

cascade oct-dec 2013

THE · YEAR · THAT · WAS



from the director's desk



Director, Kirloskar Brothers Limited

Let me begin by wishing you all a very We are now at the cusp of a great leap Happy New Year.

I am confident for this new year; more because I see great energy levels among team.

Our stress on promoting and shaping the young with programmes focused on their work such as 'HI-POTS' or 'Fast Trackers' is a testament of the value we place on their growth and progress. Their growth is dependent largely on the experiences because of the exposure they have in the field. Young people in all sectors are taking their responsibility with a lot of pride and I see them as the true soul of this organisation.

forward. It is with this conviction that we can deliver to a greater ambition to achieve our stated vision.

the young people who are part of the I wish you all well and look for your complete involvement in achieving our

editor's word



Shipra Tripathi Head, Global Marketing and Communication, Kirloskar Brothers Limited

The year that was.... and what a year! Several significant achievements with very large pumps being delivered to customers satisfaction, celebration for ten years of success with SPP, celebrations for 50 years of our Dewas plant, and many such...

A year that has given us much to develop our future on, an energised young team willing to encourage change and a vision that speaks of Enriching Lives.

We look at the new year with hope and ambition, and with the strength of conviction to be able to achieve the goals we have set for ourselves.

Team Cascade wishes our readers a Happy New Year!

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foreword



Sanjay Kirloskar Chairman and Managing Director, Kirloskar Brothers Limited

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The start of 2014 has brought some of my experience in manufacturing and of Kirloskar Brothers Limited (KBL). These have been captured for you by the team Cascade.

As we take on the new year and get ready to face new challenges I would like to quote to you some words of my grandfather - Shantanu Laxmanrao Kirloskar.

"When I went to various developed and developing countries to locate markets and potential collaborators, I had the advantage

very interesting memories for all of us at a certain clarity of objectives. I take a long - term view in business, holding that while short-term gains might bring more benefits for the immediate future, policies framed upon a far-sighted view lay a strong foundation for continuous gains for years to come. Experience had taught me to learn and endure during long years of preparation, gestation and trail in establishing manufacturing enterprises. For all this, I accounted myself fortunate."

I wish you all a very Happy New Year.

RACING

against

TIME

COIMBATORE SPEEDS PUMP PRODUCTION

FROM 60Sec TO 20Sec PER PUMP

Revolutionising pump production at Kaniyur, Coimbatore from 460 pumps per day at the rate of 1 pump per minute to 1380 pumps per day, at the rate of 3 pumps per minute! Thanks to the Mahila Mission 20 and other qualitative changes.

The uniqueness of this facility is that it employs 100% female employees for the manufacture of domestic pumps. The revolutionary workforce proved its might by implementing the Mahila Mission-20 project.

The ambitious plan was formulated in a bid to increase the overall productivity of the plant. In initial stages of the plant operations, 460 pumps were manufactured at the unit per day at the rate of one pump per minute. Currently the output has increased to 1380 pumps per day, at the rate of 3 pumps per minute, thanks to the implementation of the project. This was a huge milestone in the industry.

A variety of qualitative changes were made to the manufacturing process to achieve the target. These included introducing Kaizen culture, formation of a 5S team, a quality circle team, a Kanban team and an ERT team. Each change was well received by the employees and implemented enthusiastically.

This facility has been exceptional in its very concept and operational performance, manufacturing one pump per minute per line. In a bid to improve the efficiency and the operational performance of the plant further, the management decided to implement 5S.

After the successful implementation of the various phases of the 5S system, an audit was conducted of the entire plant and the 'Inspection & Stores' department was awarded the best 5S zone. An external audit conducted in June 2013 also won the unit Four Stars for its performance by QCFI CC. As a result, the project saw spectacular success and has received a lot of appreciation from within the organisation.

Authorised Repair

closer to you

AUTHORISED REFURBISHMENT CENTRE

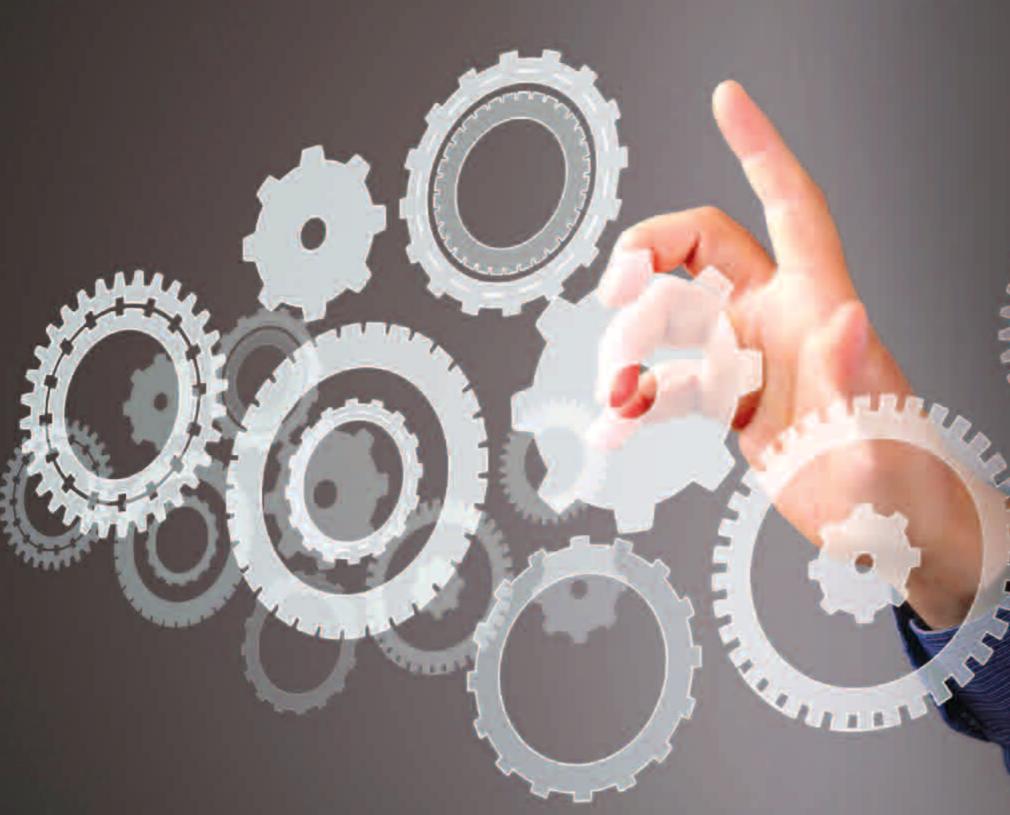
2013 saw the incubation of ARCs at Baroda, New Delhi, Surat and Jamshedpur. Aiming to bring comprehensive refurbishment and performance test facilities closer towards customers, Kirloskar Brothers Limited (KBL) takes a definitive step to further strengthen customer relationships.

↑ uthorised Refurbishment Centres (ARC) are a pioneering Ainitiative to bring comprehensive refurbishment and performance test facilities to customers. ARCs are one-stop shops to meet every contingency, reduce breakdown time and ensure quicker, faster, proactive service delivery. The array of services offered include, assembling and dismantling of pumps, overhauling, corrocoating, shot blasting, hydro-testing, pump testing, impeller balancing and

At these centres, the customers can get their products refurbished for life as well as performance enhancement. The success of the first ARC at Baroda was replicated across the country with more centres launched at key industrial locations like Jamshedpur, Surat and Delhi. With these centres in action, customers are saving precious time in getting pumps repaired from plants of KBL and also saving money in transportation.

The second Authorised Refurbishment Centre (ARC) was launched at New Delhi. Like the one in Baroda, this ARC too is well equipped with state-of-the-art facility to service, repair and improve efficiency for all small, medium and large pumps manufactured by KBL. With this facility in action, customers save on transportation cost, can reduce their downtime and also save energy with upgraded pumps.

At the inauguration, Sanjay Kirloskar, reaffirmed the commitment of KBL to the customers and said, "This is yet another innovative initiative by Kirloskar Brothers to build up a stronger bond with our customers; and it will address the service needs of our esteemed customers. We are planning to set up similar refurbishment centres at different locations in India."



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INK-PACT IMPACT

MoU signed with

MECHANICAL & ELECTRICAL DEPARTMENT (MED)

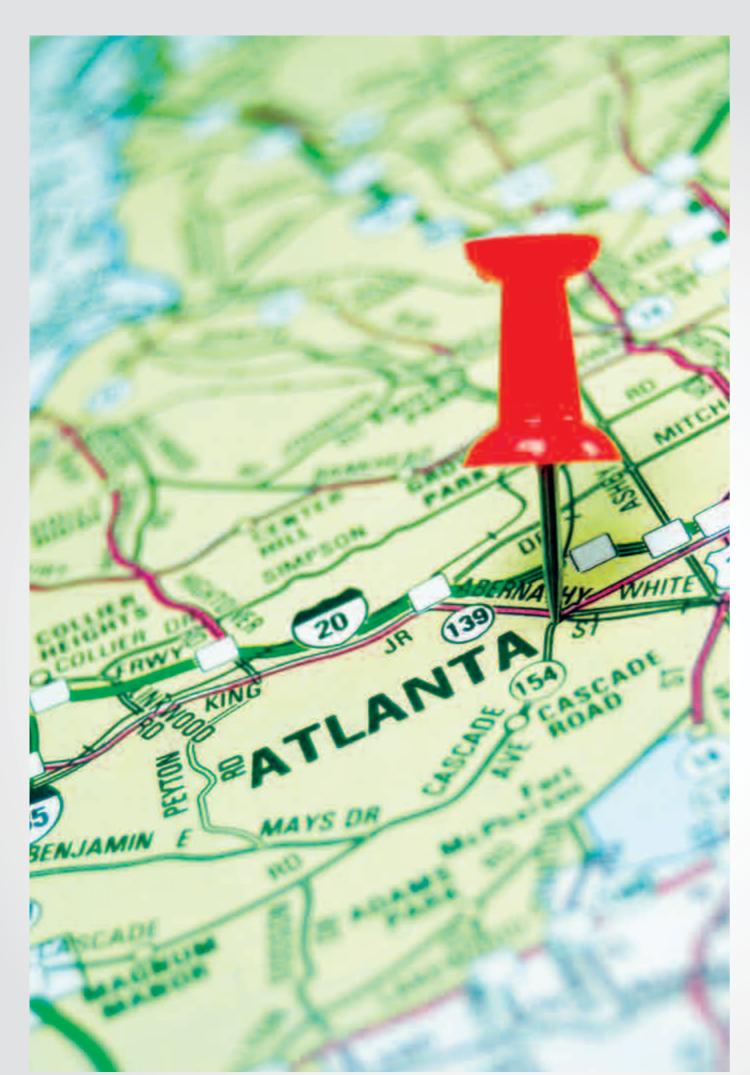
EGYPT POWER SECTOR



Kirloskar Brothers Limited (KBL) signed a Memorandum of Understanding (MoU) with Mechanical and Electrical Department (MED), Ministry of Water Resource and Irrigation, Government of Egypt to build and upgrade the skill sets of the MED's engineers and technicians.

The MoU was signed in New Delhi between Mr. Sanjay Kirloskar, Chairman and Managing Director, KBL and Dr. Mostafa Abu Zeid, Chairman MED, Ministry of Irrigation, Government of Egypt, on behalf of their respective organisations. On the occasion, Dr. Mostafa Abu Zeid, said, "We are proud to take this association further and use KBL expertise to develop the skill sets of our workforce. Over 21,000 MED engineers will benefit from this training programme in next one year."

Over 100,000 KBL pump sets have been working along the river Nile and have been responsible for the irrigation of a large area for agriculture. In 2013, KBL celebrated 50 years of its presence in Egypt with the installation of two major pumping stations on the banks of the Nile River. With the capacity to irrigate more than 20,000 hectares of agricultural land, the Benban pumping station and Rozaikat pumping station will increase the production of grains by 50,000 tonnes and will generate employment for over 60,000 people in this region.



NEW SPP PLANT

INAUGURATION

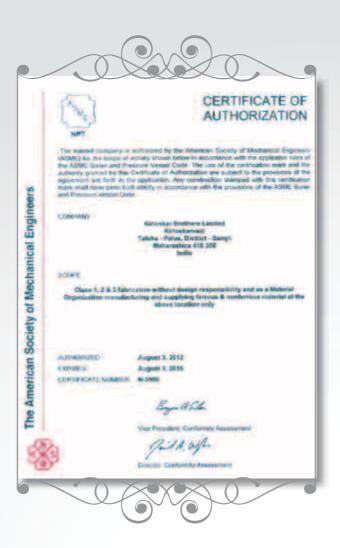
IN ATLANTA USA



In a bid to boost its business globally, SPP Pumps, a subsidiary of Kirloskar Brothers Limited (KBL), inaugurated its most advanced facility at Atlanta, USA. This is the seventh manufacturing facility of Kirloskar Brothers outside India. With an investment of USD 6 million, this facility is spread over 1,55,000 square feet and has an installed capacity of 2,500 units annually. The state-of-the- art engineering, testing and training facility in Atlanta is manufacturing and assembling end-suction, horizontal splitcase, multi-stage and vertical turbine pumps. The new vertical turbine test facility enhances our presence in the power sector and increases our dominance in the fire market. With this facility, the production capacity of SPP Pumps has increased by 30% and the turnover of the company is expected to reach USD 40 million in the coming 3 years.

The facility was inaugurated by Mr. Sanjay Kirloskar, Chairman and Managing Director, KBL. Speaking on the occasion, Mr. John Kahren, President of SPP Pumps Inc. said, "The new plant in Atlanta is all set to take the success story of SPP Pumps even further. With this new investment, we are eyeing expansion in new and exciting markets and continuation of our dominance in the fire pump markets. The Atlanta facility will be instrumental in achieving our projected growth for the years to come."

The plant will further strengthen growth of SPP Pumps Inc. in various market segments such as Municipal Corporations, Commercial, Industrial, HVAC, Process, Power and Fire pump markets.





First & Only Indian Pump

Manufacturing Company

TO ACQUIRE THE PRESTIGIOUS

N & NPT

CERTIFICATION

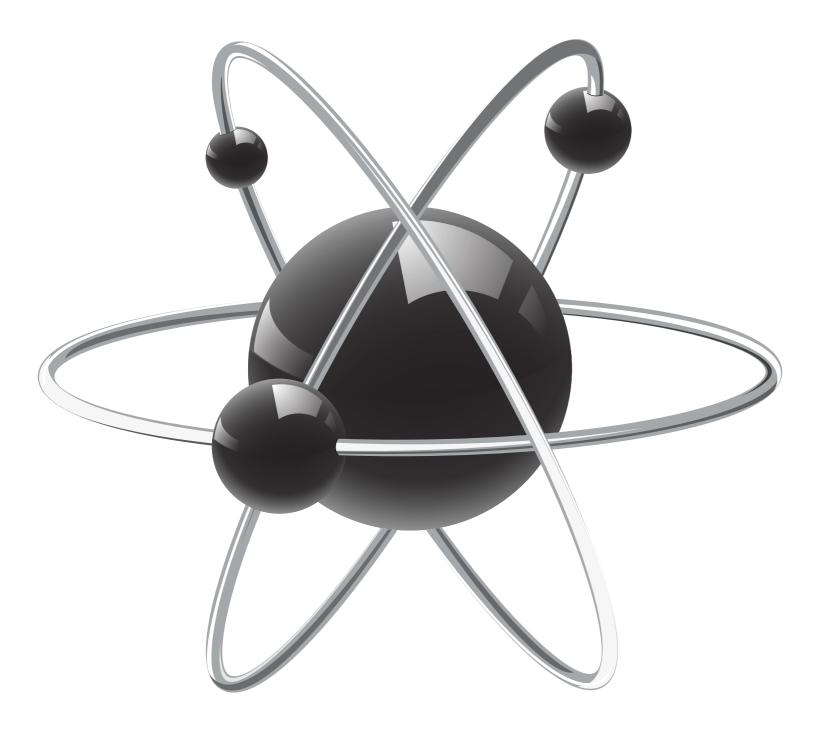
Mr. Sanjay Kirloskar, Chairman & Managing Director, Kirloskar Brothers Limited said, "We are delighted to be India's first and only pump manufacturer to acquire a prestigious certification N and NPT by ASME, USA."

Kirloskar Brothers Limited (KBL), a leading global fluid management company, received the N and NPT Certificates of Authorisation from the American Society of Mechanical Engineers (ASME), USA for pumps to be manufactured at the Kirloskarvadi plant. KBL is the first Indian pump manufacturing company and among the world's top companies to acquire the N and NPT certification. N, NPT certification is mandatory for nuclear business in USA, Canada and other western countries.

These certifications are the pre-qualification criteria for nuclear business in Europe and other developed countries. 'N' Certificate authorises KBL the construction of Class 1, 2 & 3 pumps and 'NPT' Certificate authorises the fabrication required of class 1, 2 & 3 equipment without design responsibility. Under the Material Organisation (MO) Certification, KBL is also authorised to manufacture and supply castings in ferrous and non-ferrous material to international players in the nuclear industries. ASME is one of the oldest standards developing organisations in the world. ASME codes and standards are respected and followed all over the world and a certification by ASME is symbol of pride.

Post an in-depth survey of quality system and evaluation of stringent quality requirements in accordance with ASME codes, KBL has received this prestigious N and NPT Certification. Lloyd's Register has provided their services as Authorised Nuclear Inspection Agency (ANIA) for this certification. The increased awareness of clean energy as well as rising demand of power to meet the rapid growth of economy, a total paradigm shift towards nuclear energy is visible.

In addition to the latest N and NPT certification, KBL has already proved its capability to design and manufacture pumps to various National and International standard requirements like HIS, NFPA 20, FM/UL, API, ATEX and CE marking. KBL is also ISO 9001, ISO 14001 and OHSAS 18001 certified company.



BHAVINI

INDIA'S FIRST SODIUM POWERED

NUCLEAR POWER PLANT

KBL expansion indigenously developed world-class technology to cool down India's 1st 500 MW Fast Breeder Nuclear Reactor set up by BHAVINI, becoming the only Indian company to develop critical application pumps for Nuclear Reactors.

Kirloskar Brothers Limited (KBL) handed over its technological marvel to the first-of-its-kind 500MW Prototype Fast Breeder Reactor (PFBR) project in India underway by Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI).

Dr. Prabhat Kumar, Chairman & Managing Director, BHAVINI flagged off the "1st Primary Sodium Pumps (PSP)" from the 100 year old Kirloskarvadi plant of Kirloskar Brothers Limited. The three PSPs manufactured in Kirloskarvadi – one of India's oldest industrial townships – weigh 135 tonnes and handle 516,000 litres of liquid sodium per minute at Kalpakkam Nuclear Plant. At 590 rpm (rotations per minute). These technological marvels will handle 400 °C to 550 °C working temperature of liquid sodium.

The PFBR setup has two types of Sodium Pumps. In the primary circuit, Primary Sodium Pump, installed in the main reactor transport the reactor core heat to secondary system. In the secondary circuit, Secondary Sodium Pumps feed the liquid Sodium back to reactor pool after taking away the heat through Heat Exchanger to light water, so as to convert it in to steam. These Secondary Sodium Pumps are installed outside the reactor vessel.

It is a privilege that India is the third country to enter the Second Stage of Nuclear Cycle and KBL is the only Indian company to develop such critical application pumps.

Speaking on the occasion Mr. Sanjay Kirloskar, Chairman & Managing Director, Kirloskar Brothers Limited said: "It gives me immense satisfaction to see Kirloskar Brothers at the forefront of technological advancements taking place in the Nuclear Power space. The vertical, single stage, top suction pumps are nothing but an alternate to imports. Today I can proudly say: we can."



LARGEST

PUMPING

TECHNOLOGIES

KBL expansion is riding on a high tide of success, by creating the World's Largest - Circulating Water System, Pumping Scheme, Offshore Pumping System and the Largest Butterfly Valve for Thermal Plants in India.

Triloskar set up the World's Largest Water Pumping System Nor Tata Power's 4,000 MW ultra-mega power project at Mundra in Gujarat. A mammoth 10.5 million litres of water is circulated with the help of KBL's 10sets of Concrete Volute Pumps every minute. The Coastal Gujarat Power Limited (CGPL), Tata Power's wholly-owned subsidiary, which has implemented the 4000 MW (800 MW x 5 units) UMPP requires an enormous amount of water to condense the heat generated in the production of power.

World's Largest Pumping Scheme at Sardar Sarovar Narmada Nigam Limited. KBL has been proudly associated in building the World's Largest Pumping Scheme, the Sardar Sarovar Narmada Nigam Limited's (SSNNL), Saurashtra Branch Canal (SBC) Pumping Scheme, in the state of Gujarat, India. KBL has played a major role in this illustrious project by supplying 26 Concrete Volute Pumps ,22 Vertical Turbine Pumps. The total system will lift 630,000 litres of water per second, to provide irrigation to 540,000 hectares of land and drinking water to approximately 4,620 towns & villages.

Largest Vertical Turbine Pump for Hinduja National Power Corporation Limited. KBL bagged this prestigious order to manufacture the largest ever Vertical Turbine Pump in India. The Hinduja National Power Corporation Limited (HNPCL) is setting up a Thermal Power Plant of 2x520 MW at Visakhapatnam, Andhra Pradesh, India. This cooling water (CW) system package is one of the world's largest offshore sea water pumping systems pumping 182,000 m³/hr of sea water. It consists of four sets of functional Vertical Turbine Pumps each with a flow capacity of 45,500 m³/hr driven by 4600 kW/18P motor.

Cooling Water System and Largest Motorised Butterfly Valve for Jaypee Nigrie Super Thermal Power Project. KBL bagged the Cooling Water System Package for the Jaypee Nigrie Super Thermal Power Project. The project comprises 2 x 660 MW Super-critical in Singrauli district of Madhya Pradesh. Through this project, KBL added another feather in its cap by developing largest ever motorised Butterfly Valve (BFV) in thermal power plants in India.



VIVA VENEZULA

ANOTHER ORDER BAGGED FOR

TERMOZULIA POWER STATION



The Power Sector of Kirloskar Brothers Limited (KBL) secured an order in Venezuela (Termozulia-III) to construct and supply a Combined Cycle Power Station that includes vertical bowl pullout pumps, two gas turbines and heat recovery steam generators and a steam turbine.

Irloskar Brothers Limited (KBL) Power Sector secured an order in Venezuela (Termozulia-III) to construct and supply a Combined Cycle Power Station that includes vertical bowl pull-out pumps made by Kirloskar-India, two gas turbines, two heat recovery steam generators and a steam turbine. Located at La Canada de Urdaneta, Maracaibo, Venezuela. The main function of the Kirloskar circulating water pumps is to deliver circulating water from Lake Maracaibo to the main condenser, running two of the pumps at 50% capacity and the third to remain as a stand-by pump. Each pump has a capacity of 109,458 GPM and along with the head has a weight of 54 tonnes. Kirloskar-India had in the past supplied the circulating water pumps that are currently working at the Termozulia-I Power Station site.

Since being awarded the first Termozulia-I project, KBL Power Sector secured the second contract from Consorcio EIS for Termozulia-III Combined Cycle Power Project in Maracaibo, Venezuela. This project involves the construction of a Combined Cycle Power Station, comprising two gas turbines, two heat recovery steam generators and a steam turbine. It is located at La Canada de Urdaneta, Maracaibo, Venezuela. The main function of the Kirloskar Auxillary Cooling Water Pumps is to deliver cooling water from the lake Maracaibo to the main condenser. This function is provided by two auxiliary cooling water pumps and Kirloskar-India made vertical bowl pull-out pumps: (BHR 50) with 140 kW electric

motors and allied accessories, seismic analysis and testing.

EXHIBITING SUSTAINABILITY

— PUMPING IT TOO! ——

Innovative and Sustainable Solutions were the key drivers for business operations in the ever changing economic scenario. Keeping in mind the dynamic market, KBL's range of products were conceptualised to provide innovative, energy efficient, cost effective solutions as per the new-age business philosophy for inclusive growth.

Triloskar Brothers Limited (KBL) created a green impression at Narious exhibition platforms like ACREX, IEFT, IFAT, IGBC and CII Exim Conclave all across India in 2013. These exhibitions were perfect platforms for KBL to showcase its innovative and sustainable pumping solutions and products. With "Sustainability" as the theme of these KBL pavilions, the exhibits highlighted the concepts of sustainability and space saving innovations applied by KBL in its products. KBL exhibited products like Lowest Life-cycle Cost (LLC)™ Pumps, Suction Diffuser Valve (SDV), Triple Duty Valve (TDV), Tamper Proof Kinetic Air Valve, Jalverter™ Panel for Solar Pumping System, Primary & Secondary Variable Flow Control Panel and patented zero leakage i-CP pump for HVAC applications with Fluid ArrestaTM technology.

The distinctive range of LLCTM pumps sustains efficiency over longer period of time and has a low life cycle cost as compared to the conventional pumps. These pumps can save additional energy cost and effectively reduce the deterioration. KBL demonstrated space saving (upto 50%) concept when TDV and SDV are fitted to the Split Case Pumps for large HVAC applications in Building Services Segment. The exhibits showcased how this concept can be used for End Suction and Vertical Inline Pumps.

Under the spotlight were the KBL's new series GENEX 500, Primary Variable Flow Controllers with added features like, Multi Pump Multi Zone Control, Chillier Protection, flexibility to use any make VFD and having international approvals like CE and UL. The new series is equipped with 7" Graphical Touch Screen Display with simple and user friendly navigation for settings, monitoring and trouble shooting. The exhibited HVAC Process Pump, an environment friendly zero leakage pump without mechanical seals and without gland packing was also much admired by the visitors.

Overall these events showcased KBL as the right solution for industries looking at conservation of energy and improving efficiency.



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A DECADE — of — TOGETHERNESS

Kirloskar Brothers Limited and SPP Pumps Limited, celebrated a decade of partnership at Coleford, U.K. The KBL leadership, SPP family and stakeholders got together to celebrate the occasion.

Kirloskar Brothers Limited (KBL), celebrated a decade of ownership of UK based SPP Pumps Limited on 8th and 9th November 2013. The 138-year old UK business, has in the last ten years seen sales in the UK rise by 280% while sales in Oil & Gas firesets have risen by 560%. SPP operates out of two sites in the UK, with five smaller service stations. It has overseas facilities in Dubai, France, South Africa, Singapore and the US.

Alok Kirloskar, Managing Director SPP Pumps, said: "SPP Pumps was a strategic acquisition done with a purpose to expand our product offerings across continents. Today, SPP Pumps is present across high-tech industries such as oil and gas production, water and waste water treatment, power generation, construction, mines and large industrial plants. In the next decade we intend to double our market presence."

Graham Terry, SPP's Director and General Manager of Europe, said: "The acquisition by Kirloskar gave the financial security, support and aspiration to help rebuild SPP's confidence and performance; a company that now ranks as one of the very best in its field. SPP has not only performed well financially but has also been recognised by its peers having won 'Manufacturer of the Year' twice and many other awards."











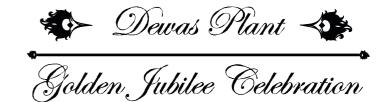












CELEBRATING MANUFACTURING EXCELLENCE

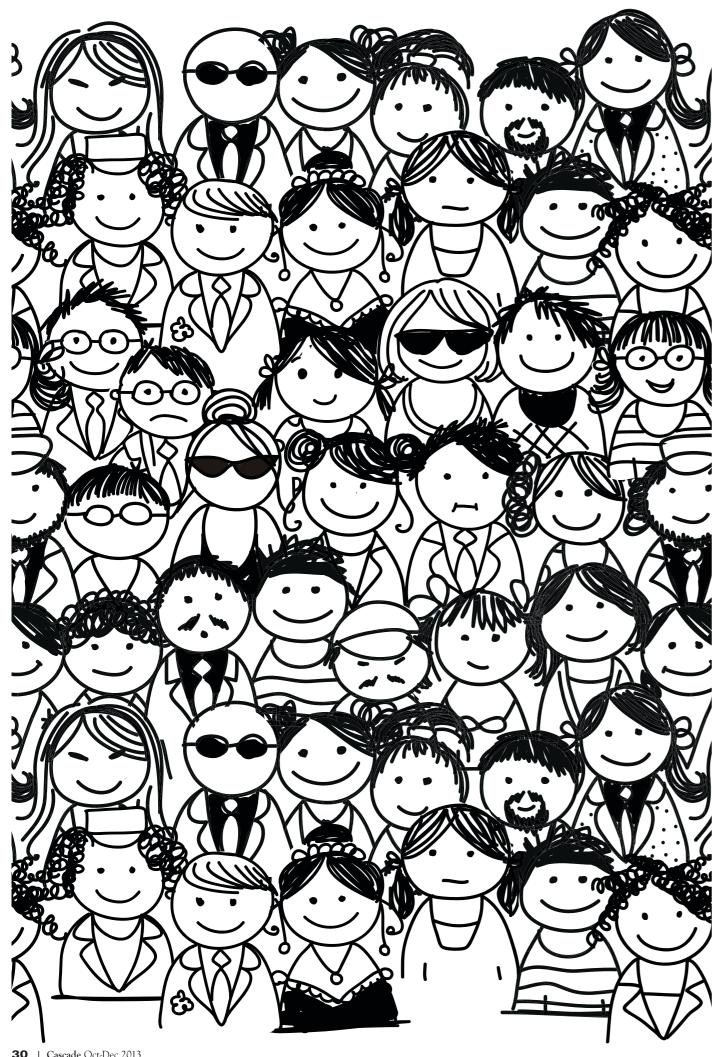
Kirloskar Brothers Limited (KBL), celebrated the Golden Jubilee of its Dewas Plant in Madhya Pradesh. Established in 1962, the plant accurately reflects KBL's Research and Development (R&D) capabilities and its commitment to Corporate Social Responsibility (CSR).

Spread across 72 acres of land with a capacity of 450,000 pumps annually. The Dewas facility manufactures various types of pumps such as surface pumps, monobloc pumps, jet pumps, open well pumps, DB pumps and vacuum pumps. The products churned out at the plant have progressively contributed to the revenues over the decades, from 900 million in 1990, 2,000 million in 2000 and 4,000 million in 2010.

Mr. Sanjay Kirloskar, Chairman and Managing Director of Kirloskar Brothers said, " I would like to thank each and every employee and all the stakeholders who have contributed to the success story of the Dewas plant. The Dewas facility has been a role model for implementing several notable initiatives over the past 50 years; in R&D, CSR and Technology segments. The plant has made significant contributions to some of our key projects like SMS, JIT, MOST, and TPS. Our vision is to expand the production to 600,000 pumps annually, and increase the turnover by 125% in next 5 years."

Mr. Jayant Sapre, Executive Director, KBL said, "Since my first visit to the plant in 2003 - 2004, I have been pleased by the advancements made at Dewas. Several innovative marketing initiatives have been implemented such as REACH, SMDS setting a benchmark for our other facilities, aiding the plant to go beyond what it set to achieve. The plant also received the Asia Award for best CSR practice at the 3rd Asia's Best CSR Practices Awards, held in Singapore in 2013. The award is Asia's most prestigious and highest recognition for corporate organisations that have created a significant impact on the lives of people in society."

Mr. Subodh Shrivastava, Dewas Plant Head, KBL said, "It gives me immense joy to be a part of Dewas' 50th Anniversary celebrations. I have been part of the team here since 1985, and I am pleased to inform you that we have a strength of 700 employees here today. When the Dewas plant was set-up 50 years ago, it had great potential to become a milestone achiever and over the years, the plant has witnessed multiple technological advancements in its manufacturing capabilities. The plant boasts of state-of-the-art R&D facilities and as of today it manufactures several types of centrifugal pumps, being supplied all over India and Indian sub-continents"



WE THE KBL PEOPLE

— COME FIRST —

Today we are seeing some significant changes on the national firmament, with the Aam Admi Party making a significant impact in the election held recently in Delhi. Perhaps it is the need of the hour, perhaps the man on the street is finally fed up of the corruption that assails his daily life. Perhaps he is finally ready to take on the mantle of working for the people with the people ... in the world's biggest and most populous democracy.

The mood that prevails today is optimistic, frankly a real swing from the abject pessimism that we have seen in the past few years. Industry on the other hand is looking at the changes that will impact the stock markets and uplift the work environment.

'We the people' of KBL have embraced change, to realise our vision 2015, of being the preferred choice for customers as well as the employees.

We have brought about changes in our systems to simplify their usage and yet promote the culture of adhering to systems, we have changed the physical layouts of plants and establishments to ensure higher productivity, we have changed the way our brochures look and the information they give, we have even changed the look and feel of Cascade, but our biggest change has been the change of attitude towards our delivery at every juncture, be it the customer, be it the vendor, be it our own colleagues.

At the very root of this changed attitude has been our expectation of excellence at every step. Not only do we expect to deliver excellence to our customers, we also expect excellence from our partners and vendors and are well on our way to create a model of excellence that pervades our working atmosphere, making this organisation the best place to work.

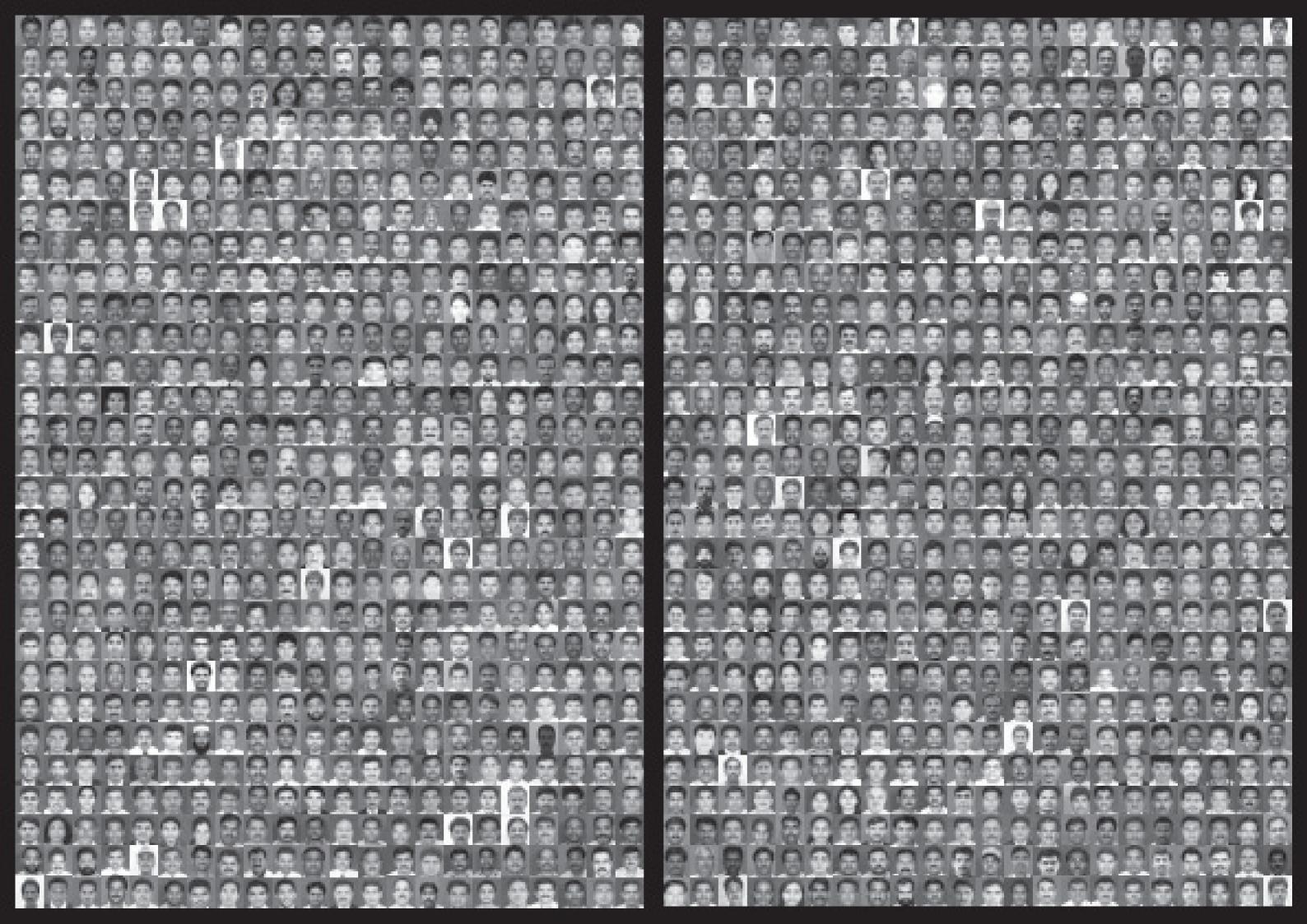
It is our challenge and we have accepted the gauntlet to be the game changers for industry with our products, for society with our active contribution and creating wealth for the nation.

After all we believe in Enriching Lives and creating a better tomorrow.

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$\ensuremath{\mathsf{MY}}$. Year . With . Kbl $\ensuremath{\mathsf{THAT}}$. WAS

As we come to an end this issue, we hope you enjoyed this quick recap and would treasure it as a souvenir. As an employee, associate or an esteemed customer, we also hope your year with us was good. Take a minute to pen down your experiences with us and spice it up with photos...let the good times role!





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