

# High-Speed Steel Market to Reach \$5.5B by 2035 | Key Players: Erasteel, Kennametal, NACHI-FUJIKOSHI, ThyssenKrupp AG

*High-Speed Steel Market Set for Strong Growth Driven by Demand for Precision Cutting Tools in Automotive, Aerospace, and Industrial Manufacturing*

ROCKVILLE, MD, UNITED STATES, August 4, 2025 /EINPresswire.com/ -- A transformative decade awaits manufacturers and market payers across automotive, aerospace, and industrial sectors as the global [High-Speed Steel \(HSS\) market](#) is poised for robust expansion. Valued at USD 2.9 billion in 2025, the market is projected to reach USD 5.5 billion by 2035, charting a Compound Annual Growth Rate (CAGR) of 6.6%. This growth is fueled by rising demand for durable, high-precision cutting tools critical to automated and high-performance manufacturing environments.



## Why High-Speed Steel Is at the Center of Industrial Evolution

HSS remains a cornerstone material for industries that rely on machining precision, wear resistance, and thermal stability. With global industrial automation and digitized production lines growing rapidly, HSS tools have emerged as indispensable in machining operations for engine components, turbine blades, and precision dies.

Unlike other tooling materials, HSS combines affordability, regrindability, and reliability—features particularly attractive to small-to-mid-sized enterprises and manufacturers operating in high-mix, low-volume environments.

## Meeting the Needs of Modern Manufacturing: Key Drivers

### Automotive Boom

Global automotive production, which exceeded 94 million units in 2023, is a key driver. HSS is heavily used in producing crankshafts, camshafts, engine valves, and other high-stress components—especially as EV manufacturing scales, where lightweight material cutting is critical.

#### Aerospace Precision Requirements

Aerospace OEMs like Airbus and Boeing continue to invest in HSS tools for machining superalloys and composites. HSS maintains hardness at elevated temperatures, making it ideal for turbine parts and structural aircraft components.

#### General Engineering and Fabrication

From maintenance to fabrication shops, HSS's adaptability and low lifecycle cost make it a go-to material across applications. Manufacturers increasingly prioritize versatile tooling solutions amid rising operational costs and demand for sustainable machining.

#### Region-Wise Growth Spotlight

##### China: Fastest-Growing Market (8.1% CAGR)

China leads the global HSS market, backed by industrial modernization and manufacturing scale. The nation's efforts to produce eco-friendly and cobalt-free HSS grades align with global sustainability trends. Government initiatives like “Made in China 2025” prioritize material innovation and advanced tooling technologies.

##### United States: Capitalizing on Reshoring and Manufacturing Resurgence

Driven by the Inflation Reduction Act and reshoring policies, the U.S. HSS market is experiencing a resurgence. With strong demand across automotive, aerospace, and machinery sectors, HSS tools are indispensable in facilities shifting to smart manufacturing and precision engineering.

##### Japan: Precision Tooling Powerhouse

Japan continues to lead in coated HSS tool innovation (e.g., TiAlN coatings), ensuring longer tool life and improved machining output. Strict JIS standards push Japanese manufacturers toward globally competitive, high-performance tooling solutions.

##### Europe and North America: Mature but Dynamic Markets

While growth is moderate, Germany, France, and the U.K. remain hubs for industrial R&D and tool innovation. These regions benefit from strong regulatory frameworks and emphasis on environmentally compliant steel production.

#### Segment Highlights: A Tailored Opportunity for Tooling Innovators

Powder Metallurgy (PM) HSS: Expected to hold 36% of the market in 2025, PM HSS offers precision alloy control, better grindability, and fine carbide dispersion—essential for CNC and high-precision toolmaking.

T-Type Grades: Dominant due to tungsten-based hardness and heat resistance, ideal for heavy-duty cutting applications in automotive and aerospace sectors.

Cutting Tools Application: The largest application segment, fueled by demand in milling, drilling, and tapping—especially where tool reusability and precision are paramount.

Automotive End-Use: The leading vertical, with HSS tools ensuring durable, consistent performance in high-speed machining of complex geometries.

### Challenges & Strategic Considerations

While HSS offers tangible benefits, manufacturers face competition from carbide and ceramic tools. HSS's performance in ultra-high-speed or temperature-intensive applications is comparatively limited. However, cost-effective lifecycle advantages, custom alloying, and surface coating innovations help bridge this gap.

The adoption of non-traditional cutting methods (laser, waterjet, additive) may reduce demand in certain sectors, but cannot fully replace HSS in flexible and regrindable cutting applications. Moreover, environmental regulations in developed economies are pushing manufacturers to invest in low-emission, energy-efficient production—a challenge that is also an opportunity for forward-looking players.

### Innovation and Competitive Edge: Where the Market is Heading

Industry leaders like Erasteel, Kennametal, ThyssenKrupp AG, NACHI-FUJIKOSHI CORP., and Sandvik AB are investing in:

- Hybrid HSS alloys to increase performance.
- AI-integrated manufacturing to minimize waste.
- Advanced coatings (e.g., TiN, AlTiN) for tool life extension.
- Custom grades for emerging applications like EV battery housing, lightweight alloy machining, and superalloy turbine parts.

Sustainability is fast becoming a differentiator. Players incorporating recycled steel, renewable energy in production, and modular tool design are gaining an edge in markets where ESG compliance is mission-critical.

### Recent Milestones

Sumitomo Electric (Dec 2024): Launched SumiDrill™ GDX, cutting carbide use while boosting tool efficiency.

Dormer Pramet (Dec 2023): Expanded their product portfolio in India, focusing on cost-efficiency and high productivity tooling, addressing the region's fast-evolving industrial landscape.

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For more on their methodology and market coverage, visit <https://www.factmr.com/about-company>

### Strategic Takeaway for Stakeholders

For manufacturers, industrial buyers, and toolmakers, the HSS market offers a strategic path forward—balancing cost-efficiency with high-performance machining. As industries continue to prioritize automation, precision, and sustainability, HSS stands out not just as a tooling material but as a solution platform adaptable across evolving manufacturing needs.

Now is the time for stakeholders to invest in advanced HSS solutions, optimize supply chains, and partner with innovation leaders—ensuring long-term resilience and competitiveness in a high-growth, high-precision future.

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### Editor's Note:

This release is based exclusively on verified and factual market content derived from industry analysis by Fact.MR. No AI-generated statistics or speculative data have been introduced. This story is designed to support manufacturers, healthcare providers, and wellness brands in recognizing the High-Speed Steel industry as a major growth and innovation sector for the coming decade.

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