

LYC Received Orders from CORUS

In October 2008 LYC signed an agreement with CORUS. CORUS are an international metals manufacturing industry group. CORUS is one of the leading brands in the global metal manufacturing industry and engages its own cutting-edge technologies and products.



China's Largest Ladle Turret Bearing has been supplied by LYC

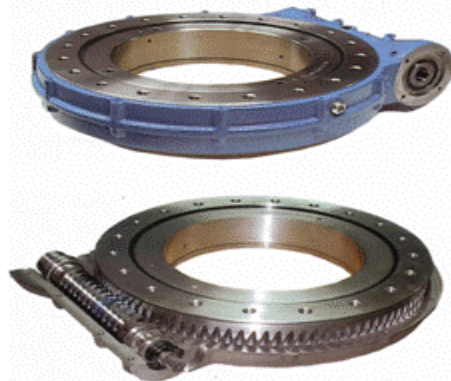
On November 17th 2008 China's largest ladle turret bearing was produced by the LYC facility in Luoyang. The diameter of this turret bearing was 5.33 metres with a weight of 9.8 tons per set and a load capacity

of 250 tons. The turret bearing is a new line for LYC in the production lines of large steel industries within China.



LYC's Solar Energy Bearing Sales Volume Doubled in 2008 with exports to Italy

In 2008 LYC exported solar energy products to Italy in an effort to make the most of every increasing demand in the energy resource field. LYC's solar energy bearings sales volume increased over 200% in comparison to the same period last year.



LYC's product scope expanded to non-bearing products

Press release on December 25th 2008. LYC's product scope is expanded from bearings into non-bearing products such as gears, racks, bevel gears, transmission shafts, and turbo worms etc. These products are successfully being exported to Spain, Italy, and Australia.



LYC launched GPS tracking system in Logistic Distribution

Press release on December 28th 2008. LYC has made vast improvements to their logistic distribution management systems by adding new material control methodologies and implemented GPS tracking systems for deliveries within China.

LYC appeared in the China stamp series

The China International Stamp Exhibition 2009. LYC's excellent technical and R & D capabilities assisted them in being selected to be identified in the China stamp series of 'Light of Science' the theme of this stamp series is based on high-tech products.



LYC were awarded another 15 patents

LYC were awarded an additional 15 patent certificates in 2008 to add to their already 91 patents. LYC continues to consistently focus on independently identifying innovational products and developing new engineering techniques. LYC is excelling in manufacturing more competitive products by applying increased efficiencies in addition to their success by being awarded intellectual property rights.

LYC signed a contract with Sandvik

LYC received an order from Sandvik on March 17th 2009. Sandvik is established as one of the top-ten companies in the world for Mining and Construction industry equipment. Sandvik specialize in engineering design and equipment manufacture for the Mineral and Construction industry.



LYC redesign their English website

LYC redesigned their English web site (www.lycbearing.com) this has been operational since March 2009. It consists of the company profile, hot products, hard news, manufacturing units, applications, and technical support etc. LYC have identified ever increasing international traffic

on their web site. About 70% of our customers download the bearing basic knowledge, technical data, and product presentations.

LYC new general products catalogue launched

LYC updated their English edition of their general products catalogue in March 2009. This book illustrates in great detail the LYC product range including basic structure, types of bearings, designations, specifications, friction characteristics, limiting speeds, materials, and applications etc. In total there are 619 pages, this is also in hard copy for customers and LYC's overseas distributors, generally many prefer to download this information in the PDF format from the LYC web site (www.lycbearing.com). LYC produce bearings in nine individual categories with more than 10,000 differing variants from a minimum 8mm in ID to maximum 7.00 meters in OD.



LYC's debut at Hannover Messe 2009



On 20-24th April LYC attended Hanover Messe 2009 Exhibition. LYC's well designed booth attracted numerous customers. LYC exhibited more than 30 different types of bearings in 6 different series including a wind turbine bearing (for a 1.5 MW application), rolling mill bearings precision bearings vehicle bearings railway bearings, and bearing components etc. The Yaw bearing and the Main Shaft bearing attracted most interest due to the size and scale of these bearings and the ever increasing interest and expansion of the wind turbine industry. LYC received over 200 well qualified customer enquiries, the volume and quality of these enquiries exceeded LYC's expectations for the Messe Exhibition.

LYC New project enters the construction peak

Press release on June 19th 2009. LYC New Project enters its construction peak. All the programs including precision bearing, automobile bearing and wind turbine bearing development are in full swing at the site. The plants steel-framed structures are at an advanced state. The first –stage construction is expected to be completed by the end 2009.

LYC developed large wind turbine bearing tester

Press release June 22nd 2009. With independent intellectual property rights LYC have developed their large-scale wind turbine bearing test rig to meet the technical performance standards for the testing of wind turbine bearings. This allows LYC to test the bearings performance, endurance and reliability under extreme conditions. The simulation allows the equipment to recreate operating conditions within the field, extreme forces are applied to the bearings, radial, axial, moment, impact, friction, and torque performance etc, are all monitored. Test parameters can be specified by our customers or by using international standards. Recently this test rig has been through an extensive domestic wind power evaluation. LYC's development of this testing rig is being internationally accepted as one of the world's international standards for Wind Turbine Bearing Testing.



large-scale wind bearing tester

3 MW yaw bearing for off-shore Wind Turbine are developed by LYC

Press release June 23rd 2009. LYC successfully produced a 3 MW Yaw bearing. The bearings application is in a marine wind turbine generator; this is the largest capacity at this time to be specified in an offshore wind turbine project in China. LYC is dedicated to expanding wind turbine applications in both on-shore and off-shore applications. LYC are currently in a development phase to produce bearings for a 5 MW off-shore wind turbine.

LYC produced extra large size spherical rollers

On June 26th 2009 LYC produced extra large size spherical rollers. These rollers are solid and symmetrical high precision products, with a diameter of 150 mm a height of 180 mm and a weight of 23.4kg each. They have a precision level of up to P5. This achievement indicates that LYC are once again pushing the envelope of product research, development, manufacturing and processing. These out of the box developments are allowing LYC to establish a solid base for expansion and obtain a greater market share of larger scale products.

On-line Order Tracking Systems are added on LYC's New Web Site

Press release on July 1st 2009. LYC revised and upgraded their English web site to facilitate their online product search, customers order tracking, delivery status and the visitor's source for statistical data analysis etc. When a VIP customer logs in they will be allowed to check their order status by detail, including the date of the order, the approval confirmation time of all technical conditions, the time for completing each manufacturing process including material preparation time, ring rolling, turning, heat-treatment, grinding, assembly time and time of delivery. This LYC English website will

allow a comprehensive, prompt and accurate on-line information management system.

LYC participates in the Asia Wind Power Exhibition

July 8-10th 2009. LYC exhibited at the 6th Asia Wind Power Exhibition in Beijing. On show were their 750 KW 3 MW wind turbine bearings for both on-shore and off-shore applications. These exhibits included LYC's Yaw bearings, Blade bearings, Main shaft bearings, Gearbox bearings and Generator bearings. These exhibitions clearly allow LYC to identify their dedication, contribution, commitment and achievements to the Wind Turbine Power Industry.



LYC purchase international advanced analysis instrumentation

July 17th 2009. LYC import several advanced analysis instruments, these include a Alloy Analyzer from the USA, X-Ray Stress Analyzer, Bearing Grinding Burn Analyzer from Finland and a Metallographic Microscope & Image Analysis System from Japan etc. The acquisition of these types of instrumentation shows LYC's continual commitment to the international bearing consumer industry. These types of instrumentation provide LYC with the ability to carry out scientific analysis in their product design and process improvement.



X-Ray Stress Analyzer

The installation of advanced detectors at LYC's heat treatment plant

July 17th 2009. LYC's heat treatment plant installed 4 new sets of magnetic particle detectors for applications in ring forgings; this will further enhance LYC's quality control. This type of equipment not only adjusts automatically the electric power according to different bearing dimensions, but, will also complete both longitudinal and transverse magnetization in the same time period. This new inspection equipment has extended LYC's range of inspection up to 500 mm.



LYC successfully developed EPBS main bearing

July 29th 2009. LYC successfully developed EPBS (Earth Pressure Balance Shield) main bearing. The main contributing factors to this bearing's success were dependent on the extensive development work in LYC's heat treatment process and their ability to resolve issues in the area of mid frequency induction

Major development in heat treatment quenching and tempering processes for wind turbine bearings



August 17th 2009. LYC have achieved major progress in their quenching and tempering for the heat treatment of wind turbine bearings. Their process flow has improved the low temperature impact efficiency. The result of this process will allow the performance index to far exceed the wind turbine bearing standard requirement. This development shows once again that LYC are dedicated to enhancing their domestic/international commitment to the wind turbine industry.

Full speed ahead for LYC to implement their new product developments

August 21st 2009. LYC have accelerated their new product developments. During the first half of 2009 new product developments achieved an 84% increase and design grew 83% compared to the same period

last year. New product developments have been focused in the fields of Wind turbine, Automobile, Rolling mill, Precision and the Construction machinery industries.

LYC intensive & extensive capital investment for the future

September 11th 2009. Over 1 billion RMB will be invested into LYC industries, this investment will focus on upgrading all 6 major divisions:

- 1) The Rail transit bearing project represented by the 350km/h high speed CRH bearing.
- 2) The Wind turbine 3rd bearing project represented by their gear box bearing.
- 3) The new vehicle bearing project represented by the third-generation hub bearing.
- 4) The industrial machinery bearing project represented by the Shield machine bearing and high precision roller bearing.
- 5) To research and develop a noiseless high-grade motor bearing, this will be based on a large scale automated manufacturing production system.
- 6) Increase the capacity of the Technology Innovation Center building.

All the above projects are expected to be complete within one and a half years.

LYC Computer-Aided Process Planning (CAPP) now in operation

September 18th 2009. One of LYC's key research projects CAPP has now been fully integrated. It began in April 2008; this CAPP was applied in the design of taper roller bearings in August this year and is proving to be very successful. The system enables the designers to reduce design time, with the net result of being able to double the design capacity within the design group.



LYC's Slewing bearing division take delivery of new forging equipment

September 18th 2009. This is part of the program for LYC's technological transformation project. LYC's slewing bearing division has installed a new 2,500 Ton hydraulic press with

the capacity to roll up to 4 meters in diameter. This equipment allows for a forging range from 1.6 meters to 4 meters diameter. The equipment will allow the forging output to increase to 3,000 sets per year for this size range. Accuracy and repeatability will be greatly improved. This equipment will be one of the key supports to LYC's Wind turbine division.



LYC new overhaul line for high speed railway bearings was certified by MOR

October 14th 2009. LYC extensively overhaul their manufacturing line for their high speed railway bearings. This overhaul gained LYC the production quality certification from the expert group of MOR.

LYC's testing capability improving continuously

Press release October 16th 2009.

In recent years LYC have focused on improving their testing capability and analysis techniques, in addition to actively paying close attention to international advanced technologies in the field of testing bearings. LYC's purchases of advanced testing equipment have provided LYC with technology guarantees with respect to bearing testing and high reliability of their products. These newly acquired devices such as portable X-ray fluorescence spectrometer for testing metals alloy composition, the Barkhausen Noise Analyzer for NDT bearings grinding burns, and the new style infrared carbon-sulfur analyzer have obviously extended the company's ability to test and analyze bearing materials and products.

LYC independently designed and produced huge pit-type heating furnace

Press release October 16th 2009. With independent innovation LYC's largest pit-type heating furnace is being manufactured. This heating furnace is the key equipment for the ring forgings of the wind turbine bearings phase II project. The shell diameter is 6.1 metres, with a depth of 4.1 metres. This is the largest heating treating equipment manufactured by LYC.

The industry standard drafted by LYC has passed the final audit

Press release November 5th 2009. The bearing industry standard for the Rolling Bearing High Speed Cargo Train Bearing, Rolling Bearing High Speed Railway Locomotive Bearing and Rolling Bearing High Speed Passenger Train Bearing has been successfully drafted by LYC and passed the final audit. This will be put into practice after final approval.

NDRC highly appreciate LYC's state level technical center

Press released November 27th 2009. NDRC appreciated LYC's state-level technical center, this ranks No.84 among the 574 state-level technical centers in their annual evaluation. Since being established LYC have always put the independent innovation as a priority, their technological development in the last three years has allowed LYC's technical center to complete over 200 key scientific and technological projects, including new product, R&D projects. LYC have been awarded a large amount of Key National projects, the majority of these projects are of scientific nature and deeply involved in industrialization projects. Up to November 2009 LYC has obtained 108 patents, including 10 invention patents, which have laid a solid foundation for improving LYC's core competences.

LYC wind turbine bearing Research & Development have made outstanding achievements

Press release November 23rd 2009. LYC independently researched, and manufactured the bearings for a 2 MW wind turbine generator. These designs were for an accelerated speed gearbox. These bearings are an important advancement in these types of gear box designs. For decades LYC have developed a series of wind turbine bearings with independent intellectual property rights. Examples of these have been for 600 KW 660 KW 750 KW 1500 KW generation sets. Yaw bearings, Pitch bearings, Main-shaft bearings, Gearbox bearings and other types of bearings are all supplied to the Wind turbine industry.

In May 2009 LYC successfully developed their large scale wind turbine bearing testing rig, this was developed with independent intellectual property rights by LYC. Once again showing LYC's strong commitment to the Turbine bearing industry, by providing their technical support in testing and establishing high reliability.

June 23rd 2009. LYC successfully produced the Yaw bearings for a 3 MW off-shore wind turbine for China's domestic Wind energy industry.

August 2009 LYC developed a key technology for improving the wind turbine's low temperature impact energy efficiency--- Forging and Tempering Technology for the Heat treating Process was greatly improved. LYC achieved a major breakthrough in this field. Nowadays LYC has formed its complete wind turbine bearing R&D system could supply the whole set of matched bearings for the megawatt wind turbine has the volume-produce capacity and reaches the level of international similar products. LYC's second wind turbine manufacturing plant project is under construction and is expected to be put into trial production at the end of 2009.

LYC improve the process of steel balls for wind turbine bearings

Press release December 11th 2009. The steel ball crushing load is very important factor for Wind turbine bearing reliability. LYC have improved the grinding and heat treatment processes and parameters to be more practical. According to the new design the steel ball's crushing load is far in excess than that of the international standard of 1166.2KN. The LYC process can achieve 1300 KN or above.

LYC cylindrical roller split bearings have successfully achieved localization

2009. Split bearings in the China domestic market have been dominated by importing bearings such as COOPER for many years. LYC cylindrical roller split bearings have been applied in many steel companies in China. LYC's Split bearings are being accepted by the domestic market, LYC are now achieving in roads into the international market.

LYC have been awarded the Information Application Leadership Award in Manufacturing & Industry of China

Recently the most influential annual meeting in the field of manufacturing information was held in Beijing, this event was co-sponsored by National Ministry of Science and Technology. LYC is the only enterprise from the bearing industry that relies on the project. PLM assisted LYC in going forward and was awarded the "2008 National Manufacturing Information Application Leadership Award, together with 31 other enterprises.

The project was aimed at the characteristics of bearing products and in the techniques of design to make system solutions, which, can be integrated into bearing design software, CAD and process design software CAPP, this should be based on a platform of Info Center PDM. The system solution uses greater conformity with the usage characteristics

and habits of the bearing industry rather than those in current common programs. This can be achieved by the use of practical work requirements by the user. This is now fully implemented within LYC. (December 25th 2009)

The largest sized Slewing bearing in China was put into production at LYC

Recently the largest sized slewing bearing with the outer diameter of 6.25metres in China was placed into production at LYC. The forged rings for outer ring and inner ring arrived at LYC's facility. The size of this Slewing bearing is another outstanding achievement for LYC's manufacturing, production and marketing of extra-large bearings. The bearing has been produced with the substantial investment in precision equipment. LYC defeated several competitors for this order; this order was awarded in September. LYC lead the competition with their very strong technical competencies. (December 26 2009)

