

## Glass Fiber Textile in the Pipe and Tank Market Report: Trends, Forecast and Competitive Analysis to 2031

https://marketpublishers.com/r/G19091C2DD39EN.html

Date: November 2024 Pages: 150 Price: US\$ 4,850.00 (Single User License) ID: G19091C2DD39EN

### Abstracts

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Glass Fiber Textile in the Pipe and Tank Trends and Forecast

The future of glass fiber textile in the global pipe and tank market looks promising with opportunities in the oil & gas, retail fuel, water/wastewater, sewage, pulp & paper, chemical & industrial, and agriculture/aquaculture markets. Glass fiber textile in the global pipe and tank market is expected to grow with a CAGR of 3.4% from 2025 to 2031. The major drivers for this market are the increasing demand for corrosion-resistant materials in pipe and tank manufacturing, growing awareness about the benefits of glass fiber textiles, which offer durability and strength, and the expansion of infrastructure projects.

Lucintel forecasts that, within the product type category, non-crimp is expected to witness the highest growth over the forecast period.

Within the 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 Glass Fiber Textile in the Pipe and Tank Market

Glass fiber textile in the pipe and tank manufacturing market is witnessing some significant developments that are changing the course of manufacturing and application of these materials, among them the pipe and tank glass fiber textile market. These trends have been fueled by advances in technologies, the need to be environmentally responsible, and the evolution of industrial practices.

Increasing Use of Hybrid Composites: Glass-fiber reinforced plastic as a material is in use together with other materials such as Carbon fiber reinforced plastics or Natural Fiber reinforced plastics. This trend is supported by better mechanical properties of such materials. More specifically, these polymer composites usually outperform the standard materials in any challenging conditions, especially in areas like high-pressure pipes or chemical tanks, etc.

Eco-Friendly Manufacturing Practices Prioritized: Currently, sustainability has turned out to be an important aspect in the glass fiber textile sector. Producers are now shifting their attention to the manufacture of products that have a low impact on the environment. This entails the development of glass fiber composites that can be recycled and the usage of safe resins.

Smart and Self-Monitoring Composites: Glass fiber-reinforced composites are also being incorporated with sensing technologies to form smart self-monitoring materials. Since these sensors can detect corrosion, leakage, or structural failure of pipes and tanks, their performance can be monitored in real-time. This advancement will also come in handy in critical activities such as oil & gas pipelines and chemical storage where risks are minimized and employment of expensive repairing measures is averted thanks to the early detection of problems that would grow into big issues.

Advances in Resin Technologies: R&D of advanced resin systems is changing the landscape of the glass fiber textile industry. New resin technologies consisting of epoxy resins and vinyl ester resins have greater chemical resistance and toughness. These resins aid in extending the life span of pipes and tanks thus making them less vulnerable to hostile environments like offshore rigs and processing plants. Resin formulation, therefore, is a progressive activity that expands the quantity of glass fiber composite applications.



Lightweight, Strong Composite Materials Manifold: The requirements for strong and light material for pipe and tank construction have led to the advancement of glass fiber textiles. Such materials are increasingly finding uses in fields that require weight reduction such as long-distance transportation of water or chemicals. This advantage of glass fiber not only being able to decrease weight but also possessing strength and durability in glass fiber composites attracts even industries looking for cheaper alternatives in accomplishing infrastructure projects.

These new trends and their implications indicate the advancement of the current technologies and the changes in the existing aspects of the glass fiber textile in the pipes and tanks. The market is becoming more and more efficient and penetration of advanced technologies such as sustainability, smart materials, and hybrid composites is widening its industrial application.

Recent Developments in Glass Fiber Textile in the Pipe and Tank Market

The advances in glass fiber textile in the pipe and tank market are manifestations of the continued creativity in this market. Some of the key developments are new improved materials, better processes, and more smart systems.

Introduction of Hybrid Glass Fiber Composites: The need to go for hybrid composite materials has been observed in the manufacture of pipes and tanks. These materials incorporate glass fibers and carbon or aramid fibers to produce composites that exhibit better strength and flexibility yet are more durable. Such hybrid composites are designed for high-performance applications like oil & gas pipelines or chemical storage tanks, where better impact resistance, corrosion resistance, and chemical resistance are required.

Adoption of Recyclable Composites: Due to increasing demands for environmental versatility, the sector has been inclined to the production of glass fiber-reinforced composites that are recyclable. Such kinds of products are manufactured with recycling in mind whereby after the active lifetime of the product waste is minimal to the environment. Recyclable composites are being embraced in areas where sustainability and greener materials are a priority like the construction and infrastructure sectors.



Resident System Direction in Terms of Development and Improvement: The development of resin technology processes and abilities has contributed to the growing use of glass fire-reinforced pipes and tanks. New resin systems such as angling and vinyl E steer are offering better chemical resistance making the materials ideal for usage in extreme bearing situations. Resins strengthen composites thus increasing the longevity of the pipes and the tanks.

Implementation of Smart Monitoring Technologies: Smart composite is another key development anticipated within the glass fiber textile market as it comes with specialized sensors placed within the fibrous structure. It is through these sensors that stress, temperature, and content damage are appraised and are provided with alerts before any failure occurs. This technology is of particular importance in critical infrastructure, such as pipelines and chemical storage tanks, where problems identified early can avert many disasters.

Improved and Automated Methods of Production: The level of automation in the glass fiber textile industry is on the rise. Increased precision in manufacturing is made possible by new techniques, particularly automated weaving and filament winding, which reduce waste and enhance uniformity. In turn, production costs are being highly reduced by the incorporation of automation thus making the glass fiber composites to be more marketable due to the cheaper price than the other smooth materials.

These key developments driven by technology point to the growing changes in the glass fiber textile market in pipes and tanks. Augmentations in hybrid composites, along with innovative resin systems and smart technologies within the industry aim at producing environmentally friendly, shorter-lived, and costly materials that would be suitable for the demands present in the expanding infrastructure as well as industrial applications.

Strategic Growth Opportunities for Glass Fiber Textile in the Pipe and Tank Market

There are many growth opportunities in the glass fiber textile in the piping and tank market in various applications. As these opportunities evolve, focusing on them will assist manufacturers in broadening their market scope in line with changing consumer needs.

Water and Wastewater Infrastructure: Due to the population growth and growth of industries the demands for water management and wastewater treatment



systems are ever-high. Glass fiber reinforced composite pipes and tanks present a corrosion-free and long-lasting alternative for such systems. Countries around the world are upgrading their infrastructures hence presenting great opportunities in the application of glass fiber composites in water supply pipes and storage tanks by extending their lifespan and minimizing the need for repairs.

Oil & Gas Industry: In the glass fiber textile market, the oil & gas segment has become one of the most contributing factors due to the demand for pipelines and tanks that can withstand very harsh working conditions. Glass fiber composites are used extensively in offshore oil rigs and pipelines where corrosion and aggression with harsh chemicals is a major problem. The demand for such materials is likely to increase because exploration and production activities, especially offshore ones, are expected to increase.

Chemical Processing Industry: There is an increased need for storage tanks and pipelines that can bear any chemical corrosion in the chemical processing industry. To meet this demand, glass fiber-reinforced plastics which are anti-corrosion and chemical proof offer the best alternative. The chemical industry demonstrates the active use of autoclaved glass fiber reinforced plastics for pipelines that cover up these drawbacks in contamination and failure risks emerging from constant actions, therefore, it is a good long-term strategy for the transportation of toxic substances.

Renewable Energy Projects: The expansion of renewable energy infrastructure like offshore wind farms and hydroelectric projects is bringing new markets for glass fiber composites. In these applications, there is always a need for lowweight yet corrosion-resistant materials. In renewable energy deployment, the use of glass fiber reinforced pipes and tanks for fluid transport and storage systems is attributing further creativity to these textiles in the green energy sortition.

Industrial Storage Solutions: There is a growing requirement for storage units made of glass fiber textile reinforced tanks to hold different types of liquids, chemicals, and hazardous waste from industrial activities. These tanks are remarkably robust, resistant to chemicals, and over time cost advantages over traditional containment units. These industrial sectors include mining, manufacturing, and chemicals, and their growth is leading to the rising demand for industrial storage systems and maintaining a healthy demand for glass fiber



textiles.

The glass fiber textile market in pipes and tanks is anticipated to mature in several verticals including water infrastructure, oil and gas, chemicals, renewable energy, and industrial storage. Such players who leverage these opportunities will thrive in this growing and very competitive market for the long term.

Glass Fiber Textile in the Pipe and Tank Market Driver and Challenges

There are several economic, technological, and policy influences affecting the glass fiber textile market for pipes and tanks. Understanding these drivers and challenges is important for market players to navigate the competitive market landscape.

The factors responsible for driving the glass fiber textile market in pipes and tanks include:

Technological Innovation in Materials: The development of resin systems, hybrid composites, and sensor systems is accelerating the demand for glass fiber textiles. The exceptional features of modified glass planar composites, including longevity, corrosion resistance, and high structural efficiency under harsh conditions, have made them widely adopted in industries such as oil and gas, chemicals, and water management.

Infrastructure Upgrades and Investment: Increased investment in infrastructure globally, particularly in industrial water management, storage facilities, and oil and gas pipelines, is creating a demand for efficient, non-corrosive pipes and tanks. Governments and industries are turning to glass fiber textiles, leading to market expansion in the long run. This highlights why governments and industries seek molded solutions using glass fiber textiles.

Environmental and Sustainability Concerns: The growing emphasis on environmental sustainability and the use of recyclable materials is driving the adoption of recycled glass fiber composites. Industries facing the challenges of carbon emissions are turning to glass fiber textiles, which help reduce waste and environmental pollution.

Increased Demand for Corrosion-Resistant Solutions: Understanding the needs of major industries is essential. For example, the water-resistant properties and



thermoplastic nature of glass fiber composites are crucial in applications such as offshore oil and gas operations, chemical storage, and water infrastructure. Polymeric glass fiber composites are more corrosion-resistant than steel or concrete, making them suitable for a wider range of sectors.

Cost Efficiency and Long-Lasting Properties: The long-term cost-effectiveness of glass fiber composites is evident because these materials are strong and require less maintenance. This makes glass fiber textiles an attractive solution for industries seeking affordable, durable options for tanks and pipes.

Challenges in the glass fiber textile market for pipes and tanks include:

High Initial Production Costs: The immediate effects of production constraints, both internal and external, pose challenges for industries. While the long-term benefits of glass fiber textiles are significant, high initial costs can deter adoption. Addressing production technology concerns and streamlining material costs is critical to overcoming this challenge.

Material Limitations in Extreme Conditions: Glass fiber composite textiles have limitations, especially in high-temperature environments or when exposed to aggressive chemicals. More research and development are needed to improve the performance of glass fiber textiles in such extreme conditions.

Supply Chain Constraints: Global supply chain challenges, such as shortages of raw materials and transportation delays, negatively affect the supply of glass fiber textiles. These challenges lead to cost increases, slower production rates, and market congestion.

The glass fiber textile market for pipes and tanks will continue to grow due to technological progress, infrastructure investments, and the increasing demand for sustainability. However, high production costs, material limitations, and supply chain disruptions remain significant challenges. These factors will influence the timely availability of supplies and the future growth of the market.

List of Glass Fiber Textile Companies in the Pipe and Tank Industry

Companies in the market compete on the basis of product quality offered. Major players



in this market focus on expanding their manufacturing facilities, R&D investments, infrastructural development, and leverage integration opportunities across the value chain. Through these strategies glass fiber textile companies in the pipe and tank industry cater increasing demand, ensure competitive effectiveness, develop innovative products & technologies, reduce production costs, and expand their customer base. Some of the glass fiber textile companies in the pipe and tank industry profiled in this report include-

**Owens Corning** 

Jushi Group

Chongqing Polycomp International Corporation

Taishan Fiberglass

Taiwan Glass Group

Nippon Electric Glass

Sichuan Weibo

3B the Fiber Glass Company (Goa Glass Fiber)

Johns Manville Corporation

Nitto Boseki

Glass Fiber Textile in the Pipe and Tank Market by Segment

The study includes a forecast for glass fiber textile in the pipe and tank by product type, application, and region.

Glass Fiber Textile in the Pipe and Tank Market by Product Type [Analysis by Value from 2019 to 2031]:

Woven Roving



Non-Crimp

Woven Yarn

CFM/CSM

Glass Fiber Textile in the Pipe and Tank Market by Application [Analysis by Value from 2019 to 2031]:

Oil & Gas

Retail Fuel

Water/Wastewater

Sewage

Pulp & Paper

Chemical & Industrial

Agriculture/Aquaculture

Others

Glass Fiber Textile in the Pipe and Tank Market by Region [Analysis by Value from 2019 to 2031]:

North America

Europe

Asia Pacific

The Rest of the World



Country Wise Outlook for Glass Fiber Textile in the Pipe and Tank Market

Over the recent past, the glass fiber textile market for pipes and tanks has progressed quite well, mainly due to the increasing need for durable and corrosion-free materials in various sectors of the economy, such as oil and gas, chemicals, and water management. Composites consisting of glass fiber textiles have high strength, low weight, and great chemical resistance, making them an excellent choice in the production of composite pipes and tanks. With the expansion of infrastructure and industrial investment within the U.S., China, Germany, India, and Japan, the demand for these materials is increasing.

U.S.A: In the U.S., the glass fiber textile market within the pipe and tank glass fiber reinforced plastic industry is largely fueled by the renewal of infrastructure as well as a rising need for anti-corrosion materials in the oil and gas, water treatment, and chemical fields, among others. Since the economy has been investing heavily in the renewal of worn-out infrastructure, there has been an increased need for the manufacture of composite pipes and tanks that incorporate glass fiber textiles for better heat insulation and chemical corrosion resistance. Additionally, the U.S. has moved toward sophisticated manufacturing technologies such as 3D printing to refine production processes for these composites, making them less costly and supply chains more efficient.

China: The accelerated industrialization and environmental concerns in China have propelled growth in the market for glass fiber textiles in pipes and tanks. With the need to control pollution and update substations, there is a greater demand for durable and long-lasting materials, especially in the water treatment and chemical sectors. Chinese businesses are already pioneers in the use of glass fiber composites in municipal pipelines and industrial tanks. Moreover, government policies aimed at encouraging green construction and manufacturing are boosting the composites market, creating new opportunities for glass fiber textiles in both the local and global markets.

Germany: Germany dominates the glass fiber textile market for pipes and tanks, particularly in the EU region. The country has a highly developed industrial environment that also focuses on research and development and environmental impact management, leading to the popularity of composites in waterworks, industrial tanking, and chemical industries. It is now commonplace for German manufacturers to apply state-of-the-art glass fiber textiles in the creation of lightweight and corrosion-resistant tanks and pipes that satisfy the high



ecological standards of these industries.

India: The increase in population and industrial activities in India has created a need for more water infrastructure construction as well as water and chemical storage facilities, leading to a rise in demand for glass fiber-reinforced pipes and tanks. There is growing attention on improving water infrastructure and increasing industrial activities like oil and gas exploration in the country, thus increasing the need for composites. Indian manufacturers are increasingly using glass fiber textiles instead of seeking other alternatives, due to their cost-effectiveness, light weight, and corrosion resistance.

Japan: Japan accounts for a considerable share of the pipe and tank glass fiber textile market, owing to the industries' strong adherence to industrial standards and infrastructure improvements. The demand for corrosion-resistant pipes and tanks in Japan is particularly high, especially for water treatment, chemical processing, and oil and gas industries. For instance, glass fiber composites have been used to meet the stringent requirements of Japanese durability standards in offshore structures, which are subject to extreme environmental conditions.

Features of Glass Fiber Textile in the Global Pipe and Tank Market

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

Trend and Forecast Analysis: Market trends (2019 to 2024) and forecast (2025 to 2031) by various segments and regions.

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

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

Growth Opportunities: Analysis of growth opportunities in different product type, application, and regions for the glass fiber textile in the pipe and tank market.

Strategic Analysis: This includes M&A, new product development, and competitive



landscape of the glass fiber textile in the pipe and 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 textile in the pipe and tank market by product type (woven roving, non-crimp, woven yarn, and cfm/csm), 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,



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on the industry?



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- 7.9: Johns Manville Corporation
- 7.10: Nitto Boseki



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