



# JIULI Hi-Tech Metals: Capability for mega-projects

**JIULI Hi-Tech Metals has developed at a rapid pace since Stainless Steel World's last visit in 2013. The company is now listed on the stock exchange, with its smooth operation and favorable growth providing a solid basis for further development. Significant investments in new technology, facilities and production capacity, combined with a long history of supplying to mega-projects, are powering the company ahead. JIULI is now reaping the benefits of increased market share in the international arena. Managing Director of JIULI Hi-tech Metals Mr. Li Zhengzhou (Denny Lee), Vice General Manager of Sales Mr. Zhu Xiaofeng, International Business Director Mr. Wang Fangwei (Robin) and Mr. Zhang Jiewei, Sales Manager of Nuclear Products, explained the company's new developments, markets, and plans for further development of its stainless and high alloy pipes and tubular products.**

*By Zhu Yixing, Stainless Steel World, Shanghai*



machine in 2014 for seamless pipe production. The clad pipe and lined pipe plant opened in 2014 and will help it expand in the upstream oil & gas industry. The company's new heat exchanger tube plant with a high degree of automation which opened in September 2015 produces ultra-long length tubes to meet increasing customer demands. The company has also invested in a tooling company which will internally supply high quality tools and dies to its production line. All of these investments indicate that JIULI has been continuously improving its capability for high quality piping and tubular products, etc. International Business Director Mr. Robin Wang explains: "These new investments reflect our leading position in the stainless steel industry, with a high degree of automation and stable product quality. The decision to make these investments was also driven by the pursuance of environmental protection and higher energy efficiency. Adhering to the philosophy 'To supply the global industrial with safe & reliable stainless steel pipes', JIULI's people are endeavoring to build the company into a key supplier of stainless steel pipes worldwide."

JIULI plans to continue investing in its production lines, while also focusing on improving its quality control system. Meanwhile, management systems such as ISO, ASME Nuclear and API are all running smoothly however the company's data management system has undergone an upgrade. Mr. Denny Lee says: "We recognize the value of data accumulation and have invested in a SAP (Systems, Applications, and Products) system to consolidate JIULI's management systems and improve the quality control (QC). Standardization and control are very important factors that will help us to achieve our target of improving efficiency by 30% within 2 years. Systems such as SAP and improved QC will help boost exports, which currently account for about 30% of volume; we plan to enlarge our international sales margin to 40-50%." He continues: "Our aims are to create new customers and satisfy their needs, while improving our project performance and quality systems. When these objects are achieved, it will give us the opportunity to become a world leading manufacturer."

Based on the continuous increase of manufacturing capacity and

improvements in quality control, JIULI is gaining recognition from more and more clients. Robin Wang explains: "In the global market, we obtained our first qualification from a leading oil & gas company - Saudi Aramco - in 2008. Today, JIULI has qualifications from most of the major oil & gas companies, such as Shell, ExxonMobil, BP, Total, etc. In recent years, our team have also achieved sound performance in the global nuclear market. Key players such as ALSTOM and AREVA etc, have approved JIULI as a qualified nuclear product supplier which has opened the way for us to participate in international projects."

### Nuclear pipe specialists

JIULI has been committed to the R&D and production of nuclear products since 1999, and today its product line covers all major tubing and system lines in both the reactor island and the conventional island, explains Zhang Jiewei. "Pipes and fittings produced by JIULI have been used in almost all nuclear units operating or under construction today in China. These include heavy water reactors, high temperature gas-cooled reactors, thorium molten-salt reactors and thermonuclear fusion reactors. Specialist items include steam generator tubing, titanium welded tubes for condensers, ferrite TP439 welded tubes for high pressure heaters, S32750 and N08367 transport pipes for SEC systems, etc." He continues: "SG tubes used on nuclear steam generators have the highest quality requirement among nuclear tubular products. JIULI is one of very few companies qualified to produce nuclear steam generator U tubes and residual heat removal heat exchanger C tubing

Innovation and research have always been cornerstones of JIULI's company philosophy, and as the company looks to future growth it continues to find new ways to meet and anticipate customer needs. The JIULI R&D Center is focused on independent innovation in manufacturing technology for stainless steel tubular products.

The JCO forming and welding plant for large diameters with wall thicknesses up to 80mm for welded pipe has been in operation since 2013. It has dramatically increased JIULI's capability of large diameter welded pipe and improved its competitiveness in the global market. JIULI also installed a 28" cold pilgering



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*Over the past three years, JIULI has supplied around 60% of the nuclear heat exchanger market in China.*

worldwide. We've also localized the production of reactor vessel internals and Control Element Drive Mechanisms (CEDM)."

'Going global' with nuclear technology has been a long term objective for China and JIULI's response was to put in place innovative strategies for marketing and product upgrading. Over the past three years, JIULI has supplied around 60% of the nuclear heat exchanger market in China. Experience in nuclear projects and robust material stocks have bolstered the company's dominant market position and today JIULI is active in global nuclear projects. A good example is its involvement in the construction of the Angra 3 nuclear project in Brazil, for which the company worked closely with AREVA and OAS. The products supplied by JIULI included nuclear I, II, III stainless steel and nickel alloy pipe.

Mr. Zhang explains: "The Angra 3 project is a very challenging job with a very high requirement in terms of product quality and documentation preparation, but with very short delivery time."

JIULI has supplied its products to around 50 nuclear units all over the world. On the basis of such experience, the company worked out a detailed project execution plan for Angra 3. Mr. Robin Wang comments: "With the cooperation of project team members, we have achieved the objective of delivering the first batch within two months. During the project execution we received strong support from the AREVA team. We believe that mutual cooperation is a guarantee of success. This was the first time that AREVA has used Chinese nuclear stainless steel pipes. Through its good performance,

JIULI has proved that AREVA's choice is not only correct but also provident."

### Successful mega-project supplier

Due to the sluggish economic environment in China and worldwide, the global stainless steel industry is facing significant challenges. However, according to its public announcement, JIULI's sales volume of stainless steel pipes in 2015 was hardly affected. Mr. Robin Wang explains: "We have faced a lot of pressure from the market this year and we have worked hard. The current achievement is attributable to our improvement in terms of comprehensive competition: firstly, JIULI is one of the few manufacturers to enjoy full manufacturing capabilities in the complete production chain of stainless steel pipes. It has a broad product portfolio, such as stainless steel

### Successful AREVA partnership

Mr. FERDINAND, Director of Supply Chain, AREVA, explained to Stainless Steel World JIULI's role as supplier for the Brazil Angra 3 project. "AREVA qualified JIULI as a supplier for nuclear safety class piping, and awarded the first contract to the company in 2014 for supplying stainless and nickel alloy pipes in a full range of diameters and grades for the Angra 3 project. We have enjoyed very good cooperation during this project and received strong support from JIULI, especially in the delivery. We thank JIULI for their good performance."

seamless pipes, welded pipes, line pipes, fittings, flanges, clad/lined pipe, coating, and represents diversified types of stainless steels, duplex steel, nickel alloys, titanium alloys, etc. In addition to this full product range, JIULI also has significant production capacity, and the capability and skill to execute world-class large projects. Our accumulated rich experience in project execution in the past means we have the ability to satisfy customer's requirements as stipulated in the contract. Maintaining the full trust of our clients is important to us."

Mr. Robin Wang continues:

"The YAMAL LNG project is a good example. Constructed as a one-off, it is the largest natural gas project of its kind in the world. It is located in the north of Russia in an environment that is very hostile, so all products to



*The company's clad/ lined pipe plant opened in 2014.*



*JIULI is the key supplier for the massive Yamal LNG project in Russia. Here pipes are being inspected by the client before being prepared for shipping.*

be used in this project have to be of very high quality. The YAMAL LNG project requires over 10,000 tons of stainless steel welded pipes. Out of all the suppliers in the world, YAMGAZ, a joint venture of TECHNIP, JGC and CHIYODA, has selected JIULI as the key supplier, based on our comprehensive competitive edge including fast delivery, storage capacity, business competence and experience in handling mega-projects. The stainless steel pipe order for the YAMAL project is one of the largest in the world. This provides a powerful endorsement for JIULI's production activity in 2015. In addition, we have just completed

the 1,000 ton duplex steel and 6Mo (N08367) evaporator tube contract for a Shell project in North America. On the basis of guaranteed quality, the delivery was made about 2 months earlier than the contracted date and we were highly praised by the customer." In 2011, JIULI was awarded the 281 km DSS line pipe project by PDO. This was JIULI's first experience of manufacturing line pipe for such a large scale project. "Through its performance, JIULI proved itself a highly efficient team able to overcome diverse difficulties. In subsequent years we have accomplished quite a

number of PDO DSS line pipe orders," Mr. Wang adds. JIULI developed the lined pipe products in cooperation with TPCO. "We are pleased that our mechanically lined pipe products are already highly recognized by customers despite TPCO JIULI being a rather new brand. The CNPC TARIM oilfield awarded JIULI a 30Km mechanically lined pipe order. In just three months, we completed documentation preparation, raw material procurement, manufacturing, and the inspection process and successfully delivered the mechanically lined pipes." Zhu Xiaofeng added: "Our mechanically lined pipe production facility is completely constructed according to world class standards. We welcome visits from international clients interested in entering into a win-win cooperation experience." It has been ten years since the first cooperation between Stainless Steel World and JIULI. During the past decade, China has made significant improvement in its industrial level. The development of JIULI reflects the rapid and steady, respectable growth of manufacturing skills in China, growing from a local stainless steel pipe supplier 10 years ago to its current situation as a major global supplier. During our visit to the JIULI plant, we witnessed the achievements made by JIULI in recent years. The company continues to improve its manufacturing capability, quality, technical service, and comprehensive competence in the world market. We look forward to seeing even greater performance from JIULI in the future!



*JIULI colleagues enjoy team building at the end of the working day.*

**Facts & Figures**

Name: JIULI Hi-Tech Metals Co. Ltd

Founded: 1987

Headquarters: Huzhou City, Zhejiang Province, China

Main products: Stainless, (Super) Duplex, Nickel alloys, Titanium pipes/linepipe/OCTG/tubes/fittings/flanges, clad/lined pipe, coating (3LPP/3LPE).

Key markets: Civil nuclear power, electric power, Oil & Gas exploration, LNG, offshore engineering, refineries, chemical, fertilizer, coal chemical industry, desalination, instrumentation.

Employees: 2500

Website: <http://en.JIULI.com>