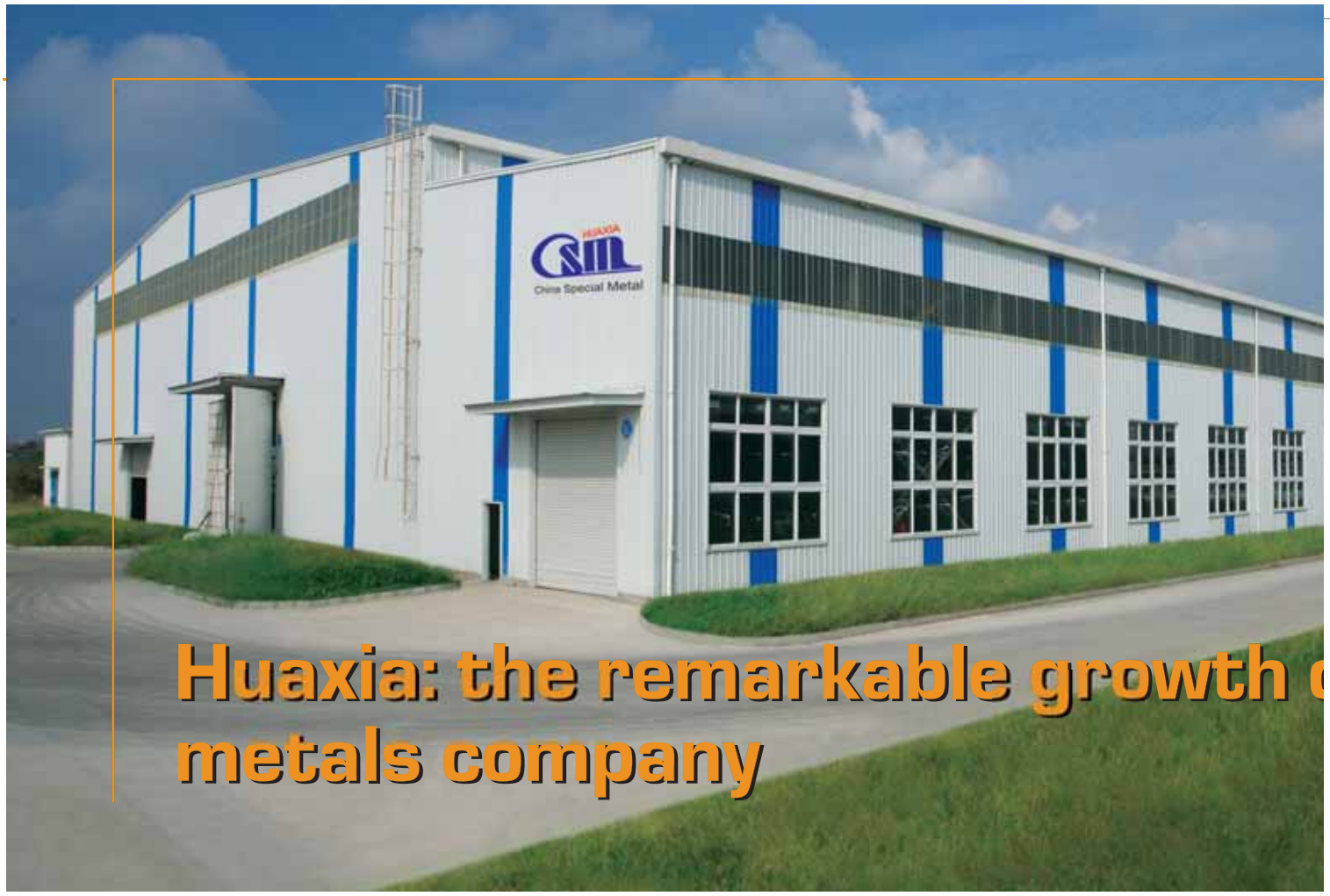
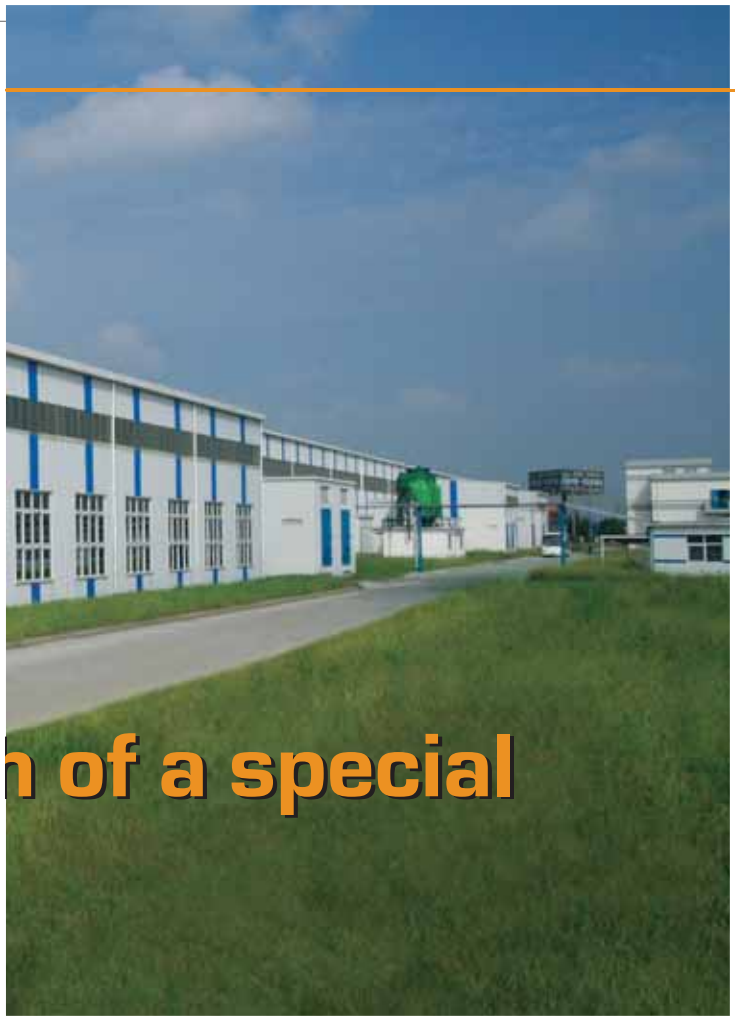



# Huaxia: the remarkable growth o metals company

**Plate heat exchanger companies, engineering companies and end users from all over the world are beating a path to Huaxia's door. The privately owned company has recently experienced spectacular growth to become one of China's leading manufacturers and exporters of titanium, tungsten, molybdenum, nickel, copper-nickel, stainless steel tube, Monel and other non-ferrous metals. Stainless Steel World visited Huaxia's Shanghai office to speak with Huaxia's President, Mr Lin and his colleagues to learn more about the domestic and export market and Huaxia's plans for the future.**

*By Sjef Roymans and Xin Zheng*

The year 1985 was one of shortages in China, but also one of opportunities. In that year Huaxia was founded, starting out with just a tiny plant in Fujian province, a new development area on the coast. To begin with, the company focused exclusively on its domestic market, with three main products: titanium, stainless steel, non-ferrous metals in a wide variety of product forms such as plate, tube, wire and bar. The company's shareholders rightly perceived that the very small Chinese markets for titanium and stainless steels had a huge potential for growth, so they pooled their business experience and set to work to fill the gap. The result has been nothing short of spectacular: in 20 years Huaxia grew from being a small factory to a large special metals company, while its workforce increased from 10 to 300. The annual turnover increased from USD 1 million to USD to 30 million. The customer number increased from 15 to 300. At the same time the company served an ever-increasing range of applications: oil & gas, chemical, and aerospace, nuclear power station, sport, medical etc.




The capacious and lightful new mill.

## Equipped to serve its customers

In order to meet the demands of the changing market place, Huaxia moved in 2003 to Shanghai, where it purchased the Bao Steel No. 3 factory. This investment was made for a number of reasons, in particular to benefit from the availability of a vacuum-annealing furnace, which is essential to produce top-quality titanium and cold rolling line which be used at the rolling mill of Bao Steel No. 3, but Huaxia quickly upgraded both the hydraulic and driving systems, allowing an increase in both the quality and quantity of the output. At present, Huaxia has the capacity to produce 3,000 tonnes of titanium (of which 500 is for tube and pipe), 2,000 of nickel alloys and 60,000 of stainless steels and other alloys (of which 5000 are tube and pipe). "We have a good reputation in terms of quality, Mr Lin tells us. "We are the only company in China that can produce such a broad portfolio of titanium and stainless steel products."

Cold rolling

Hot rollingtubes for chemical and petroleum refinery plants.

With the ambition to better serve its customers, Huaxia has moved out of the old factory it purchased from Bao Steel into a brand-new facility in the Pudong South district in Shanghai. The new plant is in an excellent location: just 30 minutes from the city centre and close to Pudong International Airport and the Yangshan port, it offers clear logistical advantages. Huaxia's new plant will consist of a state-of-the-art facility covering an area of 72,600 square metres, of which 32,000 square metres of workshops. The first phase of this project will encompass production facilities for cold rolled sheets and plates for titanium, stainless steels, nickel alloys and other non-ferrous metals. For the sheet and plate, this new plant will include one 1.2-metre hot rolling mill and two 1.2-metre cold rolling mills. "We will also have 3 furnaces, one for heating and the other for solution annealing and 3rd for vacuum annealing, says Mr Lin. "The pickling system is quite advanced for Chinese standards because it has a recycling system to control environmental pollution. The vacuum-annealing furnace is a key piece of equipment to ensure high quality. With this annealing furnace we are able to meet the very strict requirements for the nuclear power, ship building, and aerospace industries. Today, Huaxia owns two furnaces for sheet. This allows us to produce more titanium in high-quality grades, for example, in plate heat exchangers. That certainly offers us a competitive edge."

## Customers and quality first

Not only does Huaxia have the capacity to produce different type of materials, it has also a committed, well-trained and professional staff who focus on quality rather than quantity. "We are not to be compared with our very large competitors," Mr Lin explains, "but we are confident we can meet a wide range of customer re-

Hot rolling machine.

quests for high-quality products in smaller quantities. In order to meet these varied requirements, we have two clear policies: first, the customer comes first, and quality comes first; secondly, each order deserves our full attention, no matter what size it may be. Whatever the requirement is in terms of technology, supply terms or quantity, each order is equally important to us. For example, sometimes customers set quality requirements that are even higher than the industry's standard requirement. This can be a reason for certain suppliers to reject the order, but we at Huaxia are happy to take up the challenge, as we have complete confidence in our modern equipment and well-trained work-force."

## Higher alloys

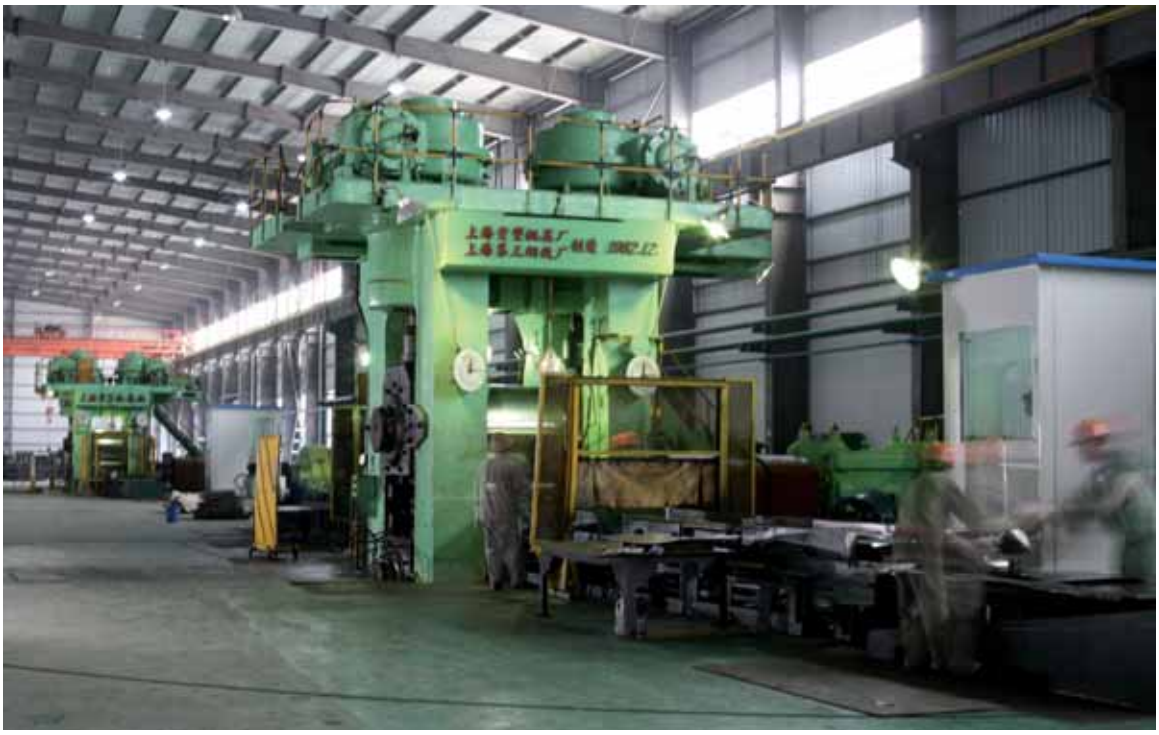
When further discussing trends in alloy development, Mr Lin confirms that there is a tendency towards increased use of higher-alloyed material grades. "Because of the fast economic developments in China, the demand is not only increasing for the low grades but definitely also for the duplex and higher grades. In particular for nickel-based alloys we have built up a strong position on the Chinese market. We are engaged on a number of research projects to further develop these grades for particular applications, oil & gas, chemical, aerospace, nuclear power station. etc. We also plan to further invest in R&D by the end of this year, when we will have access to the resources of the former Baosteel group. Also, we have aligned ourselves with well-known scientists from Chinese universities and institutes. The demand for duplex and super duplex grades is becoming so important that it seems a good idea to explore a further exchange of information."

In addition, Huaxia is planning to invest in an electro-beam furnace so that it can produce titanium for producing coil in the near future. "When our electro-beam furnace is commissioned next year, it will be the first in the whole of China after Baoti's," says Mr Lin. "We will continue to focus on the stainless steel as well as the titanium market," he continues. "We will therefore be investing in melting capacity for the production of ingots and slabs. We are also planning to expand our hot rolling capacity for the production of hot and cold rolled coils."

## Domestic and export markets

We asked Mr Lin if there was a danger of creating over-capacity. "Most of our investments are in order to increase our stainless steel production. I do not foresee any over-capacity in this area, as in China there is still an enormous demand for stainless steels, in particular higher alloys such as duplex, super duplex stainless

This is the essential equipment for PHE - Vacuum Annealing Furnace.



Cold rolling line with the biggest capacity of titanium sheet in China.

steels and nickel alloys mainly for tube and pipe applications. Recently China has been importing stainless steels at a rate of 4.5 million tonnes per year. Chinese manufacturers now have a capacity of 2.6 million tonnes per year, so there is a gap of 1.9 million tonnes. There is therefore room for further development of the domestic stainless steel business." Mr Lin expects that Huaxia will be able to supply at least 5 per cent of the domestic market for special stainless steels such as the duplex, super duplex and nickel alloys, amounting to 200,000 tonnes in cold and hot rolled sheet, plate and coil.

Needless to say, Mr Lin's ambition is also to further explore and penetrate the export markets for these products. Export is not new to Huaxia: already in the 1990s it started exporting to Indonesia, supplying major oil and gas exploration projects for companies such as Petronas. Huaxia also exports to projects in South America, Brazil and Europe.

Today 80 per cent of Huaxia's production is for export, the main product being titanium. Fifty per cent of exports go to Europe, 30 per cent to the USA, 10 per cent to South Africa and a further 10 per cent to the rest of the world. Huaxia seems to be well positioned to further boost its exports of stainless steels and titanium tube and pipe. Given the size and importance of the European market, this is especially an area where Huaxia would like to expand its presence. Sales and Marketing Manager Mrs Cao explains: "Every country is important to us, and we see the European market as a whole. Actually we are already successfully exporting to Europe titanium and stainless steels for use in such applications as plate heat exchangers, electric plating and in the chemical process industry. Also the European oil & gas, petrochemical and refinery industries offer good market opportunities for us." At the moment Huaxia has no plans to set up an office in Europe, as its network of end users and stockists is already large and growing. "Furthermore, most of our European clients have plants or offices in China."

## Diversification and improvement

Elaborating further on Huaxia's plans for the future, Ms Cao is confident that the company has the capacity to diversify in terms of both products range and applications, depending on market developments. Of great importance will be the nuclear power industry, the Chinese government is planning to develop 10 new-build nuclear power stations. Another field of application with tremendous potential will be the ever-expanding aerospace industry. In addition Mrs Cao mentions the sport products market, which will also offer a suitable niche for Huaxia's special metals. "It is our mission and on-going goal to continue to push ahead with making better and better products," Ms Cao concludes.

### About Lin Jian

Huaxia's founder and president, Mr Lin Jian, has a degree in metallurgy. After his graduation, he carried out scientific research into titanium alloys. He also managed the import/export activities of the aerospace department of a trading company. Combining the advantages of academic knowledge and trading experience with titanium, Mr Lin was one of the first to bring Chinese titanium products to the international market.