# FIBERGLASS HANDRAIL



#### The advantages of Fiberglass Handrail

- · Corrosion resistant and anti-aging
- Non-conductive and non magnetic
- Light weight and high strength
- · Long service life and maintenance-free
- Bright color and good appearance
- · Easy of installation and dimensional stability
- · Water-proof, fire retardant



American Bureau of Shipping Approved for use on a variety of ABS Class ships.



## Fiberglass Railing Systems

The raw materials for pultrusion include a liquid resin mixture (containing resin, fillers and specialized additives) and reinforcing fibers. To achieve the rein-forcement purpose, materials in continuous forms such as rolls of fiberglass mat and doffs of fiberglass roving are used. During the pultrusion process, the raw materials are pulled through a heated steel forming die. When the reinforcements are saturated with the resin mixture ("wet-out") in the resin bath and pulled through the die, the resin comes hardened due to the heat from the die and the cured profiles are thus formed in the same shape as the die.



Manufactured with the pultrusion process, the fiberglass reinforced handrail shapes contain up to 70% glass fibers,

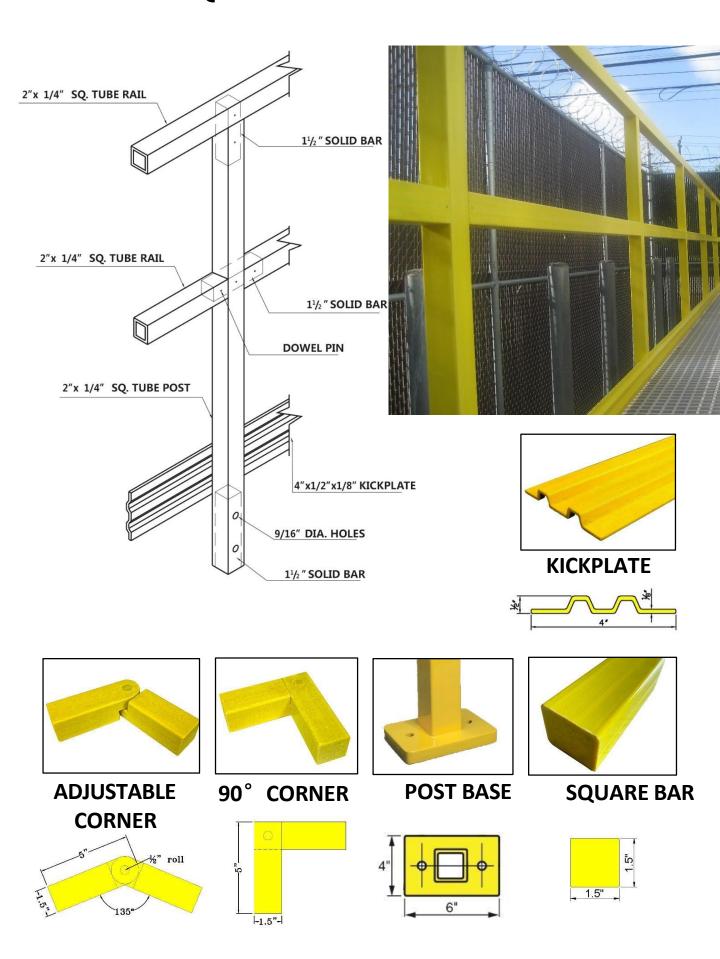
guaranteeing extraordinary mechanical properties to the system.

The handrail system is composed of various pultruded shapes. These systems utilize tubes, kickplate and solid inserts.

Handrail systems are designed to meet OSHA requirements. They are available in Polyester and Vinyester resin. A secondary clear U.V. coating is applied as a standard.



# STANDARD SQUARE HANDRAIL CONSTRUCTION

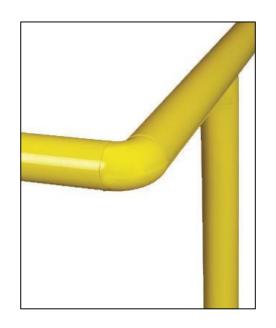


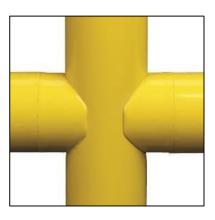




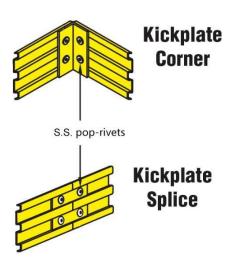


### STANDARD ROUND HANDRAIL CONSTRUCTION





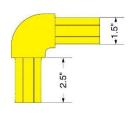




### **ROUND HANDRAIL COMPONENTS**

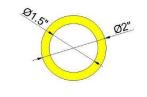


90° CORNER



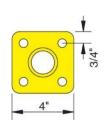


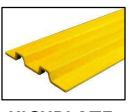
INTERMEDIATE CONNECTOR





**POST BASE** 





**KICKPLATE** 



# Ladder and Cage systems

#### **Corrosion Resistant Ladders**

Manufactured with pultruded profiles, vertical ladders are suitable for any application in corrosive environments.

#### **Mechanical Excellence**

Fiberglass safety ladders meet and or exceed OSHA requirements. Serrated flutted rungs are incorporated for a slip resistant foothold.

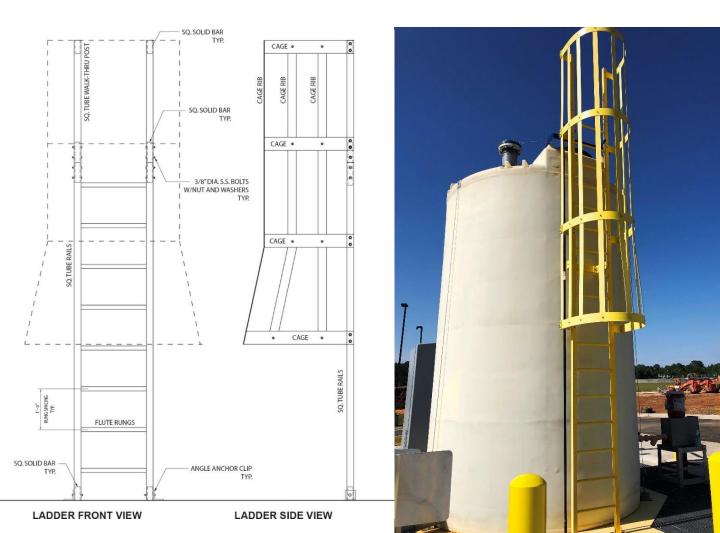
#### Easy to use

Supplied in custom lengths, their light weight structure enhances ease of installation.

#### **Economical and durable**

With a cost comparable to aluminum ladders, fiberglass ladders offer additional distinctive features such as:

- Resistant to impact (No permanent deformation due to temporary overloading or impact).
- Low or no maintenance (maintenance free over the years, no painting required and no corrosion).
- Fiberglass Safety cages are pre-drilled for a rapid field installation.



### **Products**



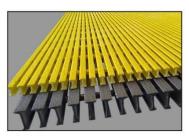
#### **Molded Grating**

Integrally molded construction with Bi-directional load carrying capability. High resin content provides higher chemical corrosion resistance and fire retardancy.



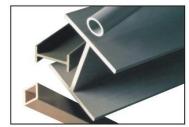
#### **Covered Grating**

Offers the same characteristics as std. grating with the benefits of a solid surface, which eliminates items from falling thru the panel grid. Slip resistant surface added for safety.



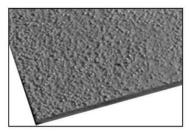
#### **Pultruded Grating**

High strength unidirectionl rovings allow for greater load carrying capability on larger spans. Fire resistant and Chemical resistant.



#### **Structural Shapes**

Standard Structural shapes include angles, I-beams, wide flange beams, channels and tube. Custom profile capabilities are available.



#### Floor Plate

The anti-slip surface is ideal for slip/fall areas, where water, oil and hazardous liquids are present.



#### **Stair Treads**

Molded and Pultruded stairtreads are available in two resin systems, polyester and vinylester. Standard and custom sizes available.



#### Handrail

Constructed to OSHA standards using pultruded shapes. Safety rails guard slip/fall areas in the workplace.



#### **Caged Ladders**

Stands up to rugged use in various environments.
Design offers easy gripping and slip resistant traction.