

# Glass Fiber in the Pipe & Tank Market Report: Trends, Forecast and Competitive Analysis to 2030

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## Abstracts

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### Glass Fiber in the Pipe & Tank Trends and Forecast

The future of glass fiber in the global pipe & tank market looks promising with opportunities for the oil & gas, retail fuel, water/wastewater, sewage, pulp & paper, chemical & industrial, and agriculture/aquaculture markets. Glass fiber in the global pipe & tank market is expected to grow with a CAGR of 3.0% from 2024 to 2030. The major drivers for this market are the increasing demand for corrosion-resistant and durable materials, technological innovations in glass fiber manufacturing, and growing emphasis on sustainability and environmental regulations.

Lucintel forecasts that, within the product type category, single end roving is expected to witness the highest growth over the forecast period.

Within this application category, oil & gas is expected to witness the highest growth.

In terms of regions, APAC is expected to witness the highest growth over the forecast period.

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### Emerging Trends in the Glass Fiber in the Pipe & Tank Market

The glass fiber in the pipes and tanks market has several emerging trends that are transforming the industry. These trends have arisen from the increasing demand for more feedback-responsive infrastructure technology and the need to improve eco-performance. Below are five current trends that are shaping the future of glass fiber in pipes and tanks.

**Environmental and Sustainability Management:** The wide range of uses for glass fiber reinforced plastic composites, especially in construction, highlights the need for sustainable development. Their ability to reduce factors such as energy consumption, carbon emissions, and maintenance costs makes them highly competitive for green building infrastructure. There is a growing demand for water and waste management solutions, and both industries and governments are advocating for fewer environmental adverse effects. This explains the increasing demand for glass fiber in the pipes and tanks.

**Technological Advancement in Manufacturing:** The introduction of modern manufacturing practices, such as 3D printing, automated fiber placement (AFP), and resin infusion, is improving time and cost efficiencies in the production of glass fiber in pipes and tanks. These innovative approaches enhance the mechanical properties of GFRP materials, reduce waste, and improve accuracy. It is also anticipated that the growth of the glass fiber industry will continue, especially in high-demand sectors like oil and gas, water, chemicals, and other industries.

**Durability in Aggressive Environmental Conditions:** One of the key benefits of glass fiber is its high corrosion resistance. This property makes them suitable for use in industries like oil and gas, where conventional materials such as metals are prone to wear and tear. As industries seek more resistant and low-maintenance options, glass fiber pipes and tanks are gaining market share, particularly in offshore and chemical processing industries.

**Emerging Economies Expanding with Growing Infrastructure:** Rapid urbanization and infrastructure growth in emerging markets such as India, Southeast Asia, and Africa are creating new opportunities for glass fiber pipe and tank solutions. The demand for new GFRP systems in these regions is also driven by the need for improved sustainable water management systems, waste disposal methods, and infrastructure development. Today, governments and companies are focusing more on building smart, green cities, and the future of glass fiber

construction will be key to achieving this goal.

**Regulatory and Safety Standards Contribute to Demand:** The rise in environmental and safety regulations in regions such as the U.S. and Europe has forced industries to seek materials that meet these standards. Glass fiber composites are designed to be durable and provide strong performance, including resistance to fire, low emissions, and overall sustainability. As a result, they are highly favored in regulated industries like water treatment, energy transmission, and chemical storage.

These emerging trends are pushing the glass fiber in the pipes and tanks market toward greater acceptance in infrastructure sector projects, with a focus on environmentally friendly design and manufacturing practices, safety for end users, and technological advancements. As these products continue to develop, the increasing demand will be met by adopting efficient technology to enhance competitiveness and ensure the availability of glass fiber solutions across industries and regions.

#### Recent Developments in the Glass Fiber in the Pipe & Tank Market

The glass fiber in the pipe and tank market has had several instructive developments in the recent past that are forging the direction of the market. These developments pertain to the advancements in the methods of production, the market's growing demand for the products, and investments seeking to capture the market.

**Innovations in Resin Infusion Methods:** In recent times, there have been changes in resin infusion technologies that have improved the efficiency and performance of glass fiber composites in production. This also assists manufacturers in constructing glass healing sticks as well as fiber tanks with more accuracy and strength while lowering the cost factor. It also helps in utilizing better properties of the materials due to GFRP being increasingly used in offshore oil rigs and water treatment facilities among other extensive applications.

**Christmas Style Cash Grants from the Governments to Robust Infrastructure:** Governments of important markets such as the turkey, US, Germany, and Japan are stimulating the change of people to the use of sustainable materials for infrastructure development. This entails initiatives to substitute these materials as steel and concrete which are accompanied by glass fibers with lower

environmental concerns including reduction of carbon emission levels and energy efficient processes.

**Links for Technologies and Companies' infra-structure development:** The companies engaged in the production and supply of glass fiber pipes and tanks are now in one way or another forming strategies with the technological companies in a bid to improve the performance and bring the cost of GFRP solutions down. These cooperative efforts allow the exchange of knowledge in advanced manufacturing as well as materials and material recycling technologies. This has propelled the speed of innovation in products and helped in gaining a foothold in new markets.

**Increasing Production Capabilities within Asia:** Manufacturers especially located in China and India are building other facilities to cater to the rising need for glass fiber pipes and tanks. This expansion is encouraged by the market brought by high demand locally and also the ability to export GFRP products to other regions. This increase in capacity is aiming at making Asian markets as the main contributors in provision of glass fiber solutions for the infrastructure market across the world.

**Marine and Offshore Applications:** The durability and anti-corrosive properties of glass fiber make it a popular choice in offshore and marine applications. Firms are seeking new ways and materials to improve the performance of GFRP in adverse conditions. The tilt towards the oil and gas structures and facilities in the seas, as well as marine construction, is fueling the growth of the market as the industries seek materials that can endure abominable conditions but with low maintenance expenses.

These trends are forcing the glass fiber in the pipe and tank market towards enhanced adoption primarily in the areas of infrastructure, oil & gas, and water management. As a result of persistent technological evolution, the formation of strategic partnerships and relentless expansion will enhance further growth in the market.

### Strategic Growth Opportunities for Glass Fiber in the Pipe & Tank Market

The market of glass fibers in pipes and tanks market is expected to witness significant growth propelled by the need to have environmentally friendly, dependable, and anti-corrosive materials in several industries. There are market development prospects for

key applications including water infrastructure, oil and gas, chemical industry and processing, agricultural sector, and marine applications. These industries are subject to severe environmental conditions and have to comply with newer environmental principles hence materials are needed.

**Water and Waste Water Infrastructure:** Glass fiber reinforced plastic (GFRP) pipes with polymer infusion can outlast steel or concrete for years and have excellent resistance to corrosion making them appropriate for water and wastewater infrastructure works. Water remains essential which has heightened focus on urbanization and global warming. Consumer needs and magnifying concern over global warming necessitate environmentally friendly approaches in the construction and management of water and wastewater systems.

**Oil & Gas Sector:** Due to the unique operating conditions such as that of offshore drilling platforms and pipelines, the oil and gas industry is one of the leading markets for glass fiber reinforced plastics. Glass fiber composites are notoriously difficult to corrode especially by salt water and within physical high-pressure environments so less upkeep is needed and the lifespan of the asset is longevity extends

**Chemical Processing Industry:** Chemical plants use equipment that has to be made from materials that do not deteriorate under the influence of aggressive chemicals and climate conditions. Not surprisingly, glass fiber tanks and pipes are replacing conventional materials as they have adequate chemical resistance for the storage and transportation of dangerous and corrosive materials.

**Agriculture & Irrigation Systems:** The industry of agriculture as well as the irrigation systems represent an important area of development for the use of glass fiber pipes. In areas where water sources are scarce and the infrastructure challenges remain high, GFRP pipes provide a solution that is light, strong, and cheap when it comes to the construction of irrigation schemes and water supply systems. This makes GFRP particularly useful in rural and agricultural areas where traditional materials are subjected to chemicals and rough weather.

**Marine & Offshore Applications:** The use of glass fiber-reinforced materials in the marine industry presents new opportunities due to their superior performance in harsh marine conditions. Tanks and piping made from glass fiber are used in shipbuilding and offshore oil and gas platforms as well as in desalination plants due to their light weight, resistance to corrosion, and

durability. As the marine industry grows, especially in offshore renewable energy, the need for long-lasting and chemically non-reactive products will grow creating new avenues for growth for suppliers of GFRP in this growing segment of the market.

The growth strategies revealed here, which cut across water and wastewater management, oil and gas, chemical processing, agriculture, and marine industries, are all extensions of the application of glass fiber pipes and tanks. The increasing need for sustainable and more durable materials with high performance in extreme conditions cuts across the growth of the glass fiber market in these industries.

### Glass Fiber in the Pipe & Tank Market Driver and Challenges

The glass fiber in the pipe and tank market is affected by several factors, including technological development, economic growth, and governmental regulations. While these drivers provide numerous areas of growth, several issues need to be addressed for the industry to grow sustainably.

The factors responsible for driving the glass fiber in the pipe and tank market include:

**Technological Advancements in Manufacturing:** Recent technological trends, including automated fiber placement, resin infusion, and 3-D printing, are changing how products made from glass fiber are manufactured. These changes affect not only the productivity of such products' manufacturing but also the characteristics of the glass fiber composites, making them stronger, more durable to withstand high temperatures, and more versatile.

**Increasing Environmental Regulations:** With various industries feeling the impacts of climate change, they are accelerating the use of sustainable and green materials due to the enforcement of environmental laws. Glass fiber composites are known to be greener because they have lower carbon emissions compared to metals and plastics. Therefore, with governments actively encouraging low carbon targets for construction and industrial uses, this will boost the usage of glass fiber for pipe and tank systems.

**Increasing Need for Corrosion-Resistant Materials:** The growing demand for such materials in sectors like oil and gas, water management, and chemical processing is a key factor driving the growth in the use of glass fiber solutions.



Corrosion leads to expensive maintenance and repairs. For offshore platforms and wastewater management plants, these costs are often necessary due to environmental extremes.

**Increasing Investment in Infrastructure:** With increased urbanization and new infrastructure development, the need for strong and green building materials continues to rise. The durability of glass fiber composites has made them increasingly preferred in infrastructure development due to their high strength, low weight, and corrosion resistance.

**Cost-Benefit and Longevity:** In the long run, the adoption of glass fiber products has proved to be cost-effective because they require low maintenance and do not need replacement. Even though the price of glass fiber composites is high initially, their lifespan, ability to withstand rust, and low maintenance costs all translate to a low cost of ownership.

Challenges in the glass fiber in the pipe and tank market are:

**Product Purchase is Too Expensive:** One disadvantage of glass fiber composites is that, while there may be savings in the long run, the initial purchase cost is often high. This initial cost may discourage small or medium-scale companies, as well as local governments with limited budgets, from choosing GFRP (Glass Fiber Reinforced Plastic) options.

**Low Awareness and Acceptance:** Despite the many advantages of glass fiber, its benefits remain unknown in many sectors, and some companies continue to rely on historically established suppliers. To overcome this, specialized marketing, education, and demonstration programs are needed to make the case for the superiority of glass fiber compared to traditional materials.

**Recycling and Research Issues:** Glass fiber composites show practicality and energy efficiency due to their long lifespan, but the recyclability of glass fiber products remains a challenge. One major drawback of GFRP materials is the complexity of recycling, which may raise costs or create significant environmental issues.

The glass fiber pipe and tank market trends outlined here show the evolution of this

industry. Factors such as technological improvements, tighter environmental regulations, and the increasing need for corrosion-resistant materials significantly shape the market for pipe and tank glass fiber. However, some bottlenecks, such as high initial costs, low awareness, and recycling complications, remain.

## List of Glass Fiber Companies in the Pipe & Tank Market

### Companies in the Pipe & Tank Market

Owens Corning

Jushi Group

Chongqing Polycomp

Taishan Fiberglass

Taiwan Glass Group

Nippon Electric Glass

Sichuan Weibo

3B the Fiber Glass Company

Johns Manville Corporation

Nitto Boseki

### Glass Fiber in the Pipe & Tank by Segment

The study includes a forecast for glass fiber in the global pipe & tank market by product type, manufacturing process, application, and region.

Glass Fiber in the Pipe & Tank Market by Product Type [Analysis by Value from 2018 to 2030]:

DUCS



Single End Roving

Multi-End Roving

Yarn

Continuous Filament Mat

Glass Fiber in the Pipe & Tank Market by Manufacturing Process [Analysis by Value from 2018 to 2030]:

Hand Lay-Up

Spray Up

Resin Infusion

Filament Winding

Pultrusion

Compression Molding

Prepreg Layup

Injection Molding

Others

Glass Fiber in the Pipe & Tank Market by Application [Analysis by Value from 2018 to 2030]:

Oil & Gas

Retail Fuel

Water/Wastewater

Sewage

Pulp & Paper

Chemical & Industrial

Agriculture/Aquaculture,

Others

Glass Fiber in the Pipe & Tank Market by Region [Analysis by Value from 2018 to 2030]:

North America

Europe

Asia Pacific

The Rest of the World

#### Country Wise Outlook for the Glass Fiber in the Pipe & Tank Market

The glass fiber market in the pipe and tank sector has continued to register extraordinary growth due to the rising demand for lightweight, erosion-resistant, and more durable solutions across various industries. This demand stems from the growing need for sustainable infrastructure solutions, enhanced safety, and higher efficiency in water, oil, and gas transportation systems. The glass fiber market, particularly in the world's strongest regions—such as the USA, China, Germany, India, and Japan—has also experienced growth in manufacturing technologies, supply chains, and supportive policies.

**United States:** In the United States, the glass fiber market for pipes and tanks has significantly developed, driven by the oil & gas, water infrastructure, and chemicals industries. Processes like automated fiber placement are expected to

reduce production time and improve efficiency. Metal and plastic pipes are gradually being replaced with environmentally friendly glass fiber reinforced composites, due to their lightweight, low maintenance, and anti-corrosion properties. Additionally, government policies promoting the use of eco-friendly and energy-efficient materials are driving the adoption of glass fiber in essential infrastructure projects across the country.

**China:** China is one of the leading countries in the glass fiber pipe and tank market due to the expansion of multiple industries. The prioritization of infrastructure development, especially in water conservancy and energy distribution, is increasing the demand for glass fiber composite pipes and tanks. Chinese manufacturers are increasingly focusing on advancements in production methods, while substantial research and development efforts are being directed towards improving the cost-effectiveness and mechanical performance of Glass Fiber Reinforced Polymers (GFRP).

**Germany:** The glass fiber pipes and tanks market in Germany is developing with the support of the nation's strong industrial foundation and is highly competitive in terms of advanced manufacturing technologies. Considerable attention is being placed on enhancing the physical and mechanical properties of glass fiber products for use in more demanding applications, such as in the chemical industry, offshore oil exploration, and drinking water systems. In construction, the demand for energy-efficient and corrosion-resistant materials has led to an increase in the use of glass fiber composites in the German market.

**India:** India's industrialization and urban development are paving the way for increased use of glass fiber in pipes and tanks. The need for renovating existing water supply systems in modern cities, coupled with a growing focus on ecological issues, is facilitating market growth. Due to the durability and cost-effectiveness of glass fiber composites, which outperform traditional materials, Indian manufacturers are increasingly using glass fiber in oil pipelines, water treatment processes, and storage tanks.

**Japan:** Japan is already utilizing glass fiber reinforced plastics for pipe and tank linings, primarily in effluent treatment and sludge storage applications across various industries. The government has also been exploring sophisticated materials to improve the country's aging infrastructure, which is vulnerable to climate-related disasters exacerbated by global warming. Glass fiber reinforced structures, such as tanks and pipes, are being used for water transmission and

storage in buildings that are designed to be disaster-resistant.

## Features of Glass Fiber in the Global Pipe & Tank Market

**Market Size Estimates:** Glass fiber in pipe & tank market size estimation in terms of value (\$B).

**Trend and Forecast Analysis:** Market trends (2018 to 2023) and forecast (2024 to 2030) by various segments and regions.

**Segmentation Analysis:** Glass fiber in pipe & tank market size by product type, manufacturing process, application, and region in terms of value (\$B).

**Regional Analysis:** Glass fiber in pipe & tank market breakdown by North America, Europe, Asia Pacific, and Rest of the World.

**Growth Opportunities:** Analysis of growth opportunities for different product types, manufacturing processes, applications, and regions for glass fiber in the pipe & tank market.

**Strategic Analysis:** This includes M&A, new product development, and competitive landscape of glass fiber in the pipe & tank market.

Analysis of competitive intensity of the industry based on Porter's Five Forces model.

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This report answers following 11 key questions:

Q.1. What are some of the most promising, high-growth opportunities for glass fiber in the pipe & tank market by product type (DUCS, single end roving, multi-end roving, yarn, and continuous filament mat), manufacturing process (hand lay-up, spray up, resin infusion, filament winding, pultrusion, compression molding, prepreg layup, injection molding, and others), application (oil & gas, retail fuel, water/wastewater, sewage, pulp & paper, chemical & industrial, agriculture/aquaculture, and others), and region (North America, Europe, Asia Pacific, and the Rest of the World)?

Q.2. Which segments will grow at a faster pace and why?

Q.3. Which region will grow at a faster pace and why?

Q.4. What are the key factors affecting market dynamics? What are the key challenges and business risks in this market?

Q.5. What are the business risks and competitive threats in this market?

Q.6. What are the emerging trends in this market and the reasons behind them?

Q.7. What are some of the changing demands of customers in the market?

Q.8. What are the new developments in the market? Which companies are leading these developments?

Q.9. Who are the major players in this market? What strategic initiatives are key players pursuing for business growth?

Q.10. What are some of the competing products in this market and how big of a threat do they pose for loss of market share by material or product substitution?

Q.11. What M&A activity has occurred in the last 5 years and what has its impact been on the industry?

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