

Europe Automotive AHSS - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Report description:

The Europe Automotive AHSS Market size is estimated at USD 4.81 billion in 2024, and is expected to reach USD 7.33 billion by 2029, growing at a CAGR of 8.80% during the forecast period (2024-2029).

Over the long term, the demand for reducing the weight to enhance vehicle performance and safety is growing in Europe which may drive the AHSS market. As a result, Advanced High Strength Steel (AHSS), a crucial material for vehicle mass reduction, is the fastest-growing material in today's automotive industry.

Europe is the world's largest producer of crude steel, and it is expected that Europe will dominate the AHSS industry through 2025. The high-revenue market value can be attributed to the presence of major automobile manufacturers and OEMs in the region. Recovery of the automobile sector during the recession period, across the region, may further support regional growth.

Steel makes up around 70 % of an average automobile's weight. Compared to standard steel, AHSS enables to reduce vehicle weight by 23-35% which is around 165 to 250 kg, for a regular passenger car, saving 3 - 4.5 tons of greenhouse gases over the vehicle's total life cycle. This saving in emissions is much more substantial than the CO2 emitted during the complete production of steel needed in a car.

Further, Within Europe, Germany is one of the prominent markets for AHSS in automobiles. The country is the largest steel producer in the EU28, with an annual production of approximately 42.4 million metric tons of crude steel, which in turn is likely to create a lucrative opportunity for the market during the forecast period.

Europe Automotive AHSS Market Trends

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Battery Electric Vehicle Dominating the Market

Steel has come a long way from its basic form of mild steel to more advanced high-strength steel grades that offer improved formability. These newer grades of steel have exceptional strength-to-weight ratios, which makes them perfect for applications like battery enclosures in electric vehicles. Advanced high-strength steel can effectively protect the battery while minimizing weight and maximizing structural integrity.

There has been an increase in steel consumption in the automotive industry in Europe as the steel composition involves more than 30% of the body structure, panels, doors, and trunk closures, giving it energy absorption and high strength in case of a crash.

Electric vehicles have seen healthy growth in recent years, with a spike in usage/sales due to increased regulatory norms by various organizations and governments to control emission levels and promote zero-emission vehicles, as well as increased charging infrastructure across regions.

Germany is a hub for the automotive industry and the country witnessed an increase in vehicle production, which is likely to boost the market. In 2022, Germany's new battery-electric vehicle registrations grew by 34 percent and hold a 14.7% market share. Whereas Plug-in Hybrid Electric vehicles registered around 11,787 units in 2022 and hold a market share of 5.8% market share in 2022.

The country also offers considerable tax reductions and incentives for electric car and charging station purchases. New electric automobiles costing less than USD 44,147 are eligible for a USD 9,933 government refund, while a USD 994 subsidy from the state-owned development bank is available for the construction of a private electric car charging station.

Several legislation and policies announced by the government for promoting electric vehicle sales across the country are likely to witness major growth in the market during the forecast period. For instance, In 2022, The government announced the legislation for zero-emission vehicles. The government aims for 100% zero-emission light-duty vehicle acquisitions of civil government-owned and operated fleets, with aspirations for 100% zero-emission medium and heavy-duty vehicle acquisitions, by no later than 2035.

Automotive manufacturers and ecosystem stakeholders in each region have begun to adapt to the changing regional patterns based on customer needs and preferences. The market studied is expected to expand due to rising vehicle demand and rising living standards around the world.

The rise in the sale of electric vehicles across the region is likely to enhance the consumption of steel components, which in turn is anticipated to witness a major growth for the market during the forecast period.

Germany Poised to be the Largest Market for European AHSS Market

Germany is one of the fastest-growing European countries, even in the electric vehicles market. According to the Federal Motor Transport Authority, a quarter more electric cars were registered in Germany in the first half of 2022 than the previous year over the same period.

During that time, the proportion of fully electric vehicles climbed to 13.5% of all new registrations. Overall, alternative-drive car registrations climbed by 14.2%, accounting for over half of all new car registrations (battery electric vehicles, hybrids, plug-in hybrids, hydrogen fuel cell vehicles, and gas vehicles). German brands accounted for 50.6% of new passenger car registrations with electric powertrains during the reporting period.

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By 2030, Germany hopes to have 15 million electric vehicles on the road. Furthermore, the German Federal Government is aggressively supporting the usage of plug-in electric vehicles. Furthermore, since the rise in BEV subsidies in June 2020, the market share of BEVs has steadily increased. Aside from the environmental benefits, the increasing availability of electric vehicles on the market is driving growth.

However, there is evidence of the country's growing popularity of electric automobiles. As a result, the German government is anticipated to eliminate financial incentives for acquiring electric vehicles next year, as rising popularity renders government subsidies outdated.

E-vehicles are getting more popular and will soon no longer require government subsidies. According to the plan, subsidies for solely electric vehicles priced under USD 40,488 will be cut to USD 4794.82 from USD 6393.09 at the beginning of next year and to USD 3196.55 by 2023. According to government sources, the incentives granted to electric car owners will expire once the next two years' budget of USD 3.44 billion is expended.

Future applications of AHSS in these electric vehicles are also expected to drive the market. With the demand for AHSS vehicles in development, various initiatives within Germany are driving technological advancements. As per, the regulatory framework (Euro 6 norms), there is a growing motivation for a low-carbon economy by 2050.

Further, research organizations such as the Affordable Lightweight Automobiles Alliance (AFLA) are specialized to deal with automotive light-weighting, which is co-funded by the European Commission's Horizon and EUCAR, the European Council for Automotive R&D.

Based on the above-mentioned points, the target market is expected to witness a considerable growth during the forecast period.

Europe Automotive AHSS Industry Overview

The Europe Automotive AHSS Market is dominated by several key players such as ThyssenKrupp AG, SSAB AB, POSCO Co. Ltd., ArcelorMittal SA, Baoshan Iron & Steel Co. Ltd., and others. As the demand for AHSS is growing in the region, the automotive AHSS manufacturers are trying to have the edge over their competitors by making joint ventures, and partnerships, and launching new products with advanced technology. Hence, driving the automotive AHSS market in Europe. For instance,

- In November 2023, Thyssenkrupp AG and JFE Steel Corporation jointly introduced the jetQ, the Advanced High Strength Steels (AHSS) for electric mobility. The new jetQ 980 and jetQ 1180 grades for geometrically complex body structure components.
- In February 2023, ArcelorMittal and I-FEVS Italy introduced a new collaboration aimed at developing safe, light, sustainable, and affordable innovative steel solutions for e-mobility applications. The new I-FEVS solutions will rely on ArcelorMittal's advanced high-strength steels (AHSS) which are majorly used in mobility applications. The collaboration includes the industrialization of battery envelops and body frame structures, the investigation of advanced steel solutions for micro-mobility solutions, the design of ultralight AHSS structures for emerging urban mobility solutions, and the incorporation of innovative, high-efficiency solar panel structures into EVs.

Additional Benefits:

- The market estimate (ME) sheet in Excel format

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