

**LYC has again been awarded the head of the National Bearing Enterprise for the sixth year in succession**

The 2010 Chinese industrial head enterprises list. LYC accepted this award at a ceremony on Nov 9<sup>th</sup>. The list was evaluated by State Statistics Bureau, their references are related to industrial associations, expert opinions and related data extracted from the Chinese industrial newspaper office Data centre LYC has been recognized for the 6th year in succession this undoubtedly shows LYC's comprehensive strengths and strong development initiative.

**LYC independently develops Special Testing Equipment for Wind Generator Bearings**

LYC recently concluded their development for their test equipment for bearing applications used within a whole array of Wind Turbine gear box environments. LYC has been assigned proprietary and intellectual property rights for the design and development of this equipment. There continues to be ongoing R&D and technical performance reviews of this equipment in addition to commissioning and loaded trial runs. This test equipment has been

primarily designed to evaluate all types of bearings located within wind turbine gear boxes up to 3MW. The test data gathered from these evaluations will undoubtedly enhance LYC's ability to further develop/improve existing and future designs and potentially extend bearing life longevity. This equipment complements LYC's existing test equipment for the blade bearing (Yaw & Pitch Bearing) and the main shaft bearing.



**Slewing bearing used on long arm concrete pump truck manufactured by LYC obtains customer approval**

In December 2010 the monitoring of the slewing bearings used in the applications of both 37m and 56m concrete pumps was concluded, these pumps have successfully completed their evaluation over the previous two years. This has allowed LYC to show their excellence in design,

quality, build and reliability in both the domestic and international engineering markets for these types of customer applications.



**LYC attended the International Power Transmission Exhibition (IFPE 2011) in Las Vegas**



March 22<sup>nd</sup> – 26<sup>th</sup>. LYC attended the International Power Transmission Exhibition (IFPE 2011)

**LYC has been awarded certificate of AS9100 (Aerospace Industry)**

Dec 27<sup>th</sup> – 31<sup>st</sup> 2010. LYC was audited by Best Cert Ltd. The AFNOR audit was conducted in the following areas: purchasing, process design, development process, quality assurance, customer satisfaction, production and service procedures etc. Following this audit LYC was successfully awarded the 'Aviation Quality Management Certificate AS9100 of AFNOR AFAQ'

in Las Vegas USA; this exhibition is held every 3 years. This was the first time LYC had attended this exhibition. The exhibition generated over 70 valued enquiries the main focus of these enquiries were directed at LYC's Slewing Rings for both Mechanical and Wind Turbine Applications along with a broad cross section of bearing applications for Earth Moving Equipment.

**NTN and LYC (Luoyang) Precision Bearing Co. Ltd**

April 16<sup>th</sup> 2011. The official ceremony for the Joint venture (JV) with HNCC Luoyang LYC bearing Co. Ltd. and Japan's NTN Bearing Corporation – NTN and LYC (Luoyang) Precision Bearing Co. Ltd. took place. The photograph above shows the ceremony of the laying of the foundation stone; this ceremony took place in Luoyang. This JV marks the world's most technically advanced car bearing hub and needle roller bearing production project that either party have entered into. The project covers a manufacturing/production area of 150,000 square metres; the total investment from both sides is in excess of 174 million dollars. During the first phase of this project the investment will be 93.5 million dollars. The project will engage the world's most advanced bearing manufacturing technology the equipment will produce high quality second-generation hub bearing units in addition to needle bearings for gearbox applications. The total manufacturing/production capacity is calculated at 50 million sets per year. The markets for these products will primarily be aimed at domestic; however within the second half of 2012 a portion of the facilities production (automobile motorcycle) will be

allocated to the overseas markets.



**LYC attended the China import and export fair in Guangzhou**

LYC attended the China import and export fair in Guangzhou April 15 – 20<sup>th</sup> 2011 LYC sales associates received several hundred valued enquiries from customers from over 30 countries.



**LYC parent company HNCC ranked the 446<sup>th</sup> among the 2011 world top 500 enterprises**

Beijing time on July 7 2011 US journal 《FORTUNE》 official website released the 2011 latest world largest 500 enterprises .LYC parent company HNCC's 146.99 billion RMB revenue taken for granted it entered into the world top 500 enterprises and ranked 466<sup>th</sup>.

**LYC approved US GE Company**

August 9<sup>th</sup> - 11<sup>th</sup> US GE (China) medical treatment group inspected LYC's third generation CT machine bearings for quality assurance, ability to design, develop produce and service etc.

LYC supplied GE with their first and second CT machine bearings, this audit team inspected LYC's Technical center, Quality Control, Environment Protection Division, and Supplies division. The New LYC project for Wind power bearing department, and the Precision bearing plant, they also reviewed LYC's supplier management, production processing, and product design and researched the product inspection processes, and the service division. GE's inspection team finally agreed to LYC's conformability.

**LYC achieved shield machine spindle bearing short run production**

August 11<sup>th</sup>. Shield machine spindle

bearing which was researched for our client was in a final assembly at the extra large size bearing plant. This means that this product can allow the unit to produce short production runs.

**LYC Wind turbine bearing testing equipment realizes series production**

The 2 MW Wind power bearing gearbox bearing was in final assembly stage, this was independently developed by LYC at the beginning of 2008. LYC developed a 1.5 MW Wind turbine Yaw bearing testing machine, a 2 MW Spindle bearing testing machine, a 2 MW wind turbine bearing gearbox bearing testing machine, from which we expect that this October a 2.5 MW Yaw bearing testing machine will come into use. LYC will have the ability to test their entire series of wind turbine bearings.



**LYC's rail transit bearings applied to the subway maintenance market**

300 sets of LYC's bearings are being used to maintain Guangzhou subway, the customer is satisfied, these have been in service over 1 year. The bearing performance has been studied for safety and reliability. Recently LYC made a bid for the Guangzhou subway bearing maintenance, the competition was from foreign bearing factories, in addition to foreign bearing agents. Guangzhou subway line has a one vehicle axle box bearing. A 3 year maintenance contract has been successfully awarded to LYC.

**The first set of the third-generation medical CT bearings came off the assembly line successfully**

After 3 years' of research by LYC's R&D team, LYC has developed the first set of the third-generation medical CT bearings in China. After nearly 10 months bench testing, the bearing passed the user acceptance and officially placed this design into small batch production. The product has been developed for the world's largest CT medical equipment supplier. This project was listed in their research plan that established a

professional R & D team to carry out their scientific research. There was much to take into account with the products special working conditions and characteristics during the development process, the R & D team solved many processing problems from similar products within the international market. LYC optimized the design and adjusted the bearings structure more than 30 times. Ultimately, the product was finalized and passed bench testing for up to 24 hours everyday; a total of 10 months of testing with 25 million rotations were successfully concluded. The customer finally accepted LYC's testing result and agreed to a small volume production run. These results laid a sound foundation and new business growth for LYC to develop future products in the high end products for this type of industry.

**LYC develop a one of a kind bearing product for robotic products**

Industrial robotic bearings are high end products that have evolved from the accelerated pace of industrialization within the country, the market base is very broad. At the end of November, LYC's new thin-section slewing bearing for heavy duty industrial robots came off the assembly line and was delivered to the customer. The successful development of this product has expanded LYC's

market share in this field and allowed us to play a critical role for any Robotic manufacture, this also allows LYC to expand this high end product market. LYC's new heavy duty industrial robots thin walled bearings rolled smoothly off the assembly line and are sent to the customer. The successful development of this product has captured a segment of the company's manufacturing base, and is targeted for further expansion to play a critical role for the company's growth in this high end product market.

**LYC to fully utilize their Science and Technology advantages to obtain fruitful patents**

In 2011, LYC technical staff focused on their enterprise target to play a scientific and technological role so as to increase their scientific and technological innovation advantage. The objective being to increase the amount of independent intellectual property rights. This is especially

true in the core competitiveness of the company's enterprises, engineers and technicians, combining the commitment to the national & provincial projects research that apply their talent in the research and development of new processes. The new technologies, methods, and new products, that are evolved from invention and patent projects will play an outstanding role in the protection and promotion of the enterprise, so as to seize the high ground of the market. Throughout the year LYC obtained, totally, 22 national patents including 8 patents of invention. Currently LYC has submitted another 18 patents to the National Patent Bureau, including 6 patents of invention.

**LYC participated in the Middle East largest steel seminar in March 2012**

LYC participated in the Middle East largest steel seminar in March 2012 and had discussions with many procurement and technical managers in very well known steel mills. LYC customer's requirement and proposed LYC's transmission solutions. During the visit the LYC team also visited other famous Middle East enterprises, further understood the local market conditions and made the promotion of LYC brand.