Operation of the CVT hot-forging press line, a world-class high-speed automatic forging machine

In January 2017, Aichi Steel began operation of two newly-constructed CVT hot-forging press lines to improve competitiveness by reforming its forging production process. Global demand for Continuously Variable Transmission (CVT) vehicles is increasing thanks to their fuel efficiency. These new forging lines have enabled world-class high-speed automatic forging of the shafts for vehicles equipped with CVTs and have increased productivity by 60%. Use of FIA* furnaces has enhanced energy efficiency and reduced CO₂ emissions, while improved logistics have shortened production lead times by 50%. Going forward, Aichi Steel will continue its forward-thinking rationalization of plants in consideration of the global environmental, while meeting growing demand through the development of stable and timely supply systems.

* FIA (Forging Isothermal Annealing): Heat treatment using energy retained from hot forging

ASCON®-CD6 launched to expand product lineup of stainless steel reinforcing bars

Expanding the lineup of SUSCON® stainless steel concrete reinforcing bars, Aichi Steel and Aiko Corporation jointly developed and launched ASCON®-CD6 as a larger version of the already available ASCON®-CD4, which was launched in November 2012. With excellent corrosion resistance and crack dispersibility, this product is the industry’s first stainless steel deformed steel wire, with expected demand to include use as reinforcing materials such as concrete secondary products.

To satisfy increasing environmental concerns, Aichi Steel also developed and launched “Stainless Green Fence”, a green wall mesh fencing product using CD4, and the company’s first product for the landscape gardening market. Going forward, Aichi Steel will continue expanding its product lineup and making its contribution to safety and security in society through improved durability of concrete structures.
Aichi Steel starts production of metallic fiber (amorphous wire)

Building an integrated production system from raw materials to sensors, and providing a stable supply of material

Aichi Steel acquired the metallic fiber (amorphous wire*1) business of Unitika Ltd. in September 2015. With transfer and installation of the production equipment at its Higashiura Plant now complete, production has started.

Of the equipment transferred, the in-rotating liquid spinning machine*2 in particular is unlike any other in the world. It directly quenches the molten metal and spins it into a fine wire.

With this new operation, we have built an integrated production system from raw material to sensor. This will provide us with a stable supply of material, enabling us to produce our own amorphous wire, a key material in the manufacture of the ultra-compact, high-performance magnetic MI sensors*3 that we develop, manufacture and sell. By further improving the performance of our MI sensors, increasing our cost competitiveness, and promptly developing new products, Aichi Steel will meet the needs of society and customers in a timely manner.

*1 Amorphous wire: Fine amorphous metal wire (no systemic atomic structure) with diameter of between 20 and 100 micrometers

*2 In-rotating liquid spinning machine: In this machine, a liquid layer is formed on the inside of a rotating drum using centrifugal force, and metal that has been heated and melted is blown into the liquid layer. The fluid layer causes rapid quenching and solidification before the molten metal can crystallize, creating the amorphous wire.

*3 MI sensor: An ultra-compact, ultra-sensitive, ultra-low power consumption, ultra-high response magnetic sensor using magneto-impedance

Initiatives to increase unity across the Aichi Steel Group

Aichi Steel and its consolidated subsidiaries in Japan and overseas are sharing information and actively increasing exchanges between sites in efforts to increase unity across the Aichi Steel Group. Along with the launch of a new in-house company system in April 2017, consolidated subsidiaries were also reorganized within the company structure, which will further increase the focus on initiatives to improve solidarity.

- One example is the kick-off event celebrating the second year of the Revival Plan at AFU, our only forging site in North America. The Chairman, President, and President of the Forging Company visited from the headquarters and offered words of encouragement to employees at the event, explaining the importance of AFU within the Aichi Steel Group and the value of continued mutual cooperation.

- Another example is the Asia Kaizen Meeting, which is held every year between Aichi Steel and the four forging sites in Asia (AFP, AFT, API and SAFC) to share information through open dialogue and presentations of ongoing improvements. The meeting was held twice in fiscal 2016; once in September 2016 at AFC (Philippines) and once in March 2017 at AFT (Thailand).

- The Aichi Global Meeting is also held on an ongoing basis to promote autonomy and strengthen ties between companies of the Aichi Steel Group, including subsidiaries in Japan and overseas. The fifth Global Meeting, held in fiscal 2016, had the theme of “clarifying parent and subsidiary roles and missions to improve autonomy of each company.” With seminars, group discussions and relaxed gatherings, the event promoted friendly relations within the Group.