

Kirloskar Brothers Centenary : An interview with Mr. Sanjay Kirloskar

Mr. Sanjay Kirloskar, Chairman and Managing Director – Kirloskar Brothers Ltd.
in conversation with Mr. Sudhanwa Kopardekar-Director, MCCIA



Q : Could you share a brief history of Kirloskar Brothers Ltd over the last century?

A: Kirloskar Brothers was established in Belgaum in 1888 with the two brothers Ramuanna and Laxmanrao Kirloskar joining hands to sell windmills and bicycles. Laxmanrao Kirloskar always had a fascination for machines. Many farmers would come to him asking for help for repair of their agriculture equipment. Over a period, he felt that he could make better equipment and decided to manufacture chaff-cutters and iron ploughs in 1901-1903. These two products were difficult to sell first, but once the market accepted them, they were sold in hundreds of thousands.

In 1910, Belgaum municipality asked Laxmanrao Kirloskar to move out of the area. The Raja of Aundh invited Laxmanrao to come to his kingdom and set up his factory on a piece of land he donated. Aundh had just one railway

station then named Kundal Road (later renamed Kirloskarvadi) where Laxmanrao located his new factory. At that time, the products were chaff-cutters, iron ploughs, peanut shellers, sugarcane crushers and hand pumps.

In 1920, the business became a company and presently we are celebrating KBL's entry into the 100th year. In 1926, KBL made India's first centrifugal pump. After the pump, the first Indian diesel, petrol and kerosene engines were made and then with Great Depression, KBL also manufactured furniture. In 1936, after Laxmanrao was appointed the Dewan of Aundh, his son Shantanu (SLK) took over as General Manager of KBL. Around 1939, KBL made India's first electric motor, fulfilling a long held dream of Laxmanrao.

Just before the Second World War, the British government came to KBL to make equipment for the war effort. SLK decided that KBL should not get into

armaments required for the war effort but to make things that would be in high demand post the war. This was how the Kirloskars got into the manufacture of machine tools. Soon enough it was realised that machine tools and ploughs could not be made in the same factory. So a new company called The Mysore Kirloskar Ltd was incorporated and foundry with a factory was set up at Harihar. Unlike Kirloskarvadi, Harihar had water and sand throughout the year. Sadly, this company does not exist anymore.

SLK was responsible for setting up the sales distribution network of KBL, which even today is the envy of many industrial product companies. KBL's domestic network currently comprises of 1800 dealers and 20,000 retailers.

Since the time he was young, Laxmanrao wanted India to make motor and engines. While KBL's first engines were made in the 1920s, it could only manufacture electric motors from 1939.

Looking at opportunities after the war, and to upgrade its technology, KBL sought technology abroad. SLK along with his cousin NW Gurjar went to the London in 1944 and signed collaboration agreements with two British companies. KBL's engine and motor businesses were then divested to Kirloskar Oil Engines Ltd. and Kirloskar Electric Co. Ltd in 1946, resulting in SLK moving to Pune and his youngest brother Ravi moving to Bangalore.

KBL continued with agriculture implements, furniture and pumps to which it then added valves for water pipelines. In 1952-53, KBL manufactured India's first air compressor. In 1958, the air compressor business was also moved out of Kirloskarvadi and a new company Kirloskar Pneumatic Co. Ltd. was started in Pune.

After that, KBL concentrated on fluid handling machinery, pumps and valves and we have recently ventured into mini hydro turbines. One of our joint venture companies also makes steam turbines. My father Chandrakant also had a long association with Kirloskar Brothers and served as the managing director for several years, from 1979 till 1985, when he fell ill, and I was appointed MD.

Q : Could you share the details of the upgradations in pump systems and some of the biggest projects implemented so far?

A: Over a period, the end customer wanted more than a pump and single point responsibility. So, our offering became a pumpset. Later we gave a solution, as in electromechanical equipment, which included valves, pipes, pumps, motors, control equipment for motors, SCADA systems etc. So, the company which was largest in its field and had huge knowledge of hydraulics and electricals, married that with communications technology and with that we were able to supply complete systems to customers.

The world's largest irrigation scheme has been constructed by us on the Saurashtra branch canal of Sardar Sarovar Narmada Nigam Ltd. The entire system is controlled from 80 km away in Gandhinagar. Here too we had to face

global competition. But KBL has many patents, which helped us to supply far more efficient systems than our global competitors. We have supplied an irrigation system to Telangana, which has the world's second highest lift, called Godavari lift irrigation scheme. Water is pumped up 120 m and over 140 km. We introduced an innovative new pump in that segment to save Capex and Opex.

On the industrial side, we have introduced magnetic drive pumps and canned motor pumps working with the Atomic establishment for the production of heavy water and for standard pressurised heavy water reactors. We have also designed and delivered primary and secondary heat transfer pumps for our fast breeder nuclear program.

Another innovation is our lowest lifecycle cost or LLC pump. Our LLC pumps are very high efficiency pumps which through design, lose only 1/10th the normal efficiency of standard pumps, which lose 1-1.5 percentage points of their efficiency within the first year. About 85 per cent of the cost of ownership of pumps is just the running cost. Payback in the case of LLC pumps is at the most in 18 months. They are little more expensive, but customers who have bought them have never switched back. We also supply large valves up to 5m, hydel turbines which go up to 10 megawatts each. In the steam turbine area, our range is up to 30 MW.

We have worked under Government of India's lines of credit, and supplied pumps to Cambodia and Senegal among other countries. We are proud of making Laos, Cambodia and Senegal self-sufficient in rice production, thereby enabling their food security.

Q : Could you share the market leadership perspective of KBL?

A: KBL has 6 factories in India, plus a foundry called Kolhapur Steel Ltd. and KPML, a company at Karad to make stators and rotors for our pumps. We have two JVs, Kirloskar Ebara Pumps Ltd. and Kirloskar Corrocoat Pvt. Ltd. to make polymer glass flake coatings.

KBL's Kirloskarvadi factory makes industrial pumps and hydro turbines,

Kondhapuri factory makes valves and Dewas, Kaniyur in Tamil Nadu and Sanand are into the small pumps manufacturing. In the small pump business, there are over 200 competitors and we are at the number 1, 2 or 3 position in the three areas that we operate in.

The Kirloskarvadi factory makes industrial as well as large pumps, catering to eight sectors namely - water, power, irrigation, industry, marine and defence, oil and gas, building and construction and spare parts. We have 40-80 percent market share in water, irrigation and power sectors. Every single metro, non-metro and municipality uses our pumps. We supply water to 35% of the population in all our cities. In industry pump segment, we have around 25 percent market share. Under the building and construction segment, we have around 70 percent market share for fire-fighting pumps. We are only ones to have a FM / UL approved factory in India.

In the fire-fighting segment, we are also the largest in the world due to our subsidiary SPP Pumps Ltd. of the UK. SPP makes pumps that go into unmanned offshore oil rigs where pumps are remotely monitored. These are also intelligent pumps and can turn off and on and send performance reports on their own. Most of the iconic buildings across the world use our pumps. KBL is also the only company who supplies FM \UL approved multistage multi-outlet pumps. There are huge benefits of buying these pumps for the builder. One pump in the basement takes care of every single floor in high-rise buildings. The building does not need to have water storage at other floors. Hence, the construction can be lighter and space required for piping is less. All in all, there are huge savings by using such pumps. Therefore many iconic buildings around the world, like the Shard in London, Marina Bay Sands in Singapore, the Wilshire Grand in Los Angeles and Baku Flame Towers use KBL's pumps.

In 1989, we started a joint venture with Ebara Corporation to make API pumps (American Petroleum Institute standard pumps). Kirloskar Ebara's



business is with well-known customers, like Saudi Aramco, Indian Oil and Reliance Industries Ltd. In the oil and gas sector, with SPP and Kirloskar Ebara, KBL can supply all centrifugal pumps requirements.

Q : The first export by KBL was done in 1935. Can you give a sense of how it has moved from there?

A: In 1935, KBL began exports because of the confidence that my grandfather and great grandfather had in our products. Later KBL exported pumps to Iran, Egypt and to countries in the Middle East and South East Asia. We have supplied over a hundred thousand pumps in Egypt and hence the Kirloskar name is used synonymously with pumps in Egypt. In 1972, there was a big break as KBL participated in a United Nations tender to support Bangladesh. One of the companies which lost that order to KBL was SPP Pumps Ltd. Few months later their Chairman came to Mumbai to look for low cost manufacturing. He called up SLK as he wanted to see the factory. It was after that visit that KBL and SPP started working together. Both companies would then on sell pumps made by KBL all over the world as per European standards.

Our interaction with SPP led to meetings with other companies. One

such company was Rateau, the then largest French manufacturer of pumps and SPP's agent in France. Rateau's management team met my grandfather and father. Together, they decided to come out with a new series of pumps for world markets. SPP also wanted to do the same with us, and we designed another range of pumps with them, which was the split case pump. For both of them, development cost was low as the pumps were designed and developed in India, and volumes were higher as two companies were selling them as their own. KBL in turn, had a product range which was far more modern than its competitors, who were subsidiaries of foreign companies. KBL's products were competing with those companies in the Western markets. Thanks to this approach, KBL could understand the expectations of foreign customers. We were one of the first companies to get ISO accreditation, for various standards over the years, in India. The company has always had a proactive attitude to introducing new thoughts and concepts within the company.

Q : The international marketing along with support of SPP and Rateau, was it co-branded?

A: Products would be branded SPP / Rateau in their territories and Kirloskar in our territory. There was distinction

who could sell where, but most of the world was open to all three.

Q : Overtime you also set up subsidiaries or manufacturing setups overseas, besides the acquisitions. Could you tell us a little about that?

A: KBL has manufacturing and packaging plants in the Netherlands, South Africa, Thailand, United Kingdom and United States. The plants in South Africa, UK and the US have a full-fledged manufacturing set up. When we bought SPP Pumps Ltd., it came with the South African factory. In Thailand and the Netherlands, we mostly do packaging, which means that we supply them components or pumps as SKUs and they add some local components and accessories like motors, panels and couplings.

Q : After liberalisation has the opening up and India signing lot of preferential trade agreements affected you in any way?

A: No, it did not. In fact, our highest growth has been after liberalisation. Competition is always good.

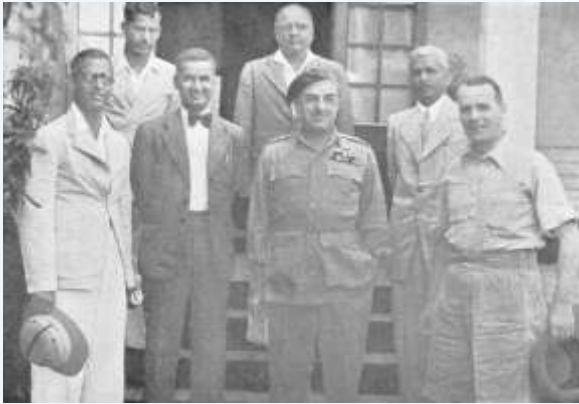
Q : Can you shed more light on your international market share and how it has grown?

A : Many people believe that our biggest market outside India is Africa.





SLK explaining working of machine to J.R.D. Tata



SLK with the foreign Distributors, on his Sixty-first Birthday, 1964



56. SLK with the foreign Distributors, on his Sixty-first Birthday, 1964



शेतकरी-बंधुनो !—
नांगरीची मेहनत, स्वर्च प वेळ
चांचून लपशांत भर पाळणारा
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किर्लोस्कर वंतु, ठळकवाडी, पेळगांव.



However, for us the largest market outside India is the US. The second largest market is Western Europe. The Middle East is also a large market, especially for oil and gas. Africa is a large volume market for us because our pumps are less complicated and so lower in cost. Our plant in South Africa makes pumps for the mining industry and assembles pumps for fire-fighting.

Q : Could you share details of your international market share?

A : 35 percent of our consolidated revenues are from outside the country. Another Rs 200 crores or 7 per cent of our consolidated revenues is from exports. While KBL is India's largest pump company, on a global scale I believe our market share is just below 2%.

Q : How have the latest technology interventions helped?

A : We have the latest software and have mapped all our product performance ranges and created 3-D models. Software helps us improve performance of our pumps. The time to develop designs is much shorter now. We have been experimenting with how to make large pumps faster as they are required in small quantities. We have one of the world's largest 3D printers. For prototypes, we now make sand moulds directly from design, thus drastically cutting down the time for the entire process of designing a product to sending it to the pattern shop and then creating the mould from 6-8 months to 72 hours. We hope to use such technologies for production of pumps in future.

Q : How are you using the latest technology upgradations and the Internet of Things (IOT) which is gaining popularity?

A : In 2006, we delivered some very large pumps to Suriname in South America which, like the Netherlands is below the sea level. Whenever there is a huge amount of rain, they have problems with water. Sometimes they need water to be pumped in and sometimes they need water to be drained out. We have supplied pumps which work equally efficiently in both directions. These pumps are controlled by mobile phones accessible instantly. In 2007, we replaced our entire water

system in Kirloskarvadi changing it from having overhead water tanks to a pressurised system. As we have had a dedicated optical fibre line from our office to the township, we also set up a control and monitoring system from Pune. We can monitor the water supply system of Magarpatta township from our Corporate Office as well. This will lead to greater understanding of how to develop more sophisticated systems in the future. Control of our machines in our factories is slowly being moved to IoT platforms and we now know how some of these machines are performing.

Q : Can you share your experience of implementing the Sardar Sarovar Project?

A : We had offered Concrete Volute Pumps (CVPs) for the project. These pumps were invented in France during the First World War. KBL manufactured and supplied its first CVPs for Dahanu power station. These pumps have been running now for 25 years. A recent third-party audit has shown that the efficiency has dropped just by 2 per cent over all these years, notwithstanding the fact that it is a most corrosive place due to sea water. But the pumps are running as good as they were 25 years ago. Such pumps are highly reliable and are being used in nuclear power plants, without stand-by. Coal-fired power plants also use such pumps. KBL is now the world's largest manufacturer of concrete volute pumps. The project has 5 pumping stations along the Saurashtra branch canal. We also had our patented technology of siphon creation and breaking to ensure that no valves were needed. Our offer was hence very different than that of our global competitors. We got the order in 2001 and the entire order was completed in 2012. I believe the customer is happy with KBL.

Q : KBL has been very strong on design talent, engineering capabilities among other things. How do you make your people continuously perform better?

A : KBL gives its employees the freedom to work, to experiment, and to make mistakes. There is an environment which encourages growth. There is a lot of research in the field of hydraulics which we encourage our

people to learn. KBL teams present papers in international seminars, so they get an opportunity to meet people from their field. We have got many awards for the 'India Design Mark', which is a part of the government's National Design Policy. This time we got it for our new product called First Line of Defence, which is a fire fighting product for villas. We have the latest software. We allow people to work on the entire product. Hence, the sense of ownership for any product is always high.

Q : You have a strong R&D capability. Can you tell a little more about it?

A : We have 3 design centres, in India, Netherlands and Britain. Week before last, we had our Dutch R&D team here in Pune. Efficiency norms are changing around the world. Our pumps must meet those norms as well. As a global company, we need to know the latest American and European machinery directives, new efficiency rules, the minimum efficiency index across the whole range of products, among other things. Making sure the backend also knows what needs to be done helps a lot in knowing the customer and the government requirements. Every company that desires to reach the top in its field must know how the environment is changing and then make pro-active efforts to lead that change.

Q : What would you say about KBL's relationship with suppliers?

A : Earlier, KBL made everything inhouse. Over a period, it offloaded a lot of work to its suppliers and kept only value-added work inside its plants. Around our factories, there are large vendors who are close to us. They are allowed to supply other customers, including our competitors. The fact that my global competitors have chosen to give my vendors their work is vindication of the efforts put in by KBL to develop its vendor base. KBL encouraged its own people to become vendors, and sometimes dealers of its products as they have a lot of knowledge.

Q : Long before the CSR norms were implemented, a lot was being done by KBL for the society at large. Could you shed some light on that?

A : If you look at how the company

began, one realizes that we were also beneficiaries of someone else's generosity, whether it was the Raja of Aundh or the Ginde family, who were money lenders in Belgaum. We believe that it is our responsibility to do something similar. My great grandmother Radhabai, and my grandmother Yamutai, did a lot of work in the rural areas, especially in the area of women's health and employment. The Raja of Aundh had in fact, appointed my grandmother on various committees, especially for upliftment of women. Yamutai Kirloskar later set up Mahila Udyog Ltd., which was an all-women factory in Khadki, Pune to make engine bearings. My grandfather never wanted his name to be mentioned whenever he contributed to a cause. KBL been working in the health and education sector through the Vikas Charitable Trust in which my wife is involved. The Trust which was set up in 1991, works with various schools and health centres. Recently, KBL got an expert from the UK to deliberate on how teaching can be improved in these schools. KBL has provided many schools with systems to ensure clean drinking water to students. KBL was amongst the earliest companies to build toilets for girls in village schools around its factories in the late 1990s.

Q : Could you tell us a little about the energy conservation efforts?

A : We have had a competition within the company for energy conservation since 1989, and all plants participate in this conservation competition. All our factories are GreenCo Gold rated, despite being old and are striving for Platinum rating. We have our own windmills with a generating capacity of 4 MW. We have rooftop solar panels in all our factories contributing close to 4.5 MW. We thought that we should go beyond this and provide customers with pumps which are "green". So our products are also very energy efficient. We do energy audits for our customers. I had the opportunity to get involved with CII's green building in Hyderabad, therefore our headquarters in Pune is a platinum rated structure. I feel that Platinum rated buildings make much more sense than gold or silver, as the cost difference is hardly around 1-2 percent.

Q : What would you like the state to do to continue promoting manufacturing in the country?

A : Our Government must insist on greater value addition within the country as all other countries do. Now, our Government is satisfied with 20% local value added; this number should be raised to 80% like Saudi Arabia and Bahrain demand, even though they are less developed industrially than us. We need to ensure that the skills of our people are continually upgraded to be able to operate / use the latest machines and software. As a multi-national company with plants overseas, as well as a contemporary product line, KBL encourages competition. I think the concerned agencies should continue to invite more foreign entities to come into our country. When competitors come in, they come in with the latest technology, a modern plant and this is what India needs. It is my belief that even if the manufacturing sector grows, employment generated might be the same as was earlier. Today we may need more people on service and design side. This change is happening. So how you upgrade the skills of workers and managers is important. It is the responsibility of the education system and industry so that right kind of people are available for our industries.

Q : What kind of efforts are taken to reskill the existing workforce?

A : Training programs are held all the time as new machines / technologies come in and when different skills are needed.

Q : Could you share your views on ways in which students could be made more industry ready?

A : KBL is involved with many institutes and Universities. In India, we work with IISc and IIT Chennai, among other top institutes. We are also working with Strathclyde University and Delft University. There is a need for this interaction. But a lot more needs to be done as our population is huge. We need far more industry – academia interaction. For this, universities and industry need to become much closer partners.

Q : Any special thoughts on Pune?

A : Pune has been a major

educational and manufacturing hub. We need to improve the existing facilities. I don't think Pune is planned very well. In many of the newer areas, roads are very narrow and not at all straight. I wish that the existing airport in Pune be converted into a commercial airport. We need to look at our defence requirements 15 years from now and understand where that technology is moving. I don't know of any other military airport of a major world power which lies in the middle of a large city, where apartments are being allowed to be built, closer and closer to defence facilities. The new Pune airport is being planned 30 miles away, instead the existing airport can be used to its full capacity by converting it to commercial. There is a huge number of people who want to come to Pune and invest, but they aren't doing so as the existing airport is not a commercial airport. I also wish that Pune metro was more underground than above ground. This will save far more money in the long term.

Q : What is your message for young entrepreneurs?

A : For me, being true to your values and aware of your responsibilities is the most important thing.

Q : Your views on India's heritage.

A : 300 years ago, India was recognised for manufacturing, be it for its textiles, jewellery, buildings, ships etc. Even our caves had engineering in them. Indian textiles have been going around the world 2000 years ago. We had looms to make the best textiles in the world. We made battleships which participated in the War of 1812 between Britain and the US. How do we get back to be the best is the challenge before us. We must be proud of our heritage and think of how we can become better than before. We need to get our focus back on handicrafts and promote them through sustained efforts to preserve the traditional art and craft. We need to get back the essence of India, a country leading the world, blessed with great natural and human resources.