

# Kuze Bellows Kogyosho Co. Ltd: quality above all else



*Kuze Bellows has an established reputation for its ability to produce very thin walled stainless steel seamless tubes.*

**“The business philosophy of Kuze Bellows Kogyosho is to make a wide-ranging contribution to both our company and our clients,” explains CEO Mr. Yasushi Kuse. “This contribution starts with our on-going invests in independent technological developments which in turn allow us to contribute to our clients’ profits; and continues with the development of our own company and the well-being of our employees.”**

**The company progressed into the arena of manufacturing specialized heat exchangers for the nuclear industry around 30 years ago and it continues to supply products to discerning clients around the globe.**

*By Joanne McIntyre*

**K**uze Bellows Kogyosho was established in 1939 by Mr. Shigekatsu Kuse as a pipe bellows production facility. This

remained the scope of the company’s production until 1963 when, utilizing its experience in manufacturing bellows, the company moved into manufacturing

seamless stainless steel pipes using the cold working process. Today the company is headed by Mr. Yasushi Kuse, son of the founder.





maintaining the highest levels of quality, which is why our products are in demand. Furthermore the products we make are seamless; as there is no welding required there can be no welding flaws. If we look at items like the coil tube, which is constructed from a high nickel alloy it is safer to connect one section of pipe, rather than use multiple sections which are welded together. Heat exchangers in nuclear power plants require very specialised small od tubes, particularly in the central part of the heat exchanger. In nuclear power in particular, it is safer to have the fewest possible welds.” Today the company’s production capacity is divided 50% stainless steel pipes, 25% fittings and 25% bellows, with stainless steel remaining its core product. “Kuze Bellows handles order for many kind of products, including specially formed metal products,” explains Mr. Kuse. “These products are created using the best technology, such as the deep drawing process and forming technique, developed with the know-how that we have acquired over our long history of manufacturing bellows. Our very thinly processed products are of particular note, as they are not produced by other companies, and have a world-wide reputation of being difficult to process. This is a good indicator of the high level of technology we employ.”

## Global network

Kuze Bellows Kogyosho typically exports 80% of its products. The main destinations for its products are Asia and the Middle East, and in particular the Far East, South East Asia and locations close to South Korea and Taiwan. “South Korea is an important market for us because the exchange rate for the Korean won is very favourable; for example Samsung and Hyundai have both been relocated to Korea from the Middle East, and we now fulfil the orders for their pipes,” continues Mr. Kuse.

The second most important region for the company geographically is the United States of America and the US Gulf.

“We expect to see extensive capital investments in the US Gulf over the next 2-3 years due to increasing demand, and because of that further developments should be expected. We also expect that some Japanese manufacturers may set up facilities in the Gulf region as a result of the high level of capital investment in the oil and gas industry by companies including ExxonMobil, Shell, Chevron, and Dow. However for our nuclear products Japan remains our central market, followed by Korea.”

Following the Fukushima accident the nuclear industry entered a period of intermission. “Fortunately due to our location in Ishikawa, we were not directly affected by that event so there have been

“The mid-1960s was a period of intense industrial growth in Japan, and it was at this time that we invested significant capital to established our pipe manufacturing capabilities,” he explains. Today the company’s production remains solidly grounded in bellows, stainless steel pipes, and stainless steel fittings and delivers a wide range of reliable, high quality products through an integrated production system. Mr. Kuse emphasizes that his company maintains a strong focus on quality to ensure the safety of its products. “We are able to produce stainless steel pipes with a very thin wall while



*Kuze Bellows is able to produce thin-walled seamless pipes to very high standards.*





*Kuze Bellows is one of just a handful of Japanese companies producing high quality seamless stainless steel pipes.*

no long lasting economic effects on our company,” explains My Kuse. “Looking to both the domestic and global nuclear power industry there have obviously been some significant impacts on safety issues as a result. At the time perhaps everyone was too overconfident, which resulted in such a serious incident.”

Part of the company’s safety culture is the on-going safety training of its staff. “We have safety and welfare committees which are focused on issues such quality management . All new employees must go through a compulsory training period which must be completed before they are allowed to work in the factory. Training is repeated periodically, particularly for the newer staff.”

**Adapting to meet the customers’ needs**

In order to accommodate it’s growing export portfolio for all industries, Kuze

Bellows recently adjusted it’s office hours, explains Mr. Kuse. “Traditionally our working days run from 08:30-17:30; however since April 2012 we have had teams focused on European clients who work 11:00-20:00. This means we can connect to European clients up until 20:00 which has increased our exports. One of the key reasons for this change was that we aim to be able to provide price estimates to client faster than anyone else. When a client makes contact with us, we are able to connect with them immediately. We want to minimize the chance of frustrating our clients. It also means we can swiftly respond to any customer feedback.”

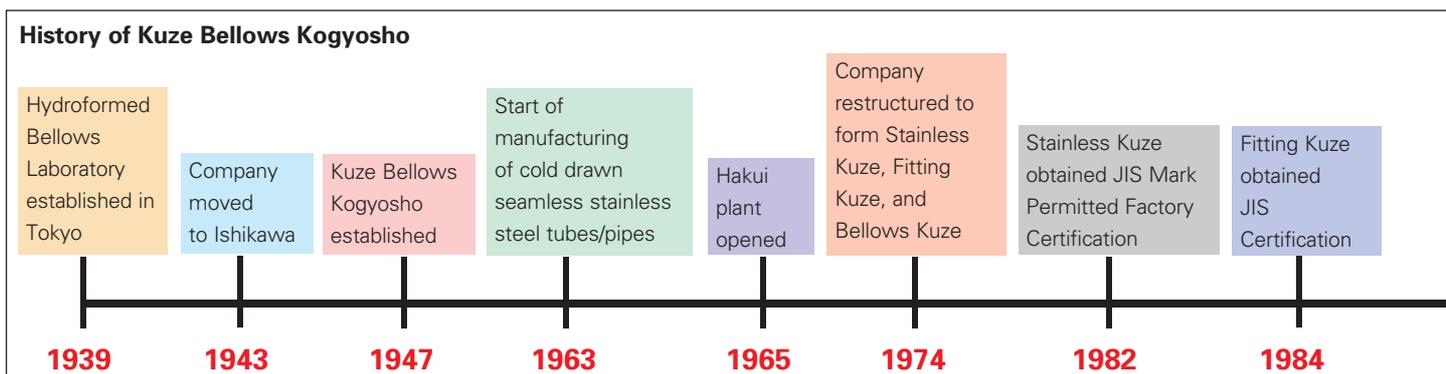
**Evolution to high nickel alloy tubes**

Stainless steel production first began in Japan around 1965 when the country was experiencing rapid growth.

“We have been manufacturing stainless steel pipes and tubes for 40 years,” explains Mr. Kuse. “In the first 20 years there were several other companies who also entered the field and started to manufacture stainless steel. However my company has remained competitive throughout the years, and there were only ever a few companies able to make small od tubes in Japan. While there were originally around fifteen companies involved in the manufacture of stainless steel seamless pipes, this number has been reduced through years due to mergers and the collapse of some of the smallest players. Today just a few of the original small companies remain.”

From the mid-1980s the market saw an increasing global demand for semi-conductors, ultra-clean pipes, and LCDs for manufacturing plants. “Initially we provided semi-conductors for Japan, America and Korea for companies such as and Samsung, LG, and Hyundai,” explains Mr. Kuse. “The quality of our products was improved through investments in modern production facilities to enable us to produce very clean pipes, and as a result we became the market leader. All of our original competitors in this sector have since closed down. Today we are proud to say that we are the number one market leader for clean pipes for construction plants relating to LCDs and semi-conductors.”

Gradually the company also moved into the arena of manufacturing pipes for the energy sector. “The market for semi-conductors has decreased so now



we are tackling the production of nickel alloy tubes for the export market, and particularly for nuclear power. These tubes are manufactured from pure nickel and nickel alloy. Of course it is a challenge, but why not face up to our challenges? Our new speciality item has become high nickel alloy coil tubing. While other manufacturers are able to produce nickel alloy tube, the coil tube has unique characteristics and Kuze Bellows is essentially the only company in world producing this item. We produce these items with no welds on the coil tubes. Safety is a top priority for these items and we are able to produce them for the demanding nuclear industry."

**Secret to success**

"Over the years we have been able to establish a leading position in the global market for thin walled seamless pipes both domestically within Japan, and in the international market," continues Mr. Kuse. "Our modern facilities and years of experience have us well-positioned to maintain this position." In 2008 Kuze Bellow opened a new



*Rigorous staff training and attention to detail ensure the highest standards of quality are maintained.*

manufacturing facility close to Seoul, South Korea with the name Kuze Korea. The site employs thirty people; while it is run by a Japanese national the rest of the team are Korean. It is the company's first manufacturing site abroad. "We'd had plans to expand into Korea for some

years already, but the timing was finally right in 2008. At the moment the facility is mainly fulfilling orders for Samsung and Hyundai. This site will assist us in continuing high quality production for a range of demanding industries around the globe," concludes Mr. Kuse.

**Bellows – the basics**

Bellows are used as parts for automatic control, measuring units, pressure & vacuum sealing, sealing of rotary parts, rotary feeds, vibration & expansion absorbers, pressure transmissions, length & position adjustment and pressure adjustment.

Metal bellows offer many possibilities because of their adjustable elasticity, bendability, and high hermeticity. As specialists in metal bellows manufacturing, Kuze Bellows mission is to meet the needs for advanced and diverse bellows with ultra-precision, and to rapidly fill small lot orders at low cost for its mainstay products of hydroformed bellows, welded bellows and rolled-formed bellows. It is the first company in Japan to have succeeded in the mass production of hydroformed bellows, which have adjustable elasticity, bendability and high hermeticity. These are used under various conditions from vacuum to high pressure, from low to high temperature, and in various parts of machines related to all kinds of fluids. Recent developments in high technology and ultra-precision have created demand for multifunctional and high-quality seamless bellows.

Semi-seamless bellows are also in great demand because they are low-priced and can be delivered in at short notice.

