

Hagane

Hagane Company

Contributing to these SDGs



Toshio Ito

Managing Executive Officer and Hagane Company President

Profile

Toshio Ito took on the role of Hagane Company President in April 2022.



Value for society

As a resource-recycling company using steel scrap as a raw material, the Hagane Company leverages its technical strengths, and integrated forging with steel making processes, to evolve by adapting to society's needs. In this way, it always provides outstanding specialty steel and contributes to the development of an environmentally friendly, safe and secure mobility society.

Specialty steel materials



Business fields

- Main products: Carbon steels and alloys for machine structural use, microalloyed steel, boron steel, spring steel, high carbon chrome bearing steel
- Main applications: Automobile engine components, drivetrain components (gears, drive shafts, and transmissions)

Company strengths

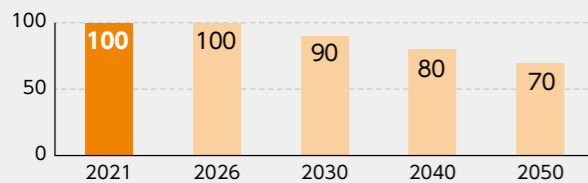
- Ability to develop highly functional materials using the integrated forging with steel making processes developed since its foundation as the leading manufacturer of specialty steels
- Strong partnerships with automakers and parts manufacturers
- Specialty steel manufacturing technologies using the low-CO₂ emission electric furnace steelmaking method*

* CO₂ emissions during manufacturing when using the electric furnace method are said to be approximately one quarter the emissions when using the blast furnace method.

Business environment

Automobile production in the automotive industry, where Aichi Steel's major customers are, is expected to grow steadily into the future, primarily in China and India. In Japan, with the progress of automobile electrification, demand for specialty steels for gasoline-powered vehicles is expected to decline. On the other hand, new demand is being created for specialty steel for electrified vehicles, including high-strength gear steel. In terms of manufacturing costs, the prices of steel scrap and electricity are forecast to further increase as the trend toward decarbonization continues. To stabilize profitability of the Hagane Company business, a mainstay of our businesses, we will continue working to minimize reductions in demand for our main products and to improve competitiveness in quality, cost, and delivery, as we focus on environmental initiatives such as reducing CO₂ emissions.

Domestic demand for specialty steel (Aichi Steel predictions)



* Percentage compared to FY2018

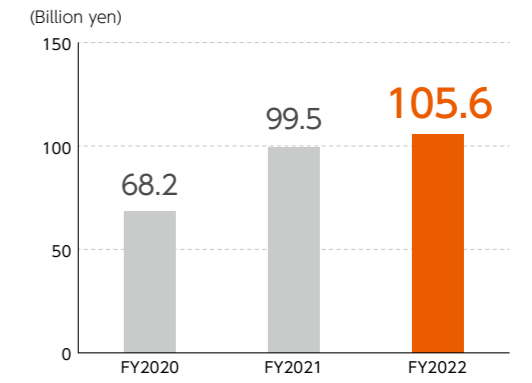
Medium- to long-term growth strategies

Aichi Steel's aim is to become the leading manufacturer of specialty steels to contribute to the development of a mobility society. The Hagane Company aims to achieve steady growth by rebuilding its existing businesses and expanding new businesses. In these existing businesses, we will work to raise demand by enhancing our solutions capabilities through joint development with customers and leveraging the technical capabilities of our integrated forging with steel making processes. We will also shift to strategic products to secure sales volumes by developing and expanding sales of new steel varieties, including the highly functional steels needed for electrified vehicles and a decarbonized society. Overseas, we will work through India's Vardhman Special Steels Limited, a company that we have invested in, to expand our steel materials business globally. On the cost front, we will lower our break-even points through careful selection of capital investments and development of production structures for responding flexibly to rapid fluctuations in production requirements. We will also improve competitiveness in quality, cost, and delivery by realizing small-section continuous casting and other technologies. At the same time, we will work to appropriately pass on the increasing costs of raw materials and energy as we pursue a sustainable business foundation.

Fiscal 2022 Business Performance

Despite reduced sales volumes due to instability within the automotive industry on the back of semiconductor shortages, the Hagane Company managed to a certain degree to pass on the costs of raw materials and energy in sales prices, which helped it achieve record net sales for the period. Business profit, on the other hand, was negative due to a lag in passing on the increased costs of ferroalloys and other materials in the sales prices, and an increase in our cost burden due to things like reduced production efficiency when lines had to stop operating as a result of a decline in sales.

Net sales



Achievements and Future Initiatives

Initiatives for recovering earnings capacity

To create a more robust business foundation, the Hagane Company is working to reform its earnings structure by fundamentally lowering break-even points to achieve profits even in times of limited production volumes. We are launching special projects to conduct activities in all aspects of purchases, production, and sales, and to achieve stable profitability.

Purchases	<ul style="list-style-type: none"> Expand steel scrap storage capacity to increase the ratio of low-cost scrap used and reduce raw material costs
Production	<ul style="list-style-type: none"> Improve yields through overall optimization of manufacturing processes Develop operation structures with minimal excess of total cost and upward flexibility in production structures and capacity Reduce costs through activities to reduce specific consumption, which is not affected by production volume variability Reduce equipment costs through optimization of equipment maintenance frequency and careful selection of capital investments
Sales	<ul style="list-style-type: none"> Improve rules for sales prices <ol style="list-style-type: none"> Increase frequency of reflecting manufacturing costs in sales prices Add surcharges to reflect energy costs Increase base prices to reflect product value

Globalization of the steel materials business

In 2019, Aichi Steel made a capital participation in India's Vardhman Special Steels, a specialty steel manufacturer, as part of efforts to capture overseas demand, which is expected to grow going forward. Partly due to improved quality and production capacity achieved through technical guidance from us, the company is growing steadily in terms of both business and profit. We signed a new support agreement in 2022 as well, and we are strengthening collaborations to achieve even further growth.

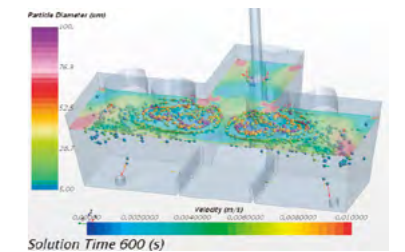
We further expanded our overseas business network in 2023 when we started supplying steel materials to our forged product production sites that supplies the Toyota Group in the ASEAN region. Going forward, we will continue expanding our integrated forging with steel making processes business globally by increasing the number of products we supply and the number of areas in which we collaborate.



Vardhman Special Steels has started supplying steel materials to our forged product production sites in the ASEAN region

Small-section continuous casting technology development

We are working on the development of small-section continuous casting technologies for steel products for automobiles, which eliminates the need for the steel material reheating process, to reduce CO₂ emissions in manufacturing processes. We are developing these technologies by leveraging basic technologies and equipment know-how, through digital transformation, in addition to the operational technologies we have developed over the years. We are currently in the customer evaluation stage for relevant products, with the aim of achieving practical application and mass production in 2024.



Group company initiatives

Aichi Steel Group companies are also actively working toward carbon neutrality.

AICHI CERATEC CORPORATION	Refractory manufacturing Industrial furnace engineering	<ul style="list-style-type: none"> Save resources by extending the useful life of refractory materials Improve thermal energy efficiency of industrial furnaces
OMI MINING CO., LTD.	Mining and processing of limestone and other minerals	<ul style="list-style-type: none"> Shift from fossil fuels in manufacturing processes
Aichi Steel Logistics Co., Ltd.	Transportation of steel material and forged products	<ul style="list-style-type: none"> Improve transportation efficiency by aggregating logistics across distribution channels (Special Award received from Green Logistics Partnership Conference)