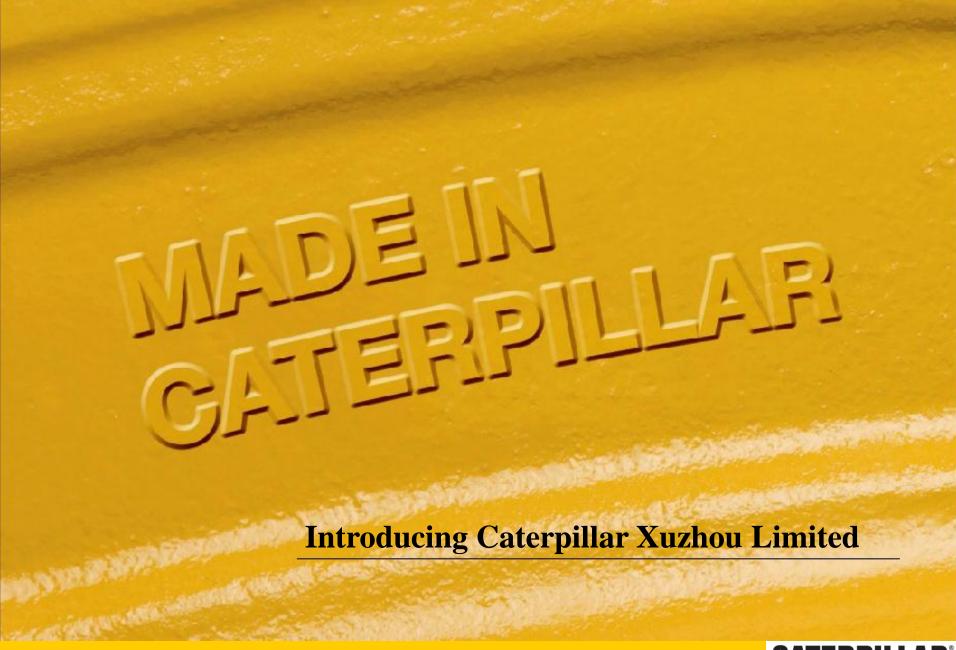


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Caterpillar: Confidential Green

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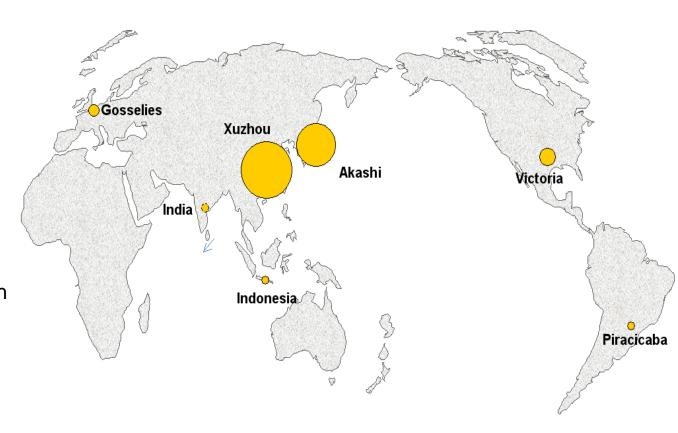


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# **Caterpillar's HEX Manufacturing Footprint**

- Driven by world class standards
- Same high quality products from every facility worldwide
- Multiple manufacturing sites support customers worldwide
- Xuzhou provides increased capacity to support worldwide growth and will become the largest excavator mfg center for Caterpillar in the world





# Our Manufacturing Facility - Caterpillar Xuzhou Limited

- A Caterpillar flagship facility
- 1800+ highly engaged employees
- 2012 employee opinion survey people engagement index 97%
- 4 manufacturing buildings in Xuzhou campus support Hex manufacturing
- 219,000 square meters of manufacturing space optimized for small, medium and large Hex production
- A safe place for our employees –
   Zero Injury for 500 consecutive
   days with 5 million working hours





# **Caterpillar Xuzhou Limited Location**





# **Caterpillar Xuzhou Limited Growth History**







**Stu Levenick Donates** 

the 5,000th HEX to







Caterpillar Xuzhou Ltd. Establishment



**CXL Groundbreaking** Ceremony

2010

Assembly Building (K) starts

Caterpillar Xuzhou New

operation



**Xuzhou Supplier Park** 

Groundbreaking



Caterpillar Xuzhou **LHEX Groundbreaking** 

CXL'S 10,000th HEX Celebration



CXL'S 50,000th **HEX Celebration** 

2011

Celebration of the

20,000th HEX Sale

25,000th HEX Sale



**Xuzhou Customs AA** Certification

30,000th HEX Sale

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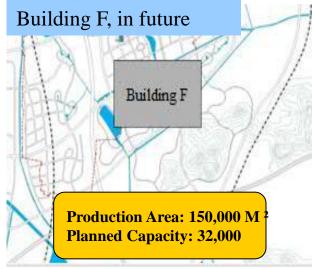
**China Operations Division** 

## Caterpillar Xuzhou Limited Growth Map





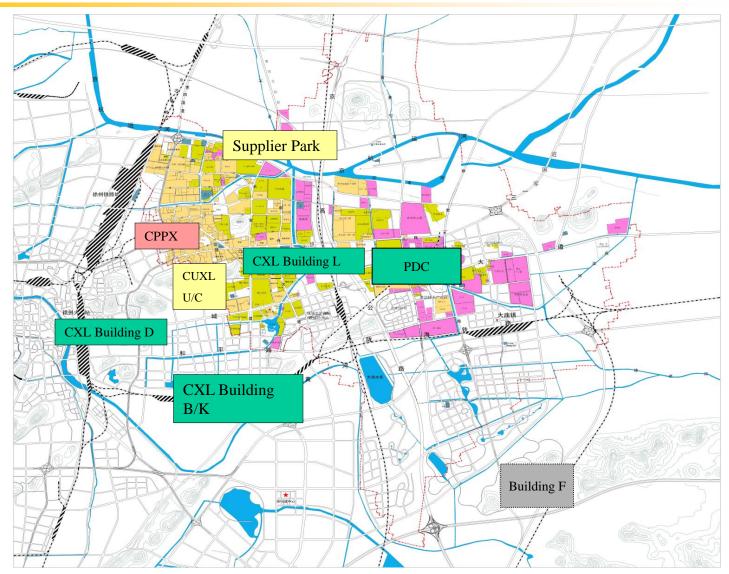




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# **Caterpillar Xuzhou Limited Manufacturing Campus**





## **Caterpillar Xuzhou Limited Products**

#### A Full Range of Hydraulic Excavators

• SHEX: 312/315/318

• MHEX: 320/320GC/323/324/

326/329

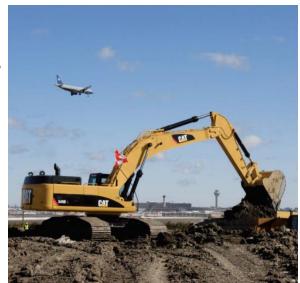
• LHEX: 336/340/349/374/390

(future products)

• OEM: 323/324/329/336

• WHEX: M313/M315

(future products)











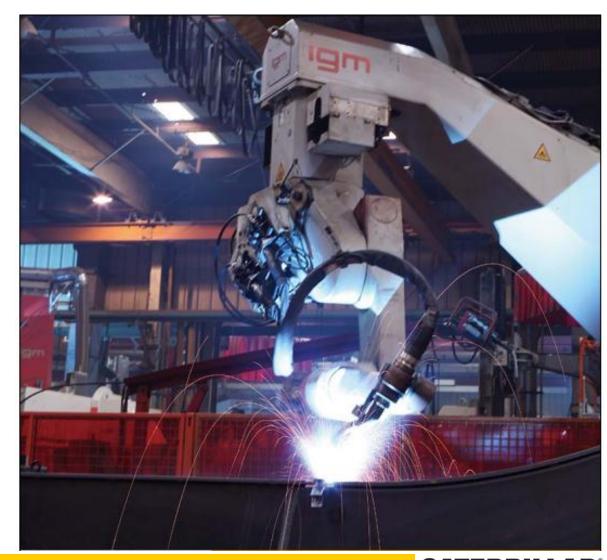
#### **Assembly Production Line**

- Caterpillar Xuzhou designed to follow Caterpillar Production System (CPS)
- The assembly production process utilizes CPS principles to realize one-piece-flow and JIT delivery.
- Continuous Improvement (CI)
   Process and Process
   Improvement Dialogue (PID)
   assures daily focus on quality



## **Robot Welding**

- Ensure weld consistency and quality
- Improve productivity
- Improve employee working environment



### **Machining Center**

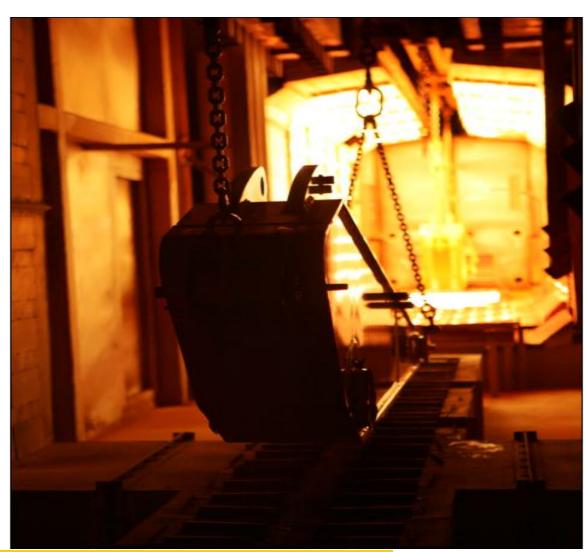
- Hex machining performed with Mitsubishi/Makino machining centers imported from Japan
- Machining process includes drilling, milling, hole-boring, tapping.
- Assure perfect assembly of every machine





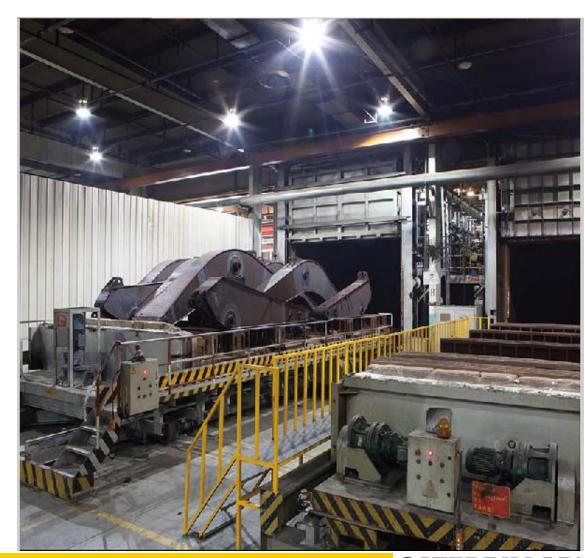
#### **Powder Painting**

- Powder painting is a Caterpillar unique process making sustainable progress possible
- Painting process includes phosphate pretreatment to prepare metal before painting (common standard process in Europe, Japan and U.S.)
- Meet Caterpillar Worldwide Painting Specifications
- All critical chemicals are from Qualified suppliers of Caterpillar



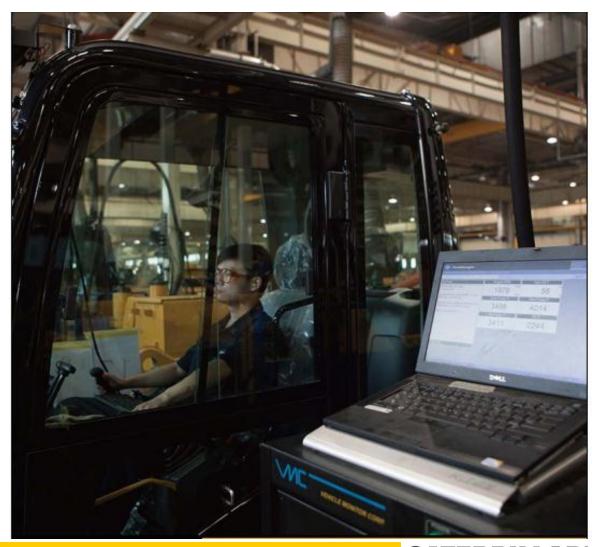
#### **Heat Treatment Process**

- Extend the service life of the Boom & Stick by reducing the stress from the weld process
- Unique process by Caterpillar



## **Computer Test**

- Advanced imported equipment for machine hot test to ensure the function for engine and hydraulic system
- Every machine is tested



## Quality Culture – Zero Defect

- Customer acceptance validation
- Ultrasonic testing for all key weld beads
- Dimension and specification controlled by CMM
- 100% Pre-delivery Inspection
- ISO9001 certification by DNV
- Internal quality certification MQ12005
- Learning / Training / Replication







## **Integrated Supply Chain Strategy**

- Caterpillar Undercarriage Xuzhou Limited built in 2012 to support our growth
- Establish Xuzhou supplier park to have key suppliers start operation in Xuzhou around Xuzhou
- Logistics solution by partner with Material Logistic & Transportation
- Plan For Every Parts (PFEP) to support Just in Time & assembly sequence operations
- Transportation optimization
- Visual traffic management







## **Our Social Responsibility**

#### Be A Good Citizen

- Scholarship at China University of Mining and Technology
- Caterpillar Charity Forest Project
- Foundation for Pengcheng Special Education School
- Support in local high schools, welfare house









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## **Our Social Responsibility**

#### Be A Greener Company

- Building K & Large Hex Facility Lead Certification
- Grey Water Recycling Corporate Chairman
   Silver Award
- Waste water treatment plant and all waste water are treated to discharge with Class I
- Steamed water to be used for showering, fire sprinkler system and machine washing
- Powder painting to improve paint efficiency and educe waste discharge
- Waste collection as various categories living garbage, hazardous waste and recycling waste







## A Journey From Good to Great...



# Team Caterpillar Xuzhou Makes All The Progress Possible









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