabrication Specifications,
- Product development,

## CODES AND STANDARDS

Design is carried out on the basis of the following international standards :

- EN 13121 : GRP tanks and containers for off-ground use
- EN 12573 : welded static non-pressurized thermoplastic tanks
- UIC DT 15 : Technical Document for the design, purchasing and construction equipments and pipe work laminate glass resin (SVR) and reinforced thermoplastic material (DPW+ SVR)
- BS 4994 : Specifications for the design and construction of reinforced plastic tanks
- AD Merkblatt
- ASME RTP 1 : reinforced plastic equipment and corrosion resistant thermosetting
- ASME X : pressurized boiler and tank
- AD Merkblatt
- AWWA D120 : Fiberglass-reinforced thermosetting plastic tanks



3D model of quench



## TRANSPORT AND INSTALLATION

GCER is more than a manufacturer and supplier of GRP equipment. GCER takes care of the entire production process, from design and engineering up to transport and the installation of the end product.



GRP Condenser  $\Phi 5000 \times 30000$   
Customer : LAB  
Country : Denmark



GRP Quench  
Customer : LAB  
Country : Denmark

## TEST & CONTROL

Test & control in GCER is divided in three sectors; raw materials quality control, production phase quality control and quality control on finished products.

Laboratory of GCER is equipped with :

- Resin Viscosity & Gel time
- Mechanical testing
- Stiffness Test Machine
- Pipe Hydro Test Machine

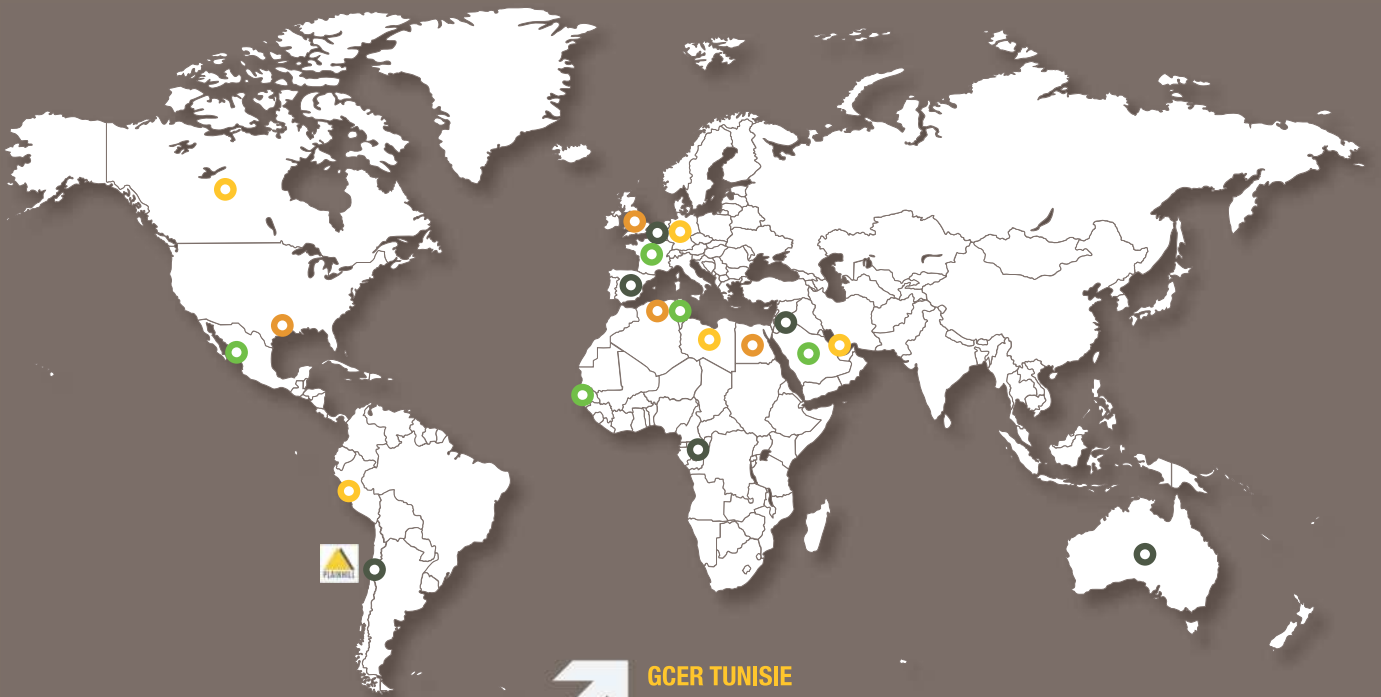
GCER's products can be supplied with CE stamp to meet PED requirement.

### QUALITY INSURANCE

GCER is certified ISO 9001: 2015 , ISO 14001 /2015 and BS OHSAS 18001 /by BY TÜV.



# AROUND THE WORLD



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