

Aircraft AFP/ATL Composites Market by Aircraft Type (Narrow-Body Aircraft, Wide-Body Aircraft, Regional Aircraft, General Aviation, Helicopter and Military Aircraft), by Application Type (Airframe, Engine Applications, Flight Control Surfaces, and Others), by Fiber Type (Glass Fiber Composites, Carbon Fiber Composites, and Aramid Fiber Composites), by Automation Type (Automated Fiber Placement and Automated Tape Layup), and by Region (North America, Europe, Asia-Pacific, and Rest of the World), Trend, Forecast, Competitive Analysis, and Growth Opportunity: 2019-2024

https://marketpublishers.com/r/AAD028F479AEN.html

Date: November 2018 Pages: 255 Price: US\$ 4,790.00 (Single User License) ID: AAD028F479AEN

Abstracts

This report, from Stratview Research, studies the global aircraft AFP/ATL composites market over the trend period from 2013 to 2018 and forecast period from 2019 to 2024. The report provides detailed insights into the market dynamics to enable informed business decision making and growth strategy formulation based on the opportunities present in the market.

Aircraft AFP/ATL Composites Market: Highlights

Composite materials have earned a reputed image in the aerospace industry owing to their excellent track record of more than five decades. Due to such incredible properties of composites compared to other materials, Boeing and Airbus scrupulously started investing in these materials in the critical section of an aircraft including airframe. As a



result, the next-generation aircraft: B787 and A350XWB, contain composites in more than 50% of the total structural weight. Composites industry stakeholders are trying to capitalize on the success story of aerospace composites for other industries as well. Several advancements in technologies and materials have gradually been brought in place in order to increase the penetration of composites to such a high level in the next-generation aircraft. Among many advancements, we believe, automation in the layup process is of paramount importance as a skilled technician can only lay up 2.5 lbs. of prepreg manually in an hour, whereas, with the help of AFP/ATL process, prepreg can be laid at more than 50 lbs. per hour.

The global aircraft AFP/ATL composites market is projected to grow at an impressive rate over the next five years to reach US\$ 4,005.1 million in 2024. Increasing production rates of the next-generation composite-rich aircraft A350XWB, B787, and F-35; introduction of fuel-efficient variants of the best-selling aircraft with a greater composites content:, A320neo and B737 max; Increasing preference of AFP/ATL process for fabricating critical aerospace composite parts; superior benefits of AFP/ATL over the hand layup process; and rising demand for faster production of composite parts in order to produce a large number of aircraft to meet huge order backlogs are giving an impetus to the growth of AFP/ATL composites in the aerospace industry.

AFP/ATL process enables companies to develop lightweight components with increased durability and shorter processing time. Additionally, AFP/ATL-based composite components also do not get damaged easily; thus, help aircraft manufacturers as well as tier players to reduce their repair cost. These advantages are bolstering the demand for AFP/ATL composites which are continuously replacing traditional hand laid composite parts or metal-cast and stamped parts.

Airbus and Boeing, the two aircraft industry giants, are enjoying a huge order backlog of their major aircraft platforms. Boeing and Airbus had a combined order backlog of 13,379 commercial aircraft by the August 2018. This huge pile of order backlogs will allow both the airframers to roll out their aircraft continuously for the next nine years at current build rates. However, they have strategically been raising the production rates of their key commercial aircraft programs in order to deliver aircraft to their widespread clients at a shorter period. This is generating enormous pressure in the supply chain including tier players to develop parts swiftly in order to meet the expectation of OEMs. Here, AFP/ATL proves to be a game-changing technology as it helps laying up prepregs at a very fast rate with excellent dimensional control; helping tier players to develop parts in stipulated time. It is being noted that all the major tier players have been switching towards AFP/ATL process.



Another trend, which will have a mammoth impact on the supply chain of the market is the recent announcement made by Boeing and Airbus about developing major parts inhouse. This is likely to draw a significant impact on the business of tier players in the long run. For instance; Boeing's upcoming wide-body aircraft B777x's wings spars will be manufactured by Boeing itself.

The global aircraft AFP/ATL composites market is segmented based on the aircraft type as Narrow-Body Aircraft, Wide-Body Aircraft, Regional Aircraft, General Aviation, Helicopter, and Military Aircraft. Wide-body aircraft are likely to remain the growth engines of the market during the forecast period. Increasing production rates of the next-generation aircraft programs A350XWB and B787 and increasing penetration of composites in newer variants of aircraft, such as B777x, are driving the wide-body aircraft segment. Military aircraft segment is driven by Lockheed Martin F-35 aircraft whose production rate is also increasing with a target of 160 aircraft per annum by 2023.

Based on the application type, airframe is likely to remain the most dominant segment during the forecast period, whereas engine components are likely to remain the fastestgrowing segment in the same period. Increasing composite content in the latest turbofan engines will continue to drive the demand for lightweight AFP/ATL composites in the engine segment in the foreseen future. Similarly, fuselage and wing sections of both next-generation aircraft (B787 and A350XWB) are made using advanced composites fabricated through AFP/ATL process.

Based on the fiber type, carbon fiber composite is projected to remain the most dominant as well as the fastest-growing fiber type market over the next five years. Carbon fiber composite offers numerous advantages, such as high strength-to-weight ratio, high tensile and compressive strength, low coefficient of thermal expansion, and high fatigue resistance at lower weight over counterpart glass fiber composites.

Based on regions, North America is projected to remain the largest as well as the fastest-growing market during the forecast period, driven by the world's largest aircraft OEM, Boeing. The USA is likely to remain the growth engine of the region's market during the forecast period, driven by all the assembly plants of Boeing as well as Lockheed Martin in the country.

Europe is also likely to witness a healthy growth momentum in the coming eons as Airbus, the leading commercial aircraft maker, has incessantly been raising the



production rates of A320 and A350XWB. Also, the region has a good capacity of producing helicopters with the presence of Airbus Helicopters and Russian Helicopters. France, Germany, Russia, and the UK are likely to remain the powerhouses of the region's market in the coming years.

Asia-Pacific currently represents a relatively small growth opportunity; however, is subjected to grow at a handsome rate in the coming years, driven by China, Japan, and India. China and Japan are projected to remain the major markets in the region; however, India is anticipated to be the new growth engine of the region's market. Major Indian conglomerates are increasingly participating in the market with an aim to get the leadership position in India.

The supply chain of this market comprises raw material suppliers, prepreg suppliers, AFP/ATL component manufacturers, tier player, aircraft OEMs, airlines, aircraft leasing companies, and MRO companies. Some of the key players in the aircraft AFP/ATL composites market are Spirit AeroSystems, Premium Aerotech, Kawasaki Heavy Industries, Leonardo S.p.A, Triumph Aerostructures, Mitsubishi Heavy Industries, The Boeing Company, Airbus Group, GKN Aerospace, Bombardier Aerospace, and UTC Aerospace System. The key aircraft OEMs include Boeing, Airbus, Bombardier, Embraer, COMAC, Lockheed Martin, Dassault Aviation, and Gulfstream Aerospace.

Research Methodology

This report offers high-quality insights and is the outcome of detailed research methodology comprising extensive secondary research, rigorous primary interviews with industry stakeholders and validation and triangulation with Stratview Research's internal database and statistical tools. More than 700 authenticated secondary sources, such as company annual reports, fact book, press release, journals, investor presentation, white papers, patents, and articles have been leveraged to gather the data. We conducted more than 10 detailed primary interviews with the market players across the value chain in all four regions and industry experts to obtain both qualitative and quantitative insights.

Report Features

This report provides market intelligence in the most comprehensive way. The report structure has been kept such that it offers maximum business value. It provides critical insights into the market dynamics and will enable strategic decision making for the existing market players as well as those willing to enter the market. The following are the key features of the report:



Market structure: Overview, industry life cycle analysis, supply chain analysis Market environment analysis: Growth drivers and constraints, Porter's five forces analysis, SWOT analysis

Market trend and forecast analysis

Market segment trend and forecast

Competitive landscape and dynamics: Market share, Product portfolio, New product launches, etc.

Attractive market segments and associated growth opportunities

Emerging trends

Strategic growth opportunities for the existing and new players

Key success factors

The global aircraft AFP/ATL composites market is segmented into the following categories:

Aircraft AFP/ATL Composites Market, by Aircraft Type

Narrow-Body Aircraft (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Wide-Body Aircraft (Regional Analysis: North America, Europe, Asia-Pacific, and RoW) Regional Aircraft (Regional Analysis: North America, Europe, Asia-Pacific, and RoW) General Aviation (Regional Analysis: North America, Europe, Asia-Pacific, and RoW) Helicopter (Regional Analysis: North America, Europe, Asia-Pacific, and RoW) Military Aircraft (Regional Analysis: North America, Europe, Asia-Pacific, and RoW) Aircraft AFP/ATL Composites Market, by Application Type

Airframe (Regional Analysis: North America, Europe, Asia-Pacific, and RoW) Flight Control Surfaces (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Engine (Regional Analysis: North America, Europe, Asia-Pacific, and RoW) Others (Regional Analysis: North America, Europe, Asia-Pacific, and RoW) Aircraft AFP/ATL Composites Market, by Fiber Type

Glass Fiber Composites (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Carbon Fiber Composites (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Aramid Fiber Composites (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Aircraft AFP/ATL Composites Market, by Automation Type



Automated Fiber Placement (AFP) (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Automated Tape Layup (ATL) (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Aircraft AFP/ATL Composites Market, By Region

North America (Country Analysis: The USA, Canada, and Mexico) Europe (Country Analysis: France, Germany, the UK, Russia, and Rest of Europe) Asia-Pacific (Country Analysis: China, Japan, Singapore, and Rest of Asia-Pacific) Rest of the World (Sub-Region Analysis: Latin America, the Middle East, and Others) Report Customization Options

With this detailed report, Stratview Research offers one of the following free customization options to our respectable clients:

Company Profiling

Detailed profiling of additional market players (up to 3 players) SWOT analysis of key players (up to 3 players) Market Segmentation

Current market segmentation of any one of the applications by fiber type Competitive Benchmarking

Benchmarking of key players on the following parameters: Product portfolio, geographical reach, regional presence, and strategic alliances Custom Research: Stratview Research offers custom research services across sectors. In case of any custom research requirement related to market assessment, competitive benchmarking, sourcing and procurement, target screening, and others, please send your inquiry at sales@stratviewresearch.com



Contents

Disclaimer Copyright Abbreviation Currency Exchange About Us Report Scope Report Objectives Research Methodology Secondary Research Key Information Gathered from Secondary Research Primary Research Key Information Gathered from Primary Research Breakdown of Primary Interviews by Region, Designation, and Value Chain Node Data Analysis and Triangulation

1. EXECUTIVE SUMMARY

2. AIRCRAFT AFP/ATL COMPOSITES MARKET - OVERVIEW AND MARKET FORCES

- 2.1. Introduction
- 2.2. Market Classification
 - 2.2.1. By Aircraft Type
 - 2.2.2. By Application Type
 - 2.2.3. By Fiber Type
 - 2.2.4. By Automation Type
 - 2.2.5. By Region
- 2.3. Market Drivers
- 2.4. Market Constraints
- 2.5. Supply Chain Analysis
- 2.6. Industry Life Cycle Analysis
- 2.7. PEST Analysis: Impact Assessment of Changing Business Environment
- 2.8. Porter's Five Force Model
 - 2.8.1. Bargaining Power of Suppliers
 - 2.8.2. Bargaining Power of Constraints
- 2.8.3. Threat of New Entrants
- 2.8.4. Threat of Substitutes



2.8.5. Competitive Rivalry

2.9. SWOT Analysis

3. AIRCRAFT AFP/ATL COMPOSITES MARKET ANALYSIS - BY AIRCRAFT TYPE

3.1. Strategic Insights

3.2. Narrow-Body Aircraft AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.)

3.2.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

3.3. Wide-Body Aircraft AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.)

3.3.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

3.4. Regional Aircraft AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.)

3.4.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

3.5. General Aviation AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.)

3.5.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

3.6. Helicopter AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.)

3.6.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

3.7. Military Aircraft AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.)

3.7.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

4. AIRCRAFT AFP/ATL COMPOSITES MARKET ANALYSIS - BY APPLICATION TYPE

4.1. Strategic Insights

4.2. Airframe: AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.)

4.2.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

4.3. Flight Control Surfaces: AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.)

4.3.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

4.4. Engine: AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.)

4.4.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

4.5. Others: AFP/ATL Composites Market Trend and Forecast (US\$ Million and Million



Lbs.)

4.5.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

5. AIRCRAFT AFP/ATL COMPOSITES MARKET ANALYSIS - BY FIBER TYPE

- 5.1. Strategic Insights
- 5.2. Aircraft AFP/ATL GFRP Market Trend and Forecast (US\$ Million and Million Lbs.) 5.2.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)
- 5.3. Aircraft AFP/ATL CFRP Market Trend and Forecast (US\$ Million and Million Lbs.) 5.3.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)
- 5.4. Aircraft AFP/ATL AFRP Market Trend and Forecast (US\$ Million and Million Lbs.)5.4.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

6. AIRCRAFT AFP/ATL COMPOSITES MARKET ANALYSIS - BY AUTOMATION TYPE

6.1. Strategic Insights

- 6.2. Aircraft AFP Composites Market Trend and Forecast (US\$ Million and Million Lbs.)6.2.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)
- 6.3. Aircraft ATL Composites Market Trend and Forecast (US\$ Million and Million Lbs.) 6.3.1. Regional Trend and Forecast (US\$ Million and Million Lbs.)

7. AIRCRAFT AFP/ATL COMPOSITES MARKET ANALYSIS - BY REGION

7.1. Strategic Insights

7.2. North American Aircraft AFP/ATL Composites Market Analysis

7.2.1. North American Aircraft AFP/ATL Composites Market T&F, by Country (US\$ Million and Million Lbs.)

7.2.1.1. The USA: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.2.1.2. Canada: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.2.1.3. Mexico: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.2.2. North American Aircraft AFP/ATL Composites Market T&F, by Aircraft Type (US\$ Million and Million Lbs.)

7.2.3. North American Aircraft AFP/ATL Composites Market T&F, by Application Type (US\$ Million and Million Lbs.)

7.2.4. North American Aircraft AFP/ATL Composites Market T&F, by Fiber Type (US\$



Million and Million Lbs.)

7.2.5. North American Aircraft AFP/ATL Composites Market T&F, by Automation Type (US\$ Million and Million Lbs.)

7.3. European Aircraft AFP/ATL Composites Market Analysis

7.3.1. European Aircraft AFP/ATL Composites Market T&F, by Country (US\$ Million and Million Lbs.)

7.3.1.1. Germany: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.3.1.2. France: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.3.1.3. The UK: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.3.1.4. Russia: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.3.1.5. Rest of Europe: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.3.2. European Aircraft AFP/ATL Composites Market T&F, by Aircraft Type (US\$ Million and Million Lbs.)

7.3.3. European Aircraft AFP/ATL Composites Market T&F, by Application Type (US\$ Million and Million Lbs.)

7.3.4. European Aircraft AFP/ATL Composites Market T&F, by Fiber Type (US\$ Million and Million Lbs.)

7.3.5. European Aircraft AFP/ATL Composites Market T&F, by Automation Type (US\$ Million and Million Lbs.)

7.4. Asia-Pacific's Aircraft AFP/ATL Composites Market Analysis

7.4.1. Asia-Pacific's Aircraft AFP/ATL Composites Market T&F, by Country (US\$ Million and Million Lbs.)

7.4.1.1. China: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.4.1.2. Japan: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.4.1.3. Singapore: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.4.1.4. Rest of APAC: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.4.2. Asia-Pacific's Aircraft AFP/ATL Composites Market T&F, by Aircraft Type (US\$ Million and Million Lbs.)

7.4.3. Asia-Pacific's Aircraft AFP/ATL Composites Market T&F, by Application Type (US\$ Million and Million Lbs.)



7.4.4. Asia-Pacific's Aircraft AFP/ATL Composites Market T&F, by Fiber Type (US\$ Million and Million Lbs.)

7.4.5. Asia-Pacific's Aircraft AFP/ATL Composites Market T&F, by Automation Type (US\$ Million and Million Lbs.)

7.5. Rest of World's (RoW) Aircraft AFP/ATL Composites Market Analysis

7.5.1. RoW's Aircraft AFP/ATL Composites Market T&F, by Sub-Region (US\$ Million and Million Lbs.)

7.5.1.1. The Middle East: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.5.1.2. Latin America: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.5.1.3. Others: Aircraft AFP/ATL Composites Market T&F (US\$ Million and Million Lbs.)

7.5.2. RoW's Aircraft AFP/ATL Composites Market T&F, by Aircraft Type (US\$ Million and Million Lbs.)

7.5.3. RoW's Aircraft AFP/ATL Composites Market T&F, by Application Type (US\$ Million and Million Lbs.)

7.5.4. RoW's Aircraft AFP/ATL Composites Market T&F, by Fiber Type (US\$ Million and Million Lbs.)

7.5.5. RoW's Aircraft AFP/ATL Composites Market T&F, by Automation Type (US\$ Million and Million Lbs.)

8. COMPETITIVE ANALYSIS

- 8.1. Strategic Insights
- 8.2. Product Portfolio Analysis
- 8.3. Geographical Presence
- 8.4. New Product Launches
- 8.5. Strategic Alliances: Mergers and Acquisitions, Joint Ventures, Collaborations etc.
- 8.6. Market Share Analysis

9. STRATEGIC GROWTH OPPORTUNITIES

- 9.1. Strategic Insights
- 9.2. Market Attractive Analysis
 - 9.2.1. Market Attractiveness by Aircraft Type
 - 9.2.2. Market Attractiveness by Application Type
 - 9.2.3. Market Attractiveness by Fiber Type
 - 9.2.4. Market Attractiveness by Automation Type



- 9.2.5. Market Attractiveness by Region Type
- 9.2.6. Market Attractiveness by Country
- 9.3. Growth Matric Analysis
- 9.4. Emerging Trends
- 9.5. Key Success Factors

10. COMPANY PROFILES OF KEY PLAYERS

- 10.1. Airbus Group SE
- 10.2. The Boeing Company
- 10.3. Bombardier Aerospace
- 10.4. GKN Aerospace
- 10.5. Kawasaki Heavy Industries
- 10.6. Leonardo S.p.A
- 10.7. Mitsubishi Heavy Industries
- 10.8. Premium Aerotech
- 10.9. Spirit AeroSystems
- 10.10. Triumph Aerostructures
- 10.11. UTC Aerospace System



I would like to order

Product name: Aircraft AFP/ATL Composites Market by Aircraft Type (Narrow-Body Aircraft, Wide-Body Aircraft, Regional Aircraft, General Aviation, Helicopter and Military Aircraft), by Application Type (Airframe, Engine Applications, Flight Control Surfaces, and Others), by Fiber Type (Glass Fiber Composites, Carbon Fiber Composites, and Aramid Fiber Composites), by Automation Type (Automated Fiber Placement and Automated Tape Layup), and by Region (North America, Europe, Asia-Pacific, and Rest of the World), Trend, Forecast, Competitive Analysis, and Growth Opportunity: 2019-2024 Product link: https://marketpublishers.com/r/AAD028F479AEN.html

Price: US\$ 4,790.00 (Single User License / Electronic Delivery) If you want to order Corporate License or Hard Copy, please, contact our Customer Service: info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <u>https://marketpublishers.com/r/AAD028F479AEN.html</u>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name: Last name: Email: Company: Address: City: Zip code: Country: Tel: Fax: Your message:

**All fields are required

Custumer signature ____



Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <u>https://marketpublishers.com/docs/terms.html</u>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970