





#### QUALITY, ECONOMY, QUICK DELIVERY

# JSHP Transformer

Feb. 2009

#### **Quick Facts**

Founded in 1967

No. of employees: 2000

Revenue in 2008: US\$753.73 millions

Delivered MVA in 2008: 59,235 MVA

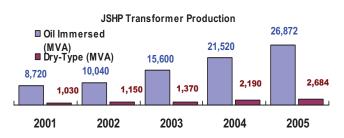
Average order production time: < 6 Months (ARO)</li>

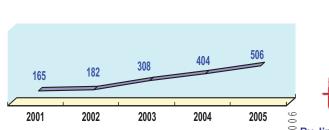
110KV & up units delivered 2008: 823

- 110KV below delivered: 5,517 units in 2008

Manufacturing Capacity: 80,000 MVA up to 500kV

 Zero field failure rate record since delivered first transformer in 1970 with thousands of units around the





110KV Up Oil Units Delivered

#### **Market Position**



- Tops the 2005,2006,2007,2008 Top 10 Chinese Transformer Manufacturers
- Has 28% of 110KV-220kV market in last 3 years in China

2007 Top Ten

China Transformer Manufacturers China 110kV-220kV Market
Published on May 20, 2008 2007

Order	Manufacturer	Sales in US dollars		
1	Baoding Tian Wei Baobian Electric Co. Ltd. ( BTW Transformer )	\$442,047,143		
2	JSHP Transformer	\$433,965,714		
3	Xian XD Transformer	\$381,572,857		

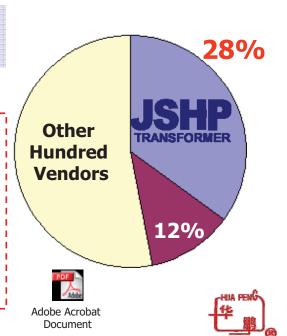
## 2006 Top Ten China Transformer Manufacturers

**TBEA Hengyang Transformer** 

Published on May 21, 2006

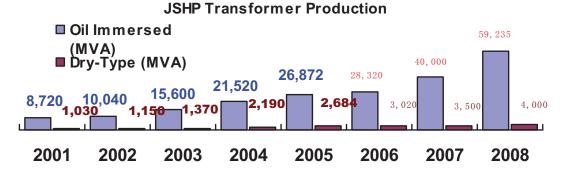
\$331,707,143

Order	Manufacturer	Sales in US Millions	Profit in US Millions
1	JSHP Transformer	\$305.81	\$16.04
2	Xian Xidian Transformer	\$258.77	\$17.15
3	BTW Transformer	\$256.50	\$28.79



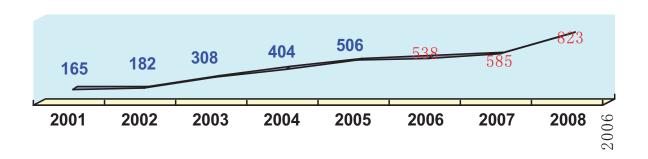
#### **Stable and Strong Growth**

A completely private company under the same management team for over a decade



Delivered hundreds of 110KV & up units per year

110-345kV Oil Units Delivered



#### **Product Line**

#### Oil-Immersed Transformers

- **Up to 345KV, 400 MVA**
- 500 kV, 800 MVA in 2009

#### Cast-Resin Transformers

- Up to 35KV, 20 MVA (delivered 3,128 units in 2008)



- 10KV/230V, 10kVA-160 kVA



Annual Production: 10,000 tons







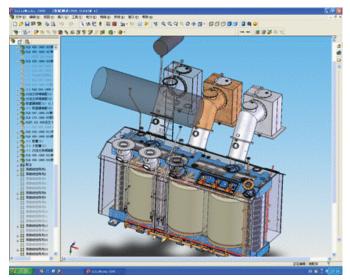




#### **Engineering**

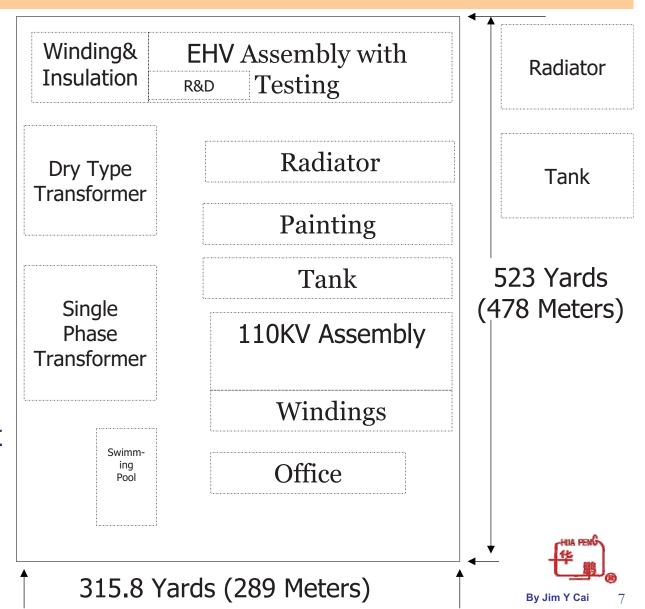
- R&D has more than 60 full time staff
  - With design & simulation software





### **JSHP Campus Layout**

- 44 acres
- < 2 miles to highway
- < 3 hours</li>to Port ofShanghai
- 1.5 million
   square feet
   of factory
   space



## **JSHP Campus**





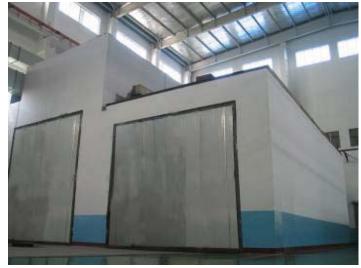




## **New Tank Shop Cross Street**









### **JSHP State-of-the-Art Facility**

#### Typical Factory Space Equipment Setup

- Special enclosed A/C workshops
- 200&100 ton travel cranes in different factory spaces
- Two Georg's slitting lines
- Two Georg's length cutting lines
- 120 ton swiveling device
- Each factory space has its own dry-out furnaces
- 12 winding machines in each factory space

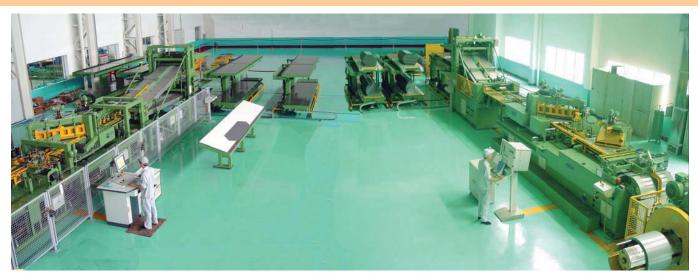








## Georg's Cutting & Slitting Lines







## **Core Stacking**



**120 tons** 



### The Winding Machines

A dozen winding machines including LAE (Italy)











## Workmanship





#### **Drying Machines – Vapor Phase**

Guarantee to be tanked in 6 hours or less after drying





#### **Testing**

- 3000 KV, 300 KJ Impulse Generator
  - 60 Hz Generator



#### **Quality Control - Zero Failure Rate**

#### Maintain excellent record with growth

Year	110kV & up Units	Test Failures	Total Test Failure Rate	Of Compon ent Failures	Misc. Test Failure Rate	Field Failure Rate
2001	165	8	4.85%	4	2.42%	0.00%
2002	182	9	4.95%	4	2.75%	0.00%
2003	308	13	4.22%	7	1.95%	0.00%
2004	404	10	2.48%	7	0.74%	0.00%
2005	506	9	1.78%	6	0.59%	0.00%
2006	538	11	2.04%	8	0.56%	0.00%
2007	595	10	1.68%	7	0.51%	0.00%







## References (1) – Shanghai

#### "Upstairs" Radiator Installation

- 35kV $\pm$ 3imes2.5% / 10.5kV 20MVA, ONAN
- Tap Changer: ABB
- Caoyang Substation, Shanghai
- Commissioned: June, 2003







#### References(2) – Low noise < 52dB

- $110kV \pm 8x1.25\% / 10.5kV$ , 40MVA
- Cooling: ONAN
- On-load tap changer: MR
- Jiangsu Province, China
- Commissioned: March, 1999
- The noise level < 52dB</li>





## References(3) – 110KV/180 MVA

- $-110kV \pm 8x1.25\%/38.5kV \pm 2x2.5\% / 10.5 kV$
- Capacity: 180MVA Cooling: ONAF
- On-load Tap Changer: MR
- Jincang Group, Gansu Province, China
- Commissioned: Dec. 2005



#### References(4) 220KV/180MVA

 $220kV \pm 8x1.25\%/110kV \pm 2x2.25\%/38.5kV$ ,

**1050KV BIL** 

180MVA Cooling: ONAF

On-load tap changer: MR

**Chating substation, China** 

Commissioned: Dec. 2006

Passed the short-circuit test

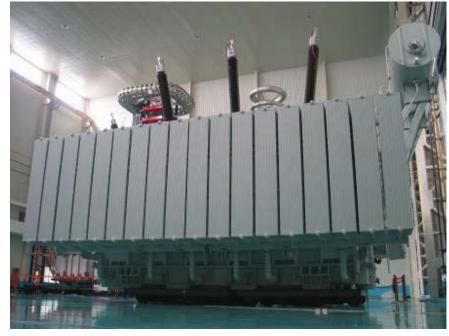




#### References(5) 220KV/240MVA

- $220kV \pm 8x1.25\%/118kV/37.5kV$
- 240MVA Cooling: ONAN
- Suzhou substation, China
- Passed the China State Grid's Certification





#### References(6) OEM to GE

- + 115kV  $\pm$  2x2.5%/10.5 kV
- 52MVA Cooling: ONAN
- GE oil & Gas ENEL GREEN POWER
- Conducted and Passed a Short-Circuit Testing
- Commissioned: Sept. 2006



#### **Another One:**

69kV±2x2.5%/13.8kV
25 MVA, 60Hz
San Diego County
Water Authority
Delivered March, 2006



### Come & Visit – 2:00 hours extra flight

- 2:00 hours flight from Seoul, Korean Airport
- 30 Minutes Drive from Nanjing Intl. Airport



#### **JSHP Service in North America**

- 1. JSHP has made a serious commitment to the North American market with a Marketing & Service Office in California.
- 2. JSHP has a service agreement with North American Substation Services (NASS) for NASS to provide prompt support.
- 3. JSHP commits 72 hour response time on service in US.







#### **JSHP** in North America

Passed Vendor Pre-qualification







Users



























### The Factory Floor Video @ YouTube

#### **OPEN TO THE WORLD**

**Who visited JSHP:** 











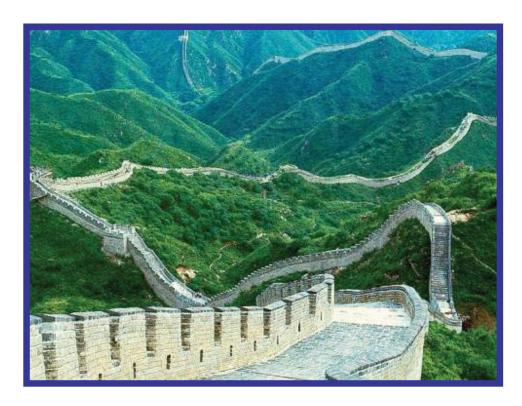




In Learning Mood Always!



## Really Appreciate Your Time



**Something Built in China Long Time Ago Still Stands** 

