

## PRESS RELEASE

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# Ningbo Powerway banks on an AMOVA logistics concept for its copper production operations



Logistics system for aluminium coils.

Ningbo Powerway Alloy Material Co., Ltd., subsidiary of Ningbo Powerway Group, has contracted AMOVA GmbH, a company of SMS group, to supply a logistics system for the complete works complex at its Yinzhou site in China. Ningbo Powerway Group is one of the most important producers of non-ferrous metals bars, wire rod and strips in the Chinese economic region. The finished products made from these primary materials are used for a wide range of applications in the

electrical and electronic industry.

This recent order continues a successful cooperation, which began about five years ago when AMOVA supplied a packaging line for narrow-strip coils to Ningbo Powerway.

AMOVA designs a complete, all-encompassing logistics concept for the facilities in Yinzhou that will assure maximum efficiency of the material flow. AMOVA is going to link all process stages from the raw material storage area down to the dispatch area, including the higher-level materials control and tracking systems. The containers, which are manually filled in the raw material storage area with scrap blends for the different copper alloys, will be transported to the melt shop by means of rail-bound vehicles. There the containers will be stacked for intermediate storage until they are taken to the melting furnace by crane. Operation of the crane will be fully automatic, including the emptying of the containers.

Downstream of the melting and milling shop, the strips are intermediately stored in the flat product storage area which will be served by an automatic gantry-type crane. Freely navigating vehicles will transport the strips from there to and between the downstream processing stages – rolling, annealing, cleaning, cutting and slitting – and finally to the buffer store from where they are taken to the packaging area. The packaged finished products will be intermediately stored in an automated high-bay store until they are dispatched.

AMOVA is going to supply two transfer cars, each designed to autonomously pick up or put down three containers at a time and transport the three containers as a set from the filling area to the intermediate storage area of the meltshop. The supply scope additionally includes a fleet of six freely navigating vehicles for the transport of the coils and the scrap containers, two additional buffer storage areas equipped with automatic cranes, a coil stacking device for the annealing plant, and the automated high-bay store, which – depending on the type of stored items – can accommodate up to 2,064 pallets. Also the management software for the various storage areas, including an integrated material flow control system, is part of the supply.

Last but not least, AMOVA will be responsible for the implementation of the Level 1 and Level 2 automation. The WMS (Warehouse Management System) will be set up as a redundant server system with virtualization. Until the MES (Manufacturing Execution System) will have been commissioned, the input terminals of the WMS will be used for the exchange of information with the various processing and cutting lines, and with other important constituents of the production process (e.g. the storage and buffer areas, and the Vehicle Management System of the freely navigating cars). In addition to acquiring process and material data, the WMS performs functions such as material tracking and plant performance analyses, which may be used as a basis for the independent calculation of Overall Equipment Effectiveness (OEE). The use of customized and animated graphics will make the system extremely user-friendly, as a matter of course, also via mobile devices.

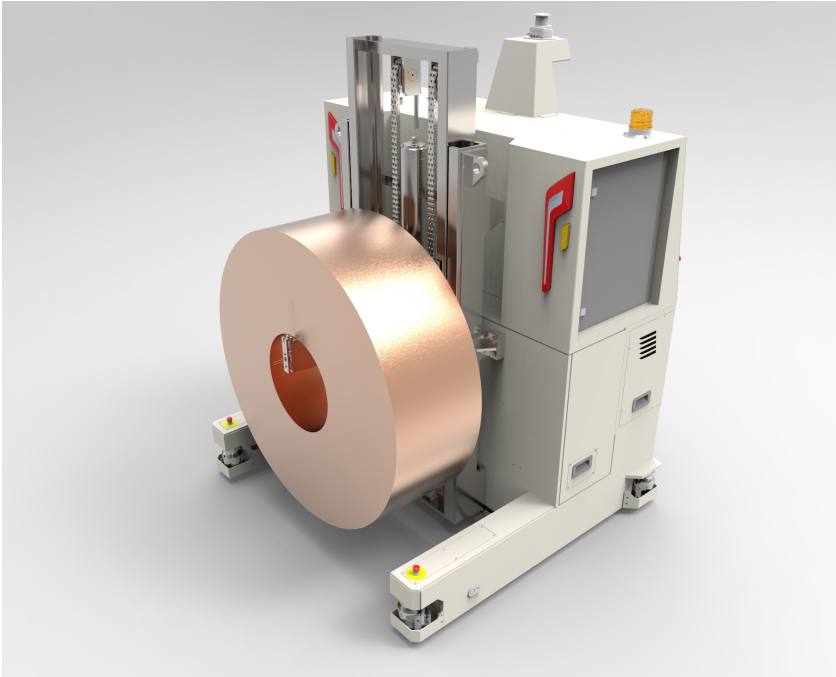
Commissioning of the entire works logistics is scheduled to be completed by early 2020.

For more than 30 years, storage and transport systems from AMOVA have been successfully in use in China in aluminum plants, in particular. With this recent order from Ningbo Powerway, AMOVA has now also entered the segment of intralogistics in Chinese copper production and processing facilities, in addition to packaging systems for copper products, which AMOVA has in the past supplied to various customers in China.

AMOVA GmbH, based in Netphen, Germany, previously known as SMS Logistiksysteme or SIEMAG Transplan, specializes in the planning and implementation of logistics concepts and the supply of turnkey intralogistics projects to customers the world over. AMOVA has its expertise and key capabilities in the design of automatic transport, smart storage and customized packaging solutions.

More than 60 years of expertise make AMOVA a highly valuable partner for customers not alone in the steel and NF-metals industry. The company has transferred its knowhow to other fields of application, such as air cargo handling and port logistics, where its solutions are

successfully in use.



Freely navigating vehicle for the transport of coils of up to 12 tons weight.

*SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. It has some 14,000 employees who generate worldwide sales of more than EUR 2.8 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.*