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SECO/WARWICK'S NEWSLETTER

Discover how SECO/WARWICK's solutions
can benefit plant production?

Direction: ASIA

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Content Premium :
/ E-book: Production Economics
/ Technical Paper: Advancements in single-crystal
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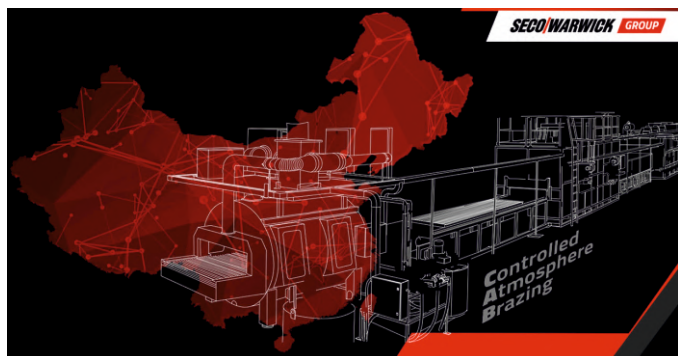
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02/2025

DIRECTION: ASIA

A Chinese manufacturers will improve plant operations by SECO/WARWICK's technologies. Discover how SECO/WARWICK's solutions can benefit plant production?



A Chinese car parts manufacturer ordered a fully electric furnace for [brazing aluminum in a protective atmosphere](#) from SECO/WARWICK. This partner specializes in the production of radiators and air conditioning systems for automobiles.

The furnace is designed for the production of tubular and plate-fin heat exchangers. A key element of this production is uniform temperature distribution across the 1300 mm wide belt.

This degree of uniformity is essential to meet the quality requirements of the finished products.

"Uniform temperature distribution across the entire belt, regardless of how wide it is, is an important consideration influencing the final effect of the production. That is why at SECO/WARWICK we focused on this feature when designing CAB furnaces, and why our system is one of the best-selling solutions of this type on the market. Our furnaces provide an optimal brazing temperature profile and a very clean atmosphere necessary to maintain high process quality. In China, we sell CAB lines for manufacturers of electric vehicle battery coolers, as well as for manufacturers of other heat exchangers. The furnaces on order by this Partner are powered by electricity, making them [ecological and free of CO₂ emissions](#)."

- says Piotr Skarbiński, Vice President, of the Aluminum Process and CAB Business Segment at SECO/WARWICK.

A New Partner in China

This is the first order for SECO/WARWICK. The CAB line on order is an excellent solution for the continuous brazing of products with similar dimensions and features. The temperature is evenly distributed over the entire width of the belt thanks to several independent heating zones. Its innovative design guarantees long-term and reliable operation under industrial conditions.

"We are one of the leaders in the CAB sector, and the only manufacturer of metal heat treatment equipment which has a dedicated brand of equipment for the electric vehicle industry – [EV/CAB](#). We are experts in this technology, but at the same time, we listen very carefully to our Partner's needs, jointly searching for new, more efficient and ecological solutions. Another renowned recipient of our solutions on the Chinese market proves that we are doing it well,"

– summed up Liu Yedong, Managing Director of SECO/WARWICK China.

An industry partner specializing in the production of heat exchangers purchased a [semi-continuous furnace](#) for controlled atmosphere aluminum brazing (CAB) from SECO/WARWICK to increase production capacity. The system is designed to increase the efficiency and quality of the heat exchangers with ribbed plate construction.

The CAB system for semi-continuous operation is based on the cycle multi-stage division. The line includes: a drying furnace, an inlet purging chamber, a patented heating and brazing chamber, an intermediate cooling chamber with an air jacket and a direct final cooling chamber. The product moves between stages in a horizontal position based on a continuously adjustable cycle time, depending on the load's type and configuration. The semi-continuous operation mode ensures that even large-sized heat exchangers will be heated evenly during the correct process time.

Aluminum brazing in protective atmosphere

The furnace purchased is superior to the traditional vacuum brazing process, thanks to the advanced semi-continuous system. The brazing process then becomes more efficient, which enables users to increase production while maintaining stable quality.

"The key advantages of this solution includes higher hourly efficiency – modern brazing technology ensures shorter production cycle time; stable and repeatable quality – the advanced brazing atmosphere control system minimizes the risk of defects, guarantees faster maintenance as well as no production downtime. SECO/WARWICK is a brand known everywhere where aluminum is processed. We owe our undoubted success to our experience and our ability to adapt products to specific, individual customer requirements. The semi-continuous CAB system is popular because it allows users to realize a reduction in costs while producing atmosphere brazing with exceptional quality control. We supply solutions to many companies in Asia, and a large part of the contracts are the result of recommendations we receive from our customers,"

- says Piotr Skarbiński, Vice President, Aluminum Process and CAB Business Segment in the SECO/WARWICK Group.

CAB solutions mean increased efficiency

[Aluminum brazing in Protective Atmosphere](#) (CAB) works well in the industrial production of heat exchangers. This solution is often chosen by the HVAC industry and manufacturers of car parts. The semi-continuous system allows for variable heating and cooling rates depending on the cycle and needs. The semi-continuous operation mode ensures uniform heating of elements even with above-average dimensions.

"SECO/WARWICK in China has already cooperated with this Partner, which additionally confirms the effectiveness of the solutions we offer. The furnace purchased is a proven solution which will ensure long-term and failure-free operation in difficult industrial conditions,"

- comments Liu Yedong, Managing Director of SECO/WARWICK China.

New Asian Partner chooses the EV/CAB line from SECO/WARWICK

SECO/WARWICK, an international leader in CAB technology, has signed a contract for the delivery of a **continuous line for protective atmosphere brazing** intended for the production of electric vehicle battery coolers. This is the first order from this Chinese customer.

Battery cooler production without secrets

The EV/CAB line will help the Chinese Partner maintain a key position on the automotive heat exchanger component market. Heat exchangers are manufactured in highly specialized, continuous lines for protective atmosphere brazing, and SECO/WARWICK is one of the most important manufacturers in the industry.



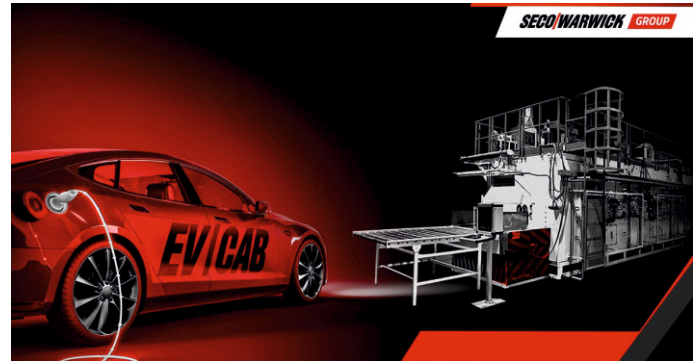
PIOTR SKARBIŃSKI
Vice-President
of the Aluminum Process
and CAB Business Segment
in SECO/WARWICK

"CAB continuous furnaces use a variable speed drive with a stainless-steel mesh conveyor belt. The controlled atmosphere brazing process heats the product to the brazing temperature, while maintaining a uniform product temperature in a protective nitrogen atmosphere devoid of oxygen. We have already sold several dozen such solutions on the Chinese market alone. Societal awareness related to the need to care for the natural environment is growing globally, and consistent legal changes in this direction are causing the electromobility sector to grow. SECO/WARWICK has great hopes for a product line dedicated to the Battery Cooler segment."

Hybrid power source

The advantage of the line on order is the hybrid gas-electric heating method, which ensures high energy savings thanks to heat recovery. SECO/WARWICK CAB lines guarantee efficiency, production repeatability and operational reliability.

The CAB line ordered by the Partner consists of a 1.6 m wide furnace TTBB chamber, radiation preheating chamber, radiation brazing furnace, cooling chamber with air jacket, final cooling chamber and control system.



The furnace is fully electric; however, at the customer's request, space was provided for the installation of gas-powered heating, which provides the flexibility for future savings.

The radiation CAB furnaces are an excellent solution for continuous brazing of products with similar dimensions and features. The temperature is distributed evenly over the entire length of the belt thanks to several independent heating zones. This type of equipment is characterized by lower investment costs and high efficiency that is achieved thanks to low nitrogen atmosphere consumption and lower service requirements compared to other CAB solutions. The CAB lines will be used for brazing large-sized car battery coolers.

"SECO/WARWICK has an excellent reputation on the Asian market. We supply CAB lines to many leading heat exchanger manufacturers. Our partners were convinced by the custom feature that will allow them to utilize the solution's hybrid operation – gas-electric – that in turn allows for production flexibility and cost control. The partners also value the SECO/WARWICK equipment's reliability and professional after-sales service,"

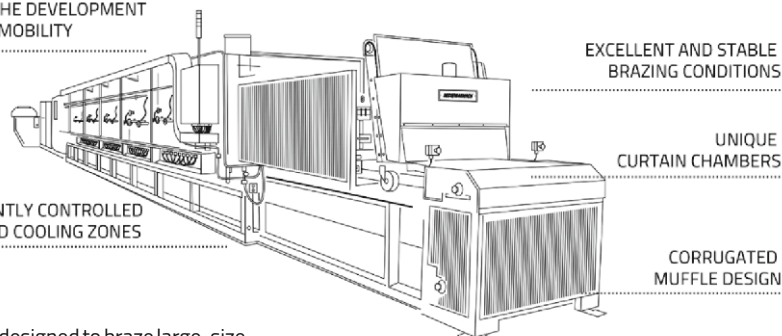
– said Liu Yedong, Managing Director of SECO/WARWICK China.

SECO/WARWICK – the automotive industry partner

This new Partner has production plants in Singapore, Malaysia, Thailand, Germany, the USA and China. The company is mainly involved in research, development and production of precision metal parts for the **automotive**, computer and telecommunications industries. This is another recognized SECO/WARWICK partner in Asia.

SUPPORTS THE DEVELOPMENT
OF ELECTROMOBILITY

INDEPENDENTLY CONTROLLED
HEATING AND COOLING ZONES



EXCELLENT AND STABLE
BRAZING CONDITIONS

UNIQUE
CURTAIN CHAMBERS

CORRUGATED
MUFFLE DESIGN

EV/CAB is CAB answer for e-mobility, a system designed to braze large-size car battery coolers for the EV electric car industry.

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