

North America

In addition to operating the most productive can stock manufacturing plant in the USA, we have built a new automotive panel and structural materials supply network for the rapidly expanding automotive materials market.



Tri-Arrows Aluminum Inc.

Tri-Arrows Aluminum Inc. (TAA) is a subsidiary handling rolled aluminum products. Supported by Logan Aluminum Inc., which boasts world-leading can stock production efficiency, TAA manufactures and sells aluminum for beverage cans, producing over 300,000 tons per year.

Special
Feature

UACJ—Accelerating Operations towards Recognition as a Global Company

Thailand

The fully-integrated manufacturing lines of the Rayong Works in Thailand have entered full-scale operation, with an annual production capacity of 200,000 tons.

UACJ (Thailand) Co., Ltd.

The Rayong Works, featuring the only fully-integrated manufacturing lines in Asia and world-class production capacity, is an integral part of UACJ (Thailand) Co., Ltd. The works combines cost competitiveness with high quality, and boasts an annual production capacity of approximately 200,000 tons.





Constellium-UACJ ABS LLC

Constellium-UACJ ABS LLC is an automotive aluminum panel manufacturing and sales company jointly established with a leading global company, headquartered in the Netherlands, Constellium N.V. The joint venture began operations in June 2016, featuring continuous heat-treated finishing and surface treatment lines.



UACJ Automotive Whitehall Industries, Inc.

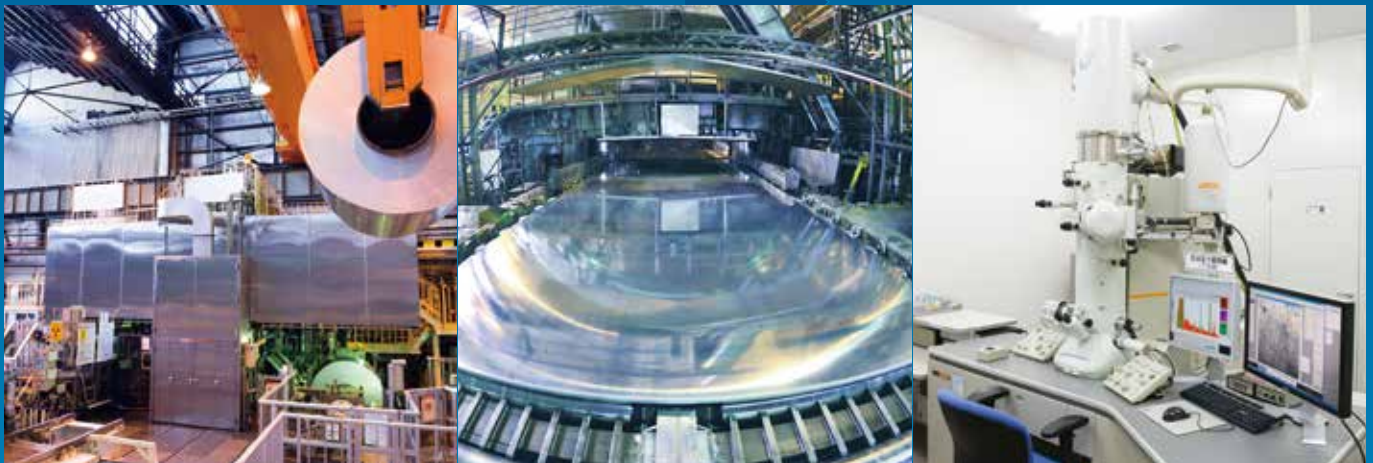
Whitehall Industries is known as the number one brand in North America for automotive structural materials. UACJ Automotive Whitehall Industries Inc. was introduced following acquisition of a subsidiary in April 2016. The company currently manufactures and sells aluminum structural materials and various aluminum parts components, with three plants in the USA and one in Mexico.

Integrating companies has given UACJ superior positioning within Japan. This action, however, was not to gain a major share of the Japanese market, but to become an aluminum industry leader in a competitive global market.

In the following, we introduce strategic developments underway involving three key global hubs that will support our efforts towards that end.

Japan

To increase cost and product quality competitiveness, we are proceeding with the reallocation of product mixes in Japan according to plan and developing new materials.



Harnessing the Synergistic Powers of the UACJ Group to Meet Demand in a Rapidly Growing Market

Special Features and Strengths of the Company

Having decades of experience and accumulating abundant technological prowess since its establishment, Tri-Arrows Aluminum, Inc. (TAA) has become a highly competitive aluminum manufacturer in the U.S.A. One of its strengths is owning a majority share of the Logan Mill, the world’s largest and most cost-competitive rolling mill. Accordingly, the company is well prepared to take on the growing demand for aluminum; a market that is set for rapid expansion.

Global aluminum rolling mills have an annual production capacity on the scale of approximately 18,000 tons per year. The Logan Mill boasts a production capacity of approximately 900,000 tons per year, and TAA will soon have a production line capable of producing 300,000 tons per year.

An important advantage to all of this is that over 80 percent of the materials procured for manufacturing are recycled aluminum. This contributes to reducing environmental impact, while also increasing

competitiveness by lowering the cost of resource materials.

Yet another key strength of TAA is a self-reliant, proactive workforce. Truly valuing its employees, the company has built a strong and resilient culture: each employee is nurtured to understand his/her role and the importance of teamwork. As a result, all members work well together while personally striving to improve production efficiency. Commented company president, Henry Gordinier, “In the past, we needed to find ways to manage costs and increase volume without a lot of capital. This required a tremendous amount of innovation and a culture that knows how to get things done. Pairing that culture with our parent company, where aluminum is the core element, you have a very strong combination.”

Benefits of Being Part of the UACJ Group

The UACJ Group is committed to becoming a global leader in the aluminum industry, which brings new dimensions of business to TAA. Gordinier continues, “While Tri-Arrows Aluminum is based in, and focuses on, the North American market, UACJ has close ties to Asia. This partnership gives us a better understanding of the Asian markets and will help position us to be more competitive as we merge into the global marketplace. As a result, new energy is emerging from within the company.”

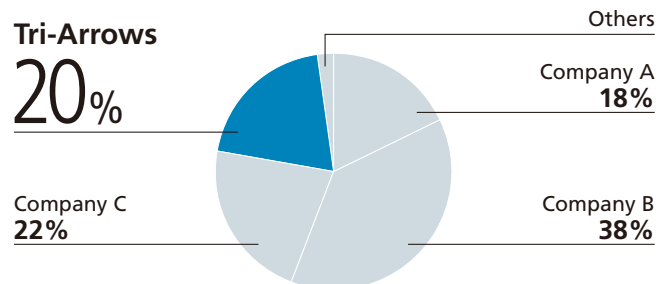
Exchanging information with various members of the UACJ Group has become a regular activity. This has led to more opportunities for collaboration and the realization of various synergies, some of which are assisting the Logan Mill and the transitional growing pains of adding operations to produce and sell automotive body sheet for the automotive industry. TAA established a cooperative working arrangement with Constellium-UACJ ABS that covers a variety of areas, including the management of internal process scrap and enhancements for elemental production materials to improve quality and performance.

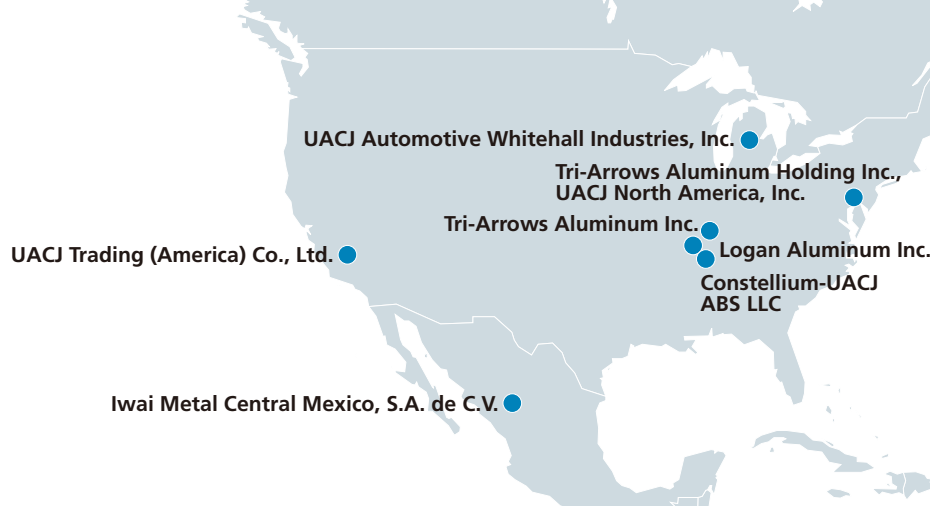


Henry Gordinier
President, Tri-Arrows Aluminum, Inc.

Henry Gordinier began his career in financial risk management in metal trading and then joined ARCO Aluminum (presently TAA) in 1999, where he engaged in risk management and business management. He left the aluminum industry and moved on to health care, where he was involved in risk strategy. His heart, however, remained in the aluminum business. He returned to the company (presently TAA) in 2014, where he was appointed to the position of president in June 2016.

North America Can Stock Sales





Publicly traded companies in America tend to focus on quarterly performance, and that can be detrimental to strategic planning that is longer-term in nature. Gordinier adds, "My experience with our Japanese owners is that strategic decisions consider a span of 10 or 20 years. For me, this was an extremely refreshing perspective to consider in business strategic planning. I believe that UACJ's decision to purchase an equity stake in the Logan Mill is a reflection of that long-term perspective. In coming together with UACJ, we will have a basis that will allow us to grow even more."

Growth Drivers and Future Direction

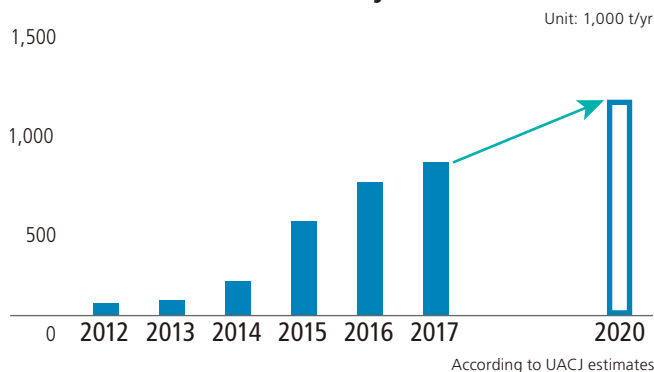
TAA is moving towards an integrated operations portfolio with a balance of materials for the beverage can and automotive markets. Declining sales have been reported in the beverage can market, mainly believed to be due to the trend of switching from carbonated beverages to healthier beverages. On the other hand, the shift from bottles to bottle-cans is gaining momentum. To meet both beverage can and automotive-related demand, production line expansion is underway at the Logan Mill. When completed, UACJ plans to own a larger share of the annual production capacity. Market conditions will be closely monitored and Logan Mill production of automotive body sheet slated for Constellium-UACJ ABS will be increased as required.

To support growth initiatives in North America, one of the ways TAA is setting itself apart is by maintaining consistency and being very deliberate in its market position. Gordinier continues, "Tri-Arrows Aluminum respects the heritage of its business, which has delivered

the earnings and capital returns that stakeholders have expected. So when we think about how important transitioning to produce materials for the automotive industry is to us and the UCAJ Group, it's vital to keep in mind we are structuring a strategy that takes advantage of an emerging new market." The consistency of TAA's message in the marketplace is highly valued by its customers. The company is focused on being able to maintain the 20 percent share presently held in the can stock market, while also seeking to expand its share of the automotive body sheet market.



Demand for Automotive Body Sheet



"Over 80 percent of Logan's resources come from recycled aluminum, which minimizes negative environmental impact."

"I think of Logan as providing green manufacturing jobs because we use so much recycled content. Aluminum, itself, is infinitely recyclable, and nearly all of our internal process scrap is recycled. UACJ also sources scrap from outside markets for use in our operations. We are very good stewards of the environment, and employees are involved in numerous activities in the community and surrounding area. As an example, the plant has been very active in supporting the United Way."



Ken Purdue
Plant Manager
Logan Aluminum Inc.



First Hot-rolled Coil Targeted for Supplying Automobile Manufacturers Comes off New Production Line

Plant Launch and Strengths of the Company

Constellium-UACJ ABS LCC was established as a joint venture between UACJ, Japan's largest aluminum manufacturer, and Constellium N.V., a European company, in response to rapidly growing demand for elemental aluminum materials. The company has completed construction of a new plant equipped with a state-of-the-art surface treatment line, and the production of materials for Japanese, European and US automobile manufacturers has begun.

The first hot-rolled coil came off of the production

line early April 1, 2016, marking the beginning of operations for the 100,000 tons facility. "This first coil was certainly a milestone for us, and we are hoping to create profits early on," stated Dave Davis, plant manager of Constellium-UACJ ABS. He continued, "We are also continuing to complete commissioning of the facility and seeking qualification. Our people are our strength. You can buy equipment anywhere, but the thing that makes you different from everybody else is the people you hire, the human factor. And what we committed ourselves to do is making sure we hire the right people, those who don't need to be managed. They have to lead."



Dave Davis
Plant Manager, Constellium-UACJ ABS LLC

Dave Davis, a mechanical engineer, was hired by Logan Aluminum in 1984, where he worked for 12 years in a variety of capacities, including process and team leader positions. He left the company for a period of time and then returned in 2002 and worked for another 12 years. In 2014, he was hired the position of plant manager at Constellium-UACJ ABS.

Growth Drivers and Future Direction

The introduction of stricter fuel efficiency regulations requires all automobile manufacturers to achieve a fixed standard of improvement by 2020. The resonating impact in the automotive industry has led to various opportunities in the market. One such example is, in order to produce lighter vehicles, manufacturers are rapidly changing to aluminum automotive body sheet. Currently, the demand for automotive aluminum sheet materials is expected to spike sharply from around 700,000 tons in 2016 to large-scale use of 1.0-1.2 million tons in 2020.

Automobile manufacturers are customers with high potential. "We've talked to representatives of automobile manufacturers in the U.S. about specific models and what exactly we can deliver that they need," Davis explained. "There's a lot of business out there. They talk openly about what they would like for us to do, and that is invaluable in moving forward. We'd like to start discussing partnering with Japanese automobile manufacturers as well."

Investment Plans to Match Future Market Growth – Contemplating the Addition of Second and Third Lines

Bill Pfund, CFO of Constellium-UACJ ABS LLC, is very bullish on business potential, commenting, "The possibilities for business in the future are looking up. Considering factors such as the Corporate Average Fuel Efficiency (CAFE) standards and requirements down the road, it's anticipated that the North American automobile aluminum materials market will grow from its current level of approximately 700,000 tons per annum to 1-1.2 million tons in 2020. That is an incredibly attractive market."

To meet that phenomenal demand, the company currently has a committee investigating the addition of more lines. We are looking at capital cost, personnel cost and possible synergies. Looking down the road, we'll watch the trend of using aluminum materials for automobiles in the U.S. market and investigate planning for investment from a positive perspective."



Bill Pfund
CFO
Constellium-UACJ
ABS LLC

UACJ and Whitehall Combine Resources to Surpass 50% Market Share

Special Features and Strengths of the Company

UACJ Automotive Whitehall Industries, Inc. is a unique precision fabricator of extruded aluminum parts that primarily services the rapidly growing aluminum market for the automotive industry. Extensive capabilities with aluminum position it to provide services that its competitors cannot. More specifically, the company is able to execute extremely precise extrusion at the upper end of the capabilities scale. David Cooper, President of UACJ Automotive Whitehall Industries, explained, “We design and build our own machinery, and engage in custom sales operations. So a lot of what you see at our plant, we designed and built. Our customer sends us a model of the part they want and we figure out a way to efficiently make it. It’s difficult to find what we have under one roof. The company is utilizing a vertically integrated business model, commissioning everything

from development to trial production and mass production. To realize a high-value-added business, the company has a great team of very talented people that have been working together for a long time; some of them as long as 40 years,” Cooper said.

Benefits of Being Part of the UACJ Group

Cooper maintains that the acquisition of UACJ Automotive Whitehall Industries is a good mutual fit, saying, “The M&A this time is a very rare case where everyone in it benefits. By joining the UACJ Group, we now have a financial foundation that is exponentially stronger compared to what we had. There’s also a global reach that we didn’t have before. Another merit that UACJ brings to the table is support in terms of production technologies and R&D. That gives us access to people with expertise that we don’t have. This, too, will help us eliminate waste and streamline manufacturing operations.”

Growth Drivers and Future Direction

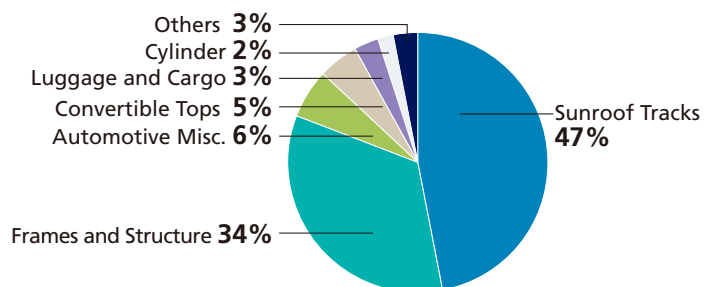
CAFE standards for fuel efficiency are driving the trend towards lighter-weight vehicles, and Cooper noted that parts previously made of steel are now being made of aluminum. The company also has operations in Mexico, a location that was selected because customers were in the vicinity. Business is exploding with requests from the automotive industry. “Orders are coming from new automotive manufacturers, as well as major companies,” Cooper continued. “So that will help us grow in Mexico. A major customer has also given us access to additional electric vehicles. UACJ has access to Japanese OEMs and other customers that we ourselves don’t currently have access to. It is a pretty good time to be where we are, and I don’t think there’s any risk of people fleeing from aluminum for any kind of safety reason.”



David Cooper
President, UACJ Automotive Whitehall Industries, Inc.

David Cooper worked at Vickers, Inc. for three years as a manufacturing manager before moving on to Parker Hannifin. He joined Whitehall Industries in 2004 as Vice President of Operations and became COO in 2009. Appointed President and COO in 2015, David remained in the same position when the company became UACJ Automotive Whitehall Industries, Inc. in 2016.

Product Overview



Fusing Technologies and Equipment Perfected in Japan to Lead Development in the Asian Market

Core aluminum factory in Asia with fully-integrated manufacturing

The UACJ Group has continued construction of its core factory in Asia, the Rayong Works of UACJ (Thailand) Co., Ltd. (hereinafter "UATH"). Following completion of cold-rolling and finishing lines, which commenced operation in January 2014, a fully-integrated manufacturing line that begins from the casting process was completed in August 2015 and has also begun full-scale operation.

Many aluminum manufacturers of beverage cans and heat exchangers now have operations not only in Thailand, but throughout Asia. The Rayong Works, built on a vast 500,000 square-meters of land, is ideally located about 100 kilometers from the international airport in the capital, Bangkok, and about 30 kilometers from the nearest seaport. Leveraging this geographical advantage and its advanced production capabilities, UATH is set for growth as it supports development of the Asian economy.

The Rayong Works is the only aluminum rolling mill in

Southeast Asia with a fully-integrated manufacturing system. Currently manufacturing is focused on producing can stock, but UATH is ready to expand the product lineup in response to market needs.

UATH President, Akinori Yamaguchi, commented sternly, "Reinforcement of the manufacturing industry in Thailand has gained momentum recently. There is nationwide promotion of R&D, and it was recently announced that the production of electric buses for specific routes would start. Future developments including collaboration with various industries, academia and the government may bring substantial business opportunities to UATH. The opening ceremony of the Rayong Works was widely reported by the local media, and we could feel the high expectations that the Thai society has for us. The growth of UATH, a pioneer of aluminum rolling manufacturing in this country, will have a direct impact on industrial development in Thailand. This will be a motivation for the people working at UATH."



Akinori Yamaguchi
President, UACJ (Thailand) Co., Ltd.

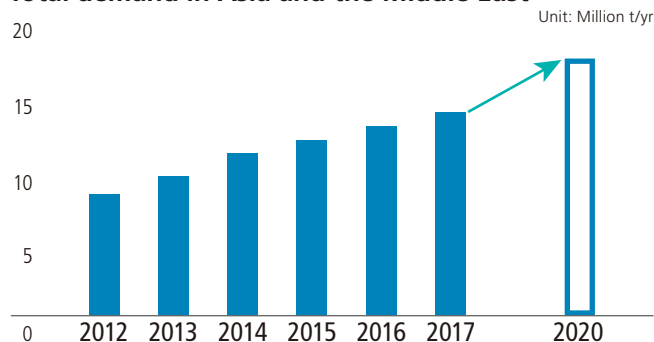
Joined Furukawa Electric Co., Ltd. in 1985. Became general manager of the Production Department in the Rolled Products Division of Fukui Works of Furukawa-Sky Aluminum Corporation in 2009. Promoted to general manager of Rolled Products Division of Fukui Works in 2011. Appointed to position of executive officer of company and promoted to current position, president of UACJ (Thailand) Co., Ltd.

Responding to strong demand, with the aim to reach annual production of 300,000 tons by fiscal 2020

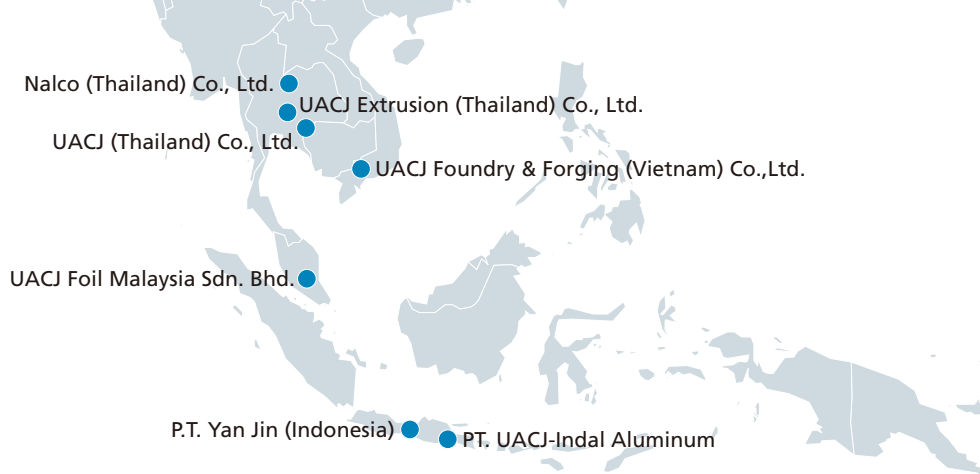
The immediate goal of the Rayong Works is to achieve the quality and production capacity equal to that of the plants in Japan. The plan is to reach a monthly production capacity of 10,000 tons in the second half of 2016 and annual production of 200,000 tons in fiscal 2017. A target for the future has been set too, annual production of 300,000 tons by fiscal 2020. This is equivalent to the same capacity as the Fukui Works and Nagoya Works, key plants in Japan.

As for product lineup, to build a firm business foundation, production will focus on can stock and automotive heat exchanger materials for the time being.

Total demand in Asia and the Middle East



According to UACJ estimates



President Yamaguchi explains, “We will concentrate our resources on training employees and expanding facilities, with the goal being to increase production capacity. In addition to Southeast Asia, where demand for aluminum is increasing, we plan to extend our sales network to the Middle East. We would like to establish a foundation capable of responding to enquiries from all over the world.”

Promoting localization of operations by strengthening technologies and human resources

The Rayong Works has made it a policy not to simply introduce “manufacturing the Japanese way,” but to pursue manufacturing that matches the local culture and employees’ disposition, and to refine these further to create a strength that makes the Rayong Works stand out. To that end, it is important that each and every one of the local staff is highly motivated in his/her work.

“With full-scale operations underway, the number of

employees at the Rayong Works has reached about 800,” says President Yamaguchi. “We will still need the assistance of Japanese engineers for product development and production engineering. But our policy is to carry out manufacturing operations using only local staff.”

To prepare employees for their jobs, efforts were concentrated on training the local staff by providing detailed explanations of work objectives and procedures of each task in the ‘Standard Procedures Handbook.’ Japanese engineers also provided instruction and coaching when starting up production. The first manufacturing line that went online in after the first phase of construction is now operated by local staff only.”

President Yamaguchi continued, “I want every employee to feel the “pride” of being a part of manufacturing at UATH. I want them to pursue the potential of aluminum and work with the spirit that they will help develop the country with their own hands.”

Acting as a builder of bridges by introducing sophisticated technologies and contributing to the growth of the homeland

Nopadol Kaewngarm
 Manager
 Electrical Engineering Section
 Engineering and
 Maintenance Dept.



“To achieve a monthly production capacity of 10,000 tons, which is the target for UATH in the second half of fiscal 2016, it is necessary for all employees to make a concerted effort to reduce equipment downtime as much as possible and continue highly efficient around-the-clock operation. For this, it is important to ensure the transfer of technologies from Japanese engineers to Thai engineers, not to mention the need to improve the skills of the operation staff themselves. As a manager of the electrical engineers, and also playing the role of bridge builder, I feel the gravity of my responsibility. At the same time, I am also very motivated being able to experience the excellence of Japanese production engineering and know-how first-hand.

My motto is ‘Nothing is impossible if you tackle things continuously and positively.’ With continued everyday efforts, I would like to contribute to the development of UATH and the Thai society.”



Turning Product Mix Reallocation and R&D Achievements into the Source of Competitiveness

Proceeding with product reallocation at domestic factories to further strengthen the competitive edge

Reallocating product mix at domestic factories has been an ongoing part of restructuring at UACJ since integrating the former companies in October 2013. Before integration began, the two companies had a number of similar products, so streamlining products and reallocating product mixes at each plant became the strategy for achieving a more efficient production network.

Hironori Tsuchiya, director and concurrently general manager of the Production Division at UACJ, explains, "One of the policies at UACJ is to strengthening global business, but it is also true that business is presently based on generating profits from domestic operations. Accordingly, increasing profitability by optimizing domestic production is an extremely important issue for achieving successful integration. Reallocating product mix at various plants requires meticulous adjustments while simultaneously being careful of customers' needs. However, work is progressing smoothly at all plants and



Hironori Tsuchiya

General Manager, Production Division Director, Managing Executive Officer and Board Member

Joined Furukawa Electric Co., Ltd. in 1980. Appointed to the position of director at the former Furukawa-Sky Aluminum Corporation in 2011. Appointed to the positions of director and managing executive officer at UACJ in 2013, where he continues to work to date. Has been assigned to the Production Division for many years and is currently the general manager.

about 60% of the task was completed in fiscal 2015. We are looking at finishing most of the product reallocation in fiscal 2016 as scheduled."

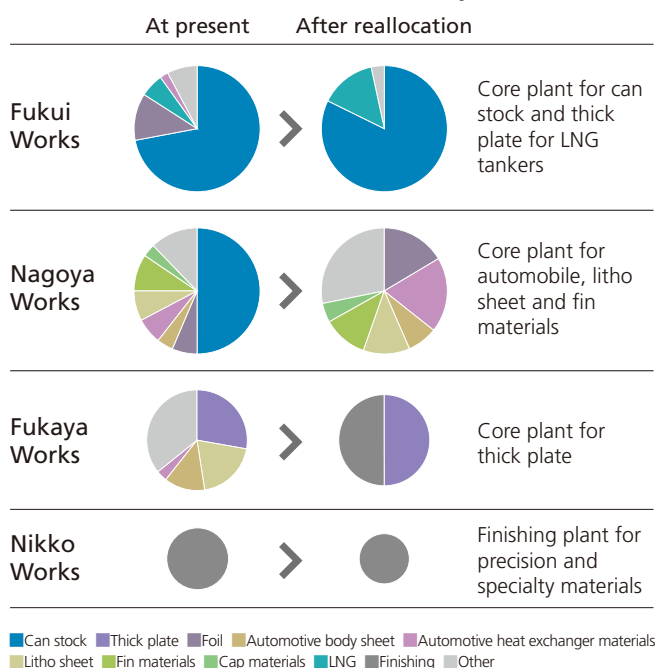
The Fukui Works is home to one of the largest-class rough hot rolling mills in Japan. As shown below, to improve production efficiency and make the most of its capacity, it is now positioned as the core plant for producing can stock and thick plate for LNG tankers, with other products being reallocated to different production facilities.

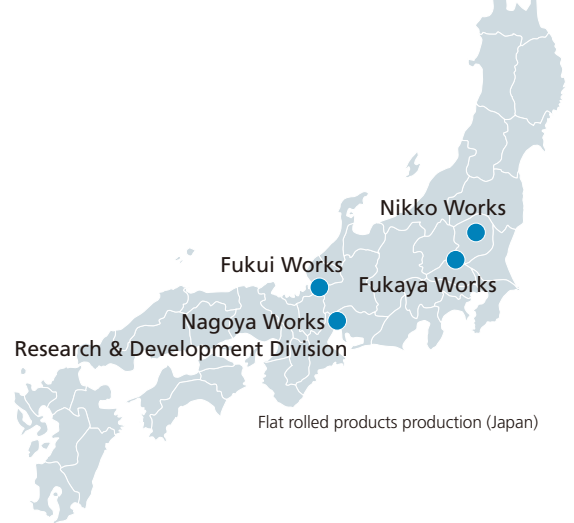
On the other hand, by moving can stock production to the Fukui Works, the Nagoya Works is now positioned as the core plant for automobile materials, litho sheet and fin materials, of which close cooperation with the Research and Development Center is indispensable.

Similarly, the Fukaya Works is now the core plant for thick plates and the Nikko Works is a finishing plant for precision and specialty materials.

Tsuchiya continues, "The purpose of the reallocation based on product mix was to increase production efficiency at each plant, including Fukui and Nagoya, thereby strengthening our competitive edge. Even after completing the reallocation phase, each plant will continue to implement various initiatives to further improve competitiveness in quality, cost and delivery, what we call 'QCD.'"

Product mix reallocation at domestic production sites





Flat rolled products production (Japan)

Reinforcing new product development and next-generation basic technologies through optimum positioning of R&D resources

The headquarters of the UACJ Group's Research and Development Division is the Research and Development Center located at the Nagoya Works, the center of all R&D activities. There are also branches at the Fukui Works and Fukaya Works. This structure enables research resources to be centralized in Nagoya while providing certain R&D functions at other main production bases. It also creates better access to customers and achieves smooth collaboration at production bases. Utilizing this R&D structure, we are developing new products and technologies while simultaneously strengthening and deepening of basic technologies.

As a result of advances technological innovation, today's industrial products use not only metal materials like steel and aluminum, but also resins and various composite materials such as ceramics and carbon fiber-reinforced plastic (CFRP). In order for the UACJ Group to continue sustainable growth, it must keep winning in the competition against many diversified materials, let alone the competition within the aluminum industry.

Kazuhiro Shibue, director, explains, "Recently, big changes are taking place in the manufacturing world as represented by applying the Internet of things (IoT) and artificial intelligence (AI) to the manufacturing industry. In the near future, such advanced technologies will be used at production sites in the aluminum industry. To properly respond to rapidly evolving technological innovations, we

must strengthen our business competitiveness through pragmatic and steady materials development. Furthermore, it is essential to concentrate on cultivating engineers who can act quickly and proactively to the needs of our customers and production sites.



Kazuhiro Shibue

General Manager,
Research and Development Division Director,
Managing Executive Officer, Member of the Board

Joined Sumitomo Light Metal Industries, Ltd. in April 1980. Consistently involved in the research and development of aluminum materials. After working as the Section 2 Manager and then Section 5 Manager in the Research and Development Center, appointed to the position of executive officer and deputy general manager of the Research and Development Center in April 2013. Appointed managing executive officer and general manager of the UACJ Research and Development Division in October 2013, where he continues to work to date.

C O L U M N

Proactively promoting R&D leveraging a network that includes joint research with customers and participation in national projects

To maximize the excellent material characteristics of aluminum, it is essential to closely collaborate with product manufacturers well acquainted with the needs of the end-user. The Research & Development Division therefore focuses on joint research with customers, and at the same time, carries out trial manufacturing and verification utilizing manufacturing equipment identical to that used by the customer to enable highly accurate evaluation and analysis. Furthermore, efforts are concentrated on developing original technologies, as exemplified by participation in national projects such as the "Technical Development Project of Innovative New Structural Materials, etc.," commissioned by the Ministry of Economy, Trade and Industry. This project aims to develop new alloys for next-generation aircraft, doing so by taking on the challenge to resolve advanced technological issues through joint research with universities and research institutions.

