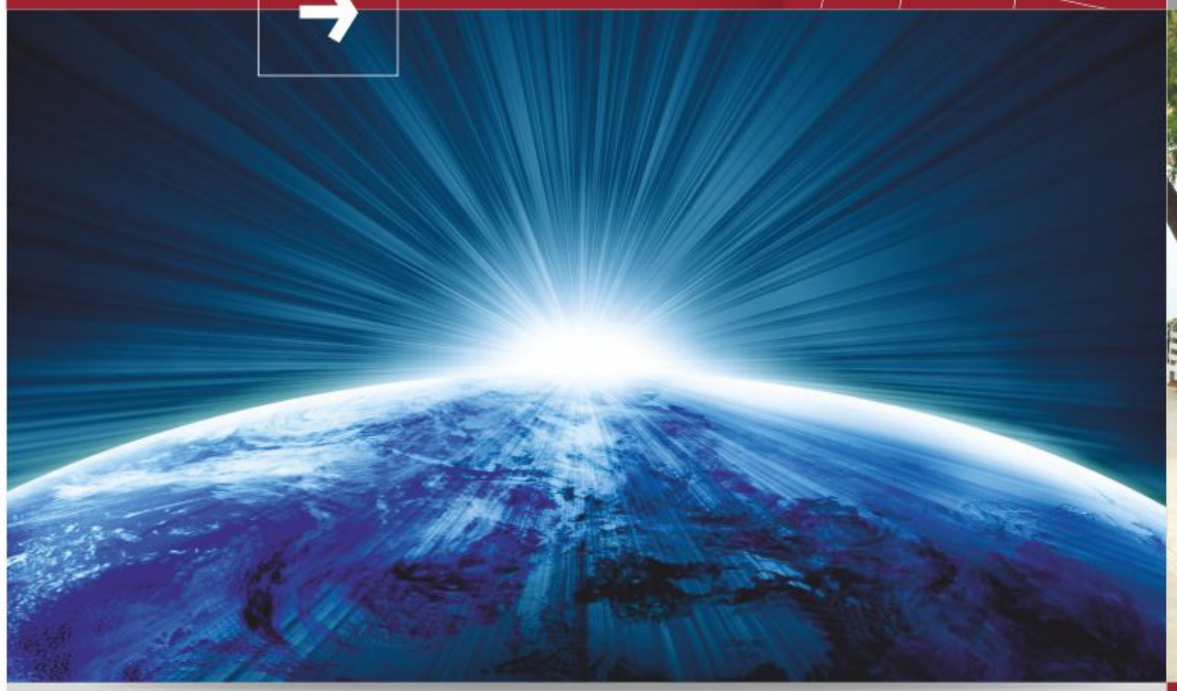
Arvind

COMPOSITES

ISO 9001:2008 certified

Redefining **Tomorrow**

Arvind composites division – expanding the frontiers of growth



ARVIND
COMPOSITES
ISO 9001:2008 certified

In 2014, Arvind Ltd. made its foray into the composites market. Equipped with revolutionary technology and advanced solutions, Arvind Composites has challenged conventions of the composites industry. With renewed energy, superior infrastructure and a talented team, the company is geared to provide new-age composite solutions to a variety of sectors such as Construction, Power & Renewable/Alternate Energy sources, Oil & Gas, Mass Transportation, Manufacturing, Telecom, Electronics & Electricals and more.

A 100 year old corporate legacy

The Lalbhai Group began its ambitious journey in 1897. What started as a pursuit of passion has now grown into a $1.5 billion worth global conglomerate. Ever since its inception in 1931, the Lalbhai Group has diversified and excelled in an array of businesses such as:

- **Textile – Fabrics & Garments Manufacturing**
- **Brands & Retail**
- **Engineering**
- **Real Estate Development**
- **Telecommunications**

Infrastructure and Facilities

ARVIND COMPOSITES
ISO 9001:2008 certified

The Composites division emphasizes on working closely with the end users. This helps to thoroughly understand the shortcomings of the existing materials and design better products using composites that cater to specific requirements. These initial findings enable in delivering effective solutions that make the entire process faster, flexible, reliable, and cost-effective for the industry.

Infrastructure and Facilities of composite division

- Global team of experienced designers
- Most advanced software packages for industrial design
- Optimization of the design of products and structures, using 3D modelling and finite element analysis
- Backward integration of Glass & Resin manufacturing
- Accurate translation of optimized designs into reality

Design softwares used

CAD
- Catia V5
- Inventor
- Mechanica
- AutoCAD

Optimisation
- Optistruct
- Radios'

CAE

Hyperworks and its derivatives Hyper Mesh, Hyper Form, Hyper View, Hyper Graph, Motion View, Motion Solve and Hyper Study.

Testing, Research and Development

Testing and R&D are important aspects of the Composites division. The team consistently strives to improve manufacturing processes, discover new efficiencies, develop new capabilities, and deliver a level of responsiveness that helps clients gain a competitive edge.

The R&D team at Arvind, follows a structured process of exploring all the possibilities and developing a shared knowledge base with end users. For every project this leads to creating and delivering long term manufacturing solutions.

Product Profiles

Pultrusions

Pultrusion is a continuous automated manufacturing process used to make composite structural profiles which are cost effective for high volume production of constant cross section parts. In its first phase, Arvind Composites Division has established over 50 Pultrusion lines at its Ahmedabad facility. The company plans to increase the number of lines to more than 200 by 2017, thus, becoming a leader in the Asian subcontinent. The range of products offered is listed below.

Cooling Tower Profiles

Pultruded Gratings

During the last three years, the use of Pultruded Gratings viz-a-viz consumption has registered a remarkable growth in industries with corrosive and chemically charged environment.

Pultruded Structural Profiles

Pultruded Structural profiles are currently used in almost all industrial segments resulting in production of products such as Cooling Towers, Ladders, Staircases, etc. These profiles are in compliance with product specific requirement such as EN 13706, CTI 137 and NEMA that have full mechanical and physical properties.

Arvind COMPOSITES
ISO 9001:2008 certified

Cable Management

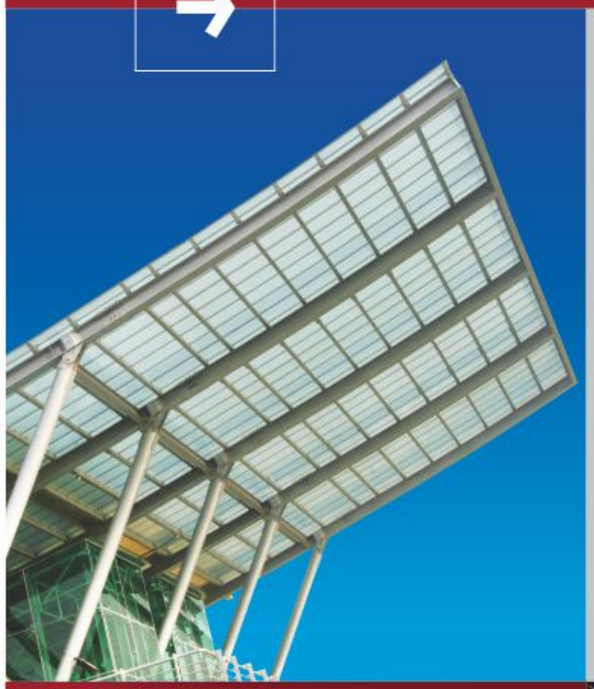
In chemically and electrically charged conditions, FRP cable trays and allied accessories are the best choice due to the non-conductive and non-corrosive nature of FRP composite material. Its corrosion resistance, flame resistance, UV protection and other useful properties makes this material highly industry friendly. Arvind Composites' materials meet the respective specifications such as ASTM, E 84, Class 1 Flame rating and the self-extinguishing requirement of ASTM D-635.

Decking System:

The composite decks manufactured through Pultrusion process have a provision for interlocking with each other. These are mainly used for Cooling Tower fan decks as well as where heavier load bearing capacities are required such as Parking Areas, Roof Tops, Platforms, etc. with provisions for non-skidding surface and otherwise.

Product Profiles

ARVIND
COMPOSITES
ISO 9001:2008 certified



Solar Structure

The renewed emphasis by the Government of India and industries at large has resulted in surging demand for alternate sources of energy such as solar power, bio energy, wind energy, and so on. The structural parts, frames, poles and pillars, etc. manufactured out of FRP material are being used as support members because of the numerous advantages this material offers.

Poles

Arvind's Composite (FRP/GRP) Pole provides solution to the traditional concerns of corrosion and cyclic maintenance expenses of convention MS, GI and Concrete Poles. Highly insulating it does not require earthing and high strength to weight ratio reduces labour cost and offers ease of installation. These poles have a very long life span particularly in areas with extreme environmental conditions. Since, no chemical surface treatment is required they are environment friendly. We are the only manufacturer of composite poles to have BIS mark.

Staircase, Ladders, Cage Ladders & Handrails

Ladders, handrails, staircases produced out of FRP material are highly-durable and low on maintenance, along with their inherent corrosion resistance, light-weight and easy installation features.

Toilets

Arvind's FRP Toilets are durable, easy to install and can withstand impacts without any damage. Being light weight it can easily be transported and installed in remote areas/terrains. Since no surface treatment is required these are environment friendly. Material of construction used is bacteria and germ free, which reduces the maintenance and cost of ownership. These are modular structures which can be transported in knocked down conditions as well as ready to install conditions.

Product Profiles

ARVIND COMPOSITES
ISO 9001:2008 certified

Gratings

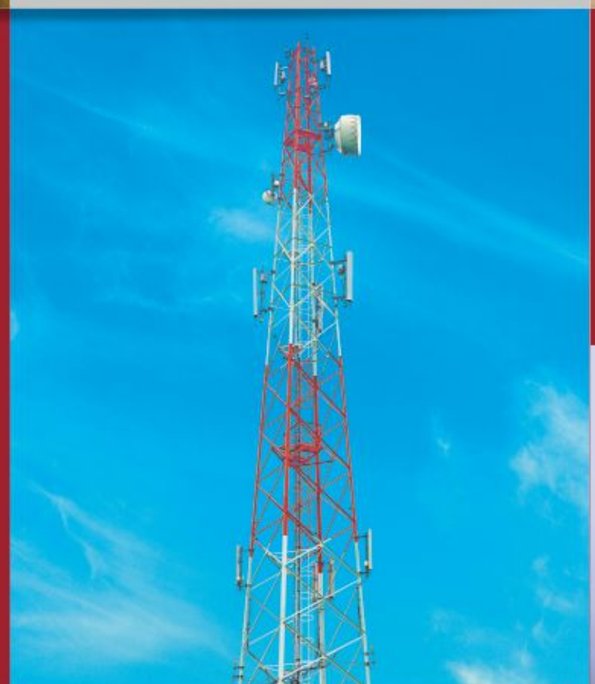
Arvind Gratings meet the highest international standards for its high strength, corrosion resistance, life long and safety. Manufactured from various resin systems, these gratings are designed to deliver many years of reliable service and outperform the conventional materials. Light in weight and easy to install, a complete range of Moulded and Pultruded Gratings are available to cater the emerging needs of various industrial segments, high load requirements as well as small mesh grades to meet falling object requirements thus ensuring workers' safety.

Telecom Towers

Innovations have led to development and manufacturing of FRP telecom towers offering various advantages over various prevailing MOCs, such as ease of installation, competitive economics, longevity, environment friendly and so forth. Arvind's quest for innovation in newer areas has drawn them to develop complete FRP structure for telecom towers ranging from 12mtr to 50mtr, using various manufacturing processes.

These FRP towers have high strength to weight ratio compared to towers made of other conventional materials. Optimised design reduces the section weights, thereby reducing the overall weight of the tower. These towers offer ease of installation and holes can be drilled on-site, by using high speed twist drill bits.

These towers are designed and tested to meet all recognised industry standards. Being fire retardant and insulator these towers have an expected life span of 80 years with zero maintenance requirements.



Transportation

Right from conceptualizing the product to commissioning it to cater to the mass transportation industry, the emphasis is put on delivering start to finish solutions. This includes tooling, prototyping, manufacturing, supply, installation and after sales services of interiors and exteriors of rail and metro rail system.

ADVANTAGES:

- Improved Performance at Lower Cost
- Greater Pay Loads Carrying capacity
- Lighter Body Achieving High Speed
- Design Flexibility
- Longer Life span due to Non-corrosive & Non-conductive MOC
- Ease of Handling & Commissioning
- Improved Aesthetics & Passenger Comfort

INTERIORS:

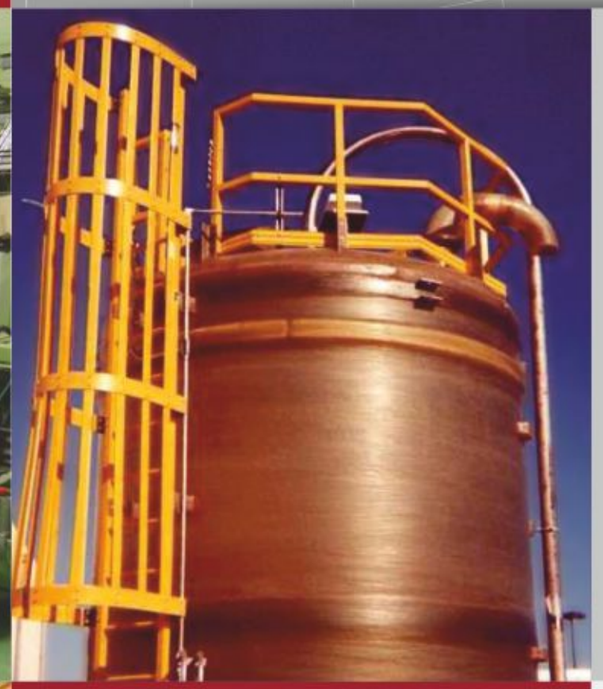
- Side Wall, End Wall & Partition Walls
- Ceiling Panels
- Luggage Racks, Doors & Windows
- Seats & Berths with Cushioning Material
- Door Pillars
- Modular Toilets
- Flooring
- Air Ducting Arrangements
- Bought-Out Items (Lighting, PA System, Entertainment System, etc.)

EXTERIORS:

- Aerodynamic Front End / Front Mask
- Drivers Desk & Drivers Cab Interior
- Guard's Compartment
- Crew Friendly Cabin

Product Profiles

ARVIND
COMPOSITES
ISO 9001:2008 certified



Resin

Quality raw materials are used to ensure delivery of superior products to end users. Thus, stress is laid on providing comprehensive range of URPs including Orthophthalates, Isophthalates, Terephthalates and Vinylesters. These are highly effective resins for FRP composites owing to their excellent mechanical and corrosion resistance properties.

Glass Fabric

Our joint venture with Germany's Preiss Daimler (PD) Group, a $900 million company with interests in Refractories, Fibre glass and Services, enables us to get quality raw material for captive use of composites product manufacturing.

The company has received an ISO 9001 and GL certification. Together, Arvind PD Composites is set to bring the German excellence in glass fabric to India.

Recommended Applications

ORTHOPHTHALATES:
General Purpose Laminating Resin, Boat Grade, Rooflight with UV stabilization, General Purpose Pultrusion, SMC / DMC, Fire Retardant, RTM, Filament Winding Application, etc.

ISOPHTHALATES:
Isophthalic Laminating Resin, Pultrusion, SMC / DMC, Filament Winding Application, etc.

TEREPHTHALATES:
Terephthalic Laminating Resin, Filament Winding Application, etc.

VINYLESTERS:
Bisphenol-A Epoxy Vinylester, Novalac Epoxy Vinylester, High HDT Vinylester, etc.

Head Office:
Arvind Limited
Arvind Composites Division PO. Khatraj,
Tal: Kalol, Dist: Gandhinagar - 382721,
Gujarat, INDIA.

+91-2764-306502
info.composites@arvind.in
sales1@teamoneinc.com

ARVIND
COMPOSITES
ISO 9001:2008 certified

www.arvind-amd.com

Tiger