



華翔 *Huaxiang*

Shanxi Huaxiang Group

“Never Say No to its Market & Customers”



華翔 *Huaxiang*

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Rev: 1.2.0

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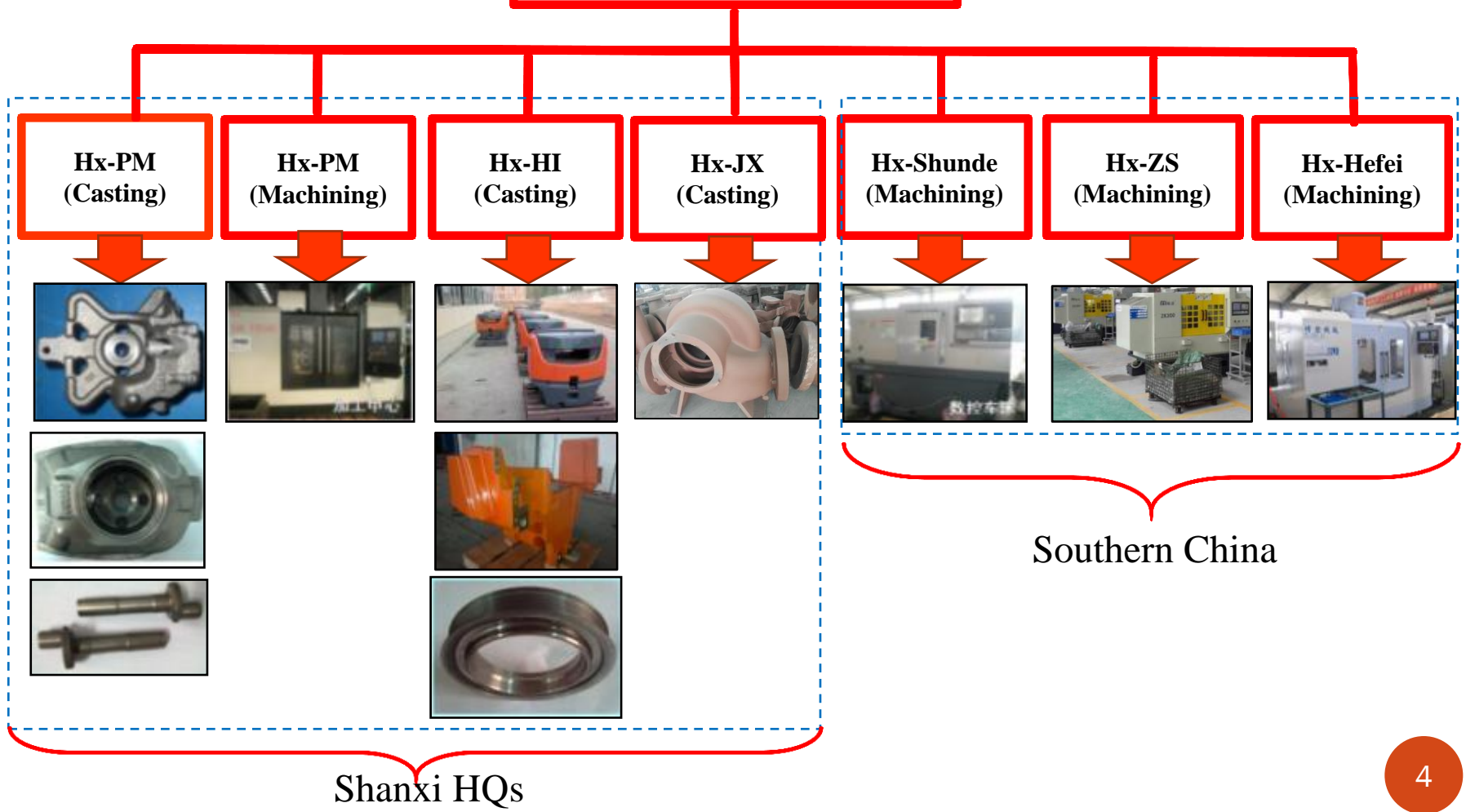
7. Location of Huaxiang Group

1. Huaxiang Group- Overview

- Company Name: Shanxi Huaxiang Group
- Established: June 1999
- No of Employees: ~4000 (Technician: ~770)
- Manufacturing Space: 520,000 square meters (SHG Industrial Park)
- Production Capacity:
 - **Casting Capacity:** 280,000 tons/annum (Vacuum & Disamatic production lines)
20,000 tons/annum (Resin sand production line)
 - **Machining Capacity:** ~100 million pcs/annum (CNC & NUM machining centers & lathes)
- Annual Turnover: 1.8 billion RMB (~244 million EUR)

1.1 Huaxiang Group- Structure

Shanxi Huaxiang Group

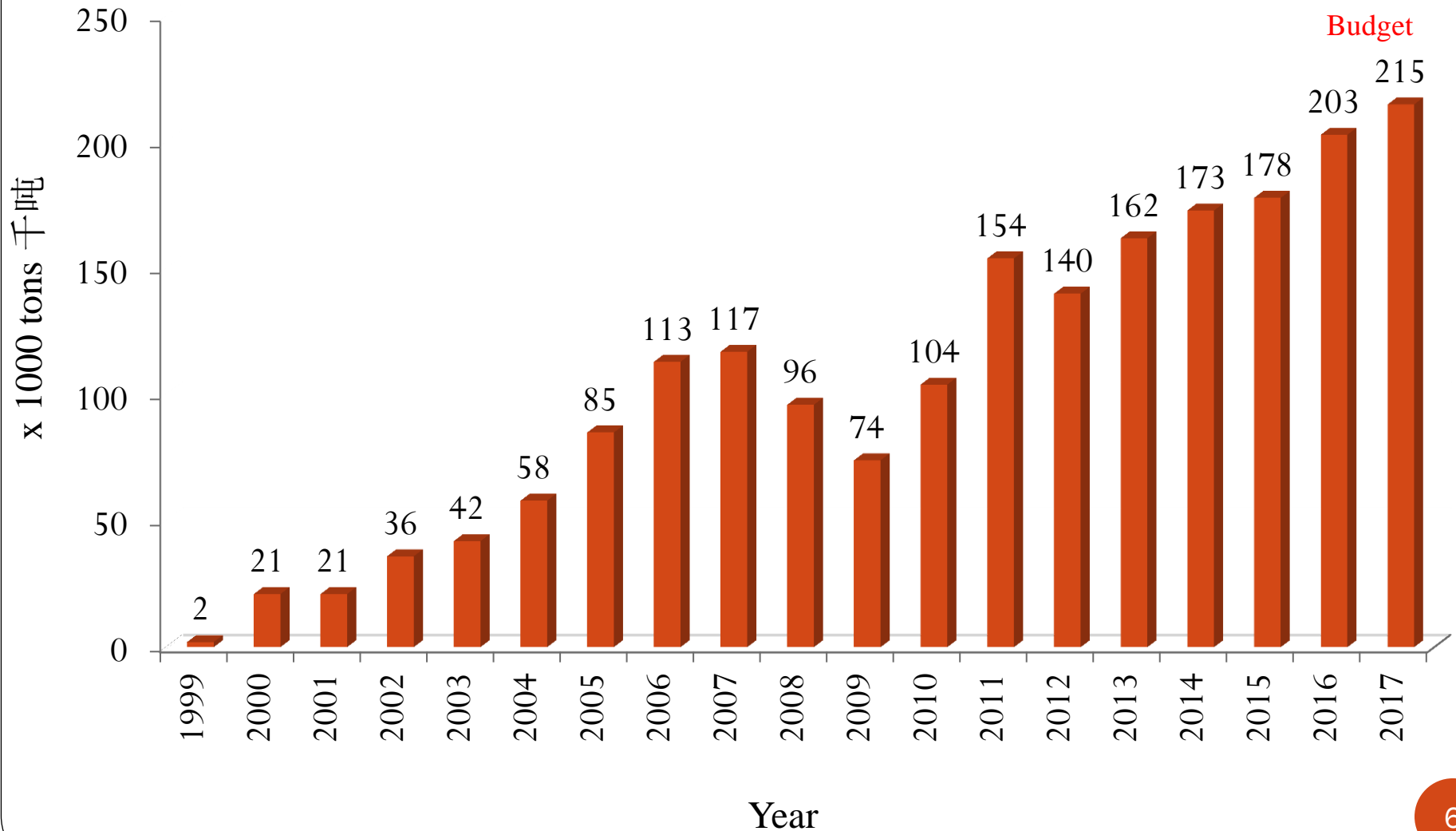


1.2 SHG Industrial Park (est.2009)



Huaxiang industry park began to construct from 2009, accounts an area of 520k square meters.

1.3 Huaxiang Group- Sales volumes (Thousand tons/year)



2. Huaxiang HI-Overview

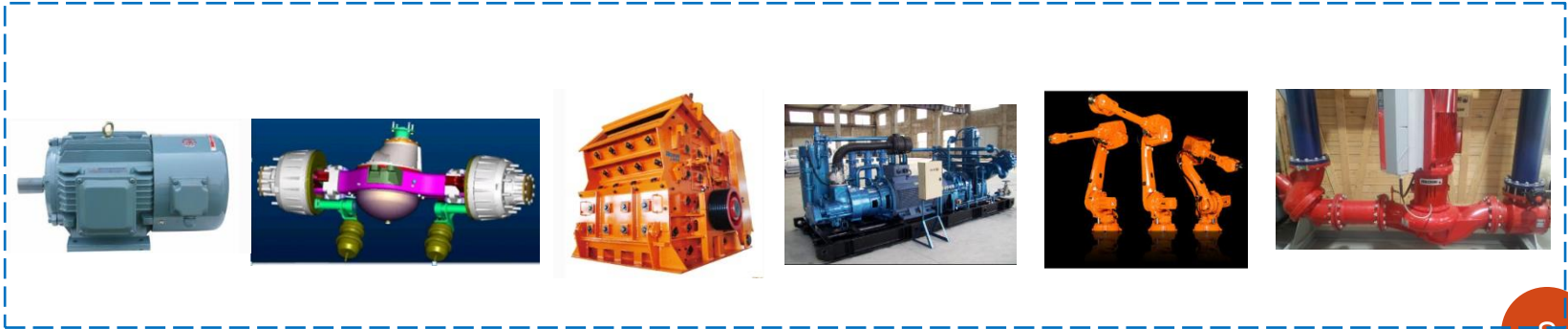
- Established: June 1999
- No of Employees: ~600 (Technician: ~120)
- Manufacturing Space: ~80,000 square meters
- Production Capacity:
- Vacuum Production line: 100,000 tons/annual
(Grey & Ductile Iron grade)
- Resin sand Production line: 20,000 tons/annual
(Grey & Ductile Iron grade)
- Material Grade: Grey Iron: EN-GJL-100 – EN-GJL-300
Ductile Iron: EN-GJS-400 – EN-GJS-700
- Product weight: Grey Iron: 15kg – 15,000kg
Ductile Iron: 15kg – 5,000kg

2.1 Huaxiang HI- Introduction

**Shanxi Huaxiang Group
HHI company**

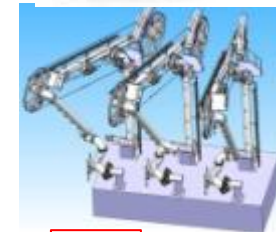
**Grey Iron
Casting Division**

**Ductile Iron
Casting Division**



2.2 Industry Profile-Vacuum production

No	Industry	Product Range
1	Material Handling	I.C & El forklifts
1.1		Tele-handlers
2	Construction	Excavators
2.1		Wheel loaders
2.2		Crawler cranes / Industrial cranes
2.3		Gearboxes, Hubs, Housings etc
3	Aerial Works Platforms	Lift platforms
4	Port Solutions	Reach- stackers
4.1		Empty container handlers
4.2		Straddle carrier
5	Loading Systems	Off-shore loading arms
6	Agricultural sector	Tractors
7	Drilling & Foundations	Pile- driving equipment



2.2 Industry Profile-Resin sand production

No	Industry	Product Range
1	Motor	Electric motor
1.1		Motor housing
2	Fluid control	Pump, Valve
2.1		Valve body
3	Chassis drive	Axle
3.1		Bridge, wheel hub, Drum brake, Reducer housing
3.2		Gearbox housing, Planetary gearbox housing
4	Air-compressor	Body, Cylinder
5	Industry robot	Arm, Base
6	Wind, Power	Box, Gear carrier, Electric wheel hub
7	Mining machine	Crusher (Flywheel, Rotation plate, Reducer housing)

1



2



3.1



3.2



4



5



6



7



2.3 Customer Profile

Material Handling



Construction



Other Industry



Aerial Works Platforms



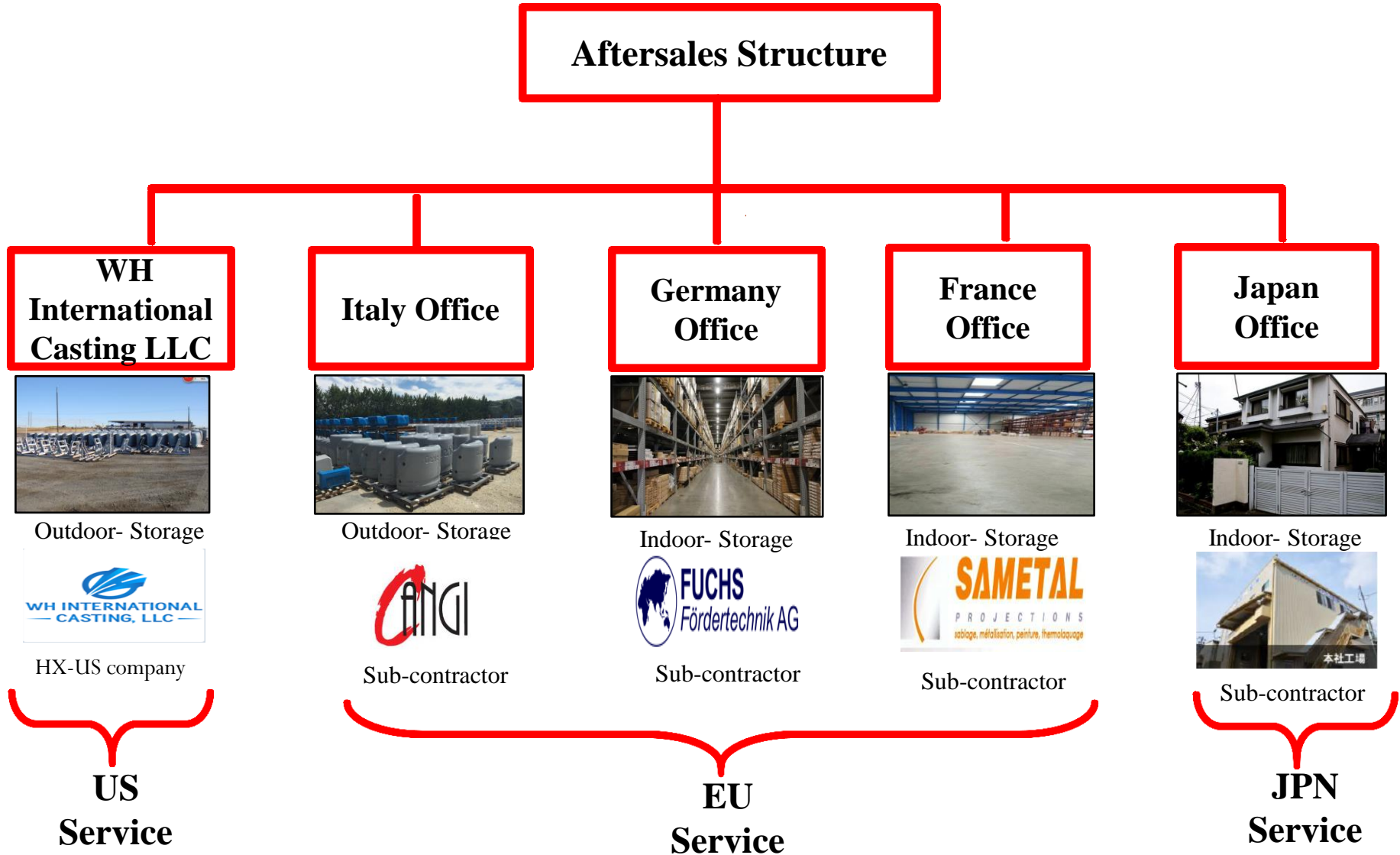
Port Solutions



Agriculture



2.4 Huaxiang After-sales Structure



2.5 After-sales Operation flow



Vessel Unloading at European port

★ Customs clearance, import duty, VAT??



Transport from Port Terminal to **HX Warehouse**



HX Warehouse

Defective Part

Transport to Repair Subcontractor



★ Inspection (Visual check by trained people)



OK Part

Painting Operations



Storage



Transport to final Customer

Customer A

Customer B

Stored in rework plant and to be prepared for next delivery to customer



3. Production Equipment

 3.1 Melting equipment

 3.2-3.3 Molding equipment

 3.4 Machining equipment

 3.5 Painting facilities

 3.6 Mould production workshop

3.1 Melting equipment



2 x Cupola/Vacuum
(up to 20tons/hr)



2 x medium frequency furnace/ Resin sand
(up to 3tons/hr)



2 x medium frequency furnace/ Vacuum
(up to 1ton/hr)



3.2 Molding equipment- Vacuum Line

3 x Vacuum production lines (7500tons/Month)



4 x Shot-blasting machines
(up to 20tons/charge)



3.3 Molding equipment- Resin Sand Line

2 x Resin sand production lines (2000tons/month)



Automatic dryer



Shakeout machine



Sand preparation equipment

3.4 Machining equipment

7 x CNC Machining Centers
(Horizontal & Vertical) (up to 70pcs/day)



2 x N.C Horizontal machining lathe(up to 20pcs/day)



3 x N.C Gantry Milling Machine
3 x N.C Horizontal Boring & Milling Machine
(up to 120pcs/day)



1 x N.C Vertical machining lathe(up to 15pcs/day)

3.5 Painting facilities-(Primer)

2 x Automated primer lines
(up to 5000tons/month)



3 x Telescopic primer booth
(up to 5000tons/month)



3 x primer grinding booth
(up to 5000tons/month)



3.5 Painting facilities-(Top-coating)

1 x Automated top-coating line
(up to 4000tons/month)



4 x Top-coat booths
(up to 4000tons/month)



3 x Top-coat spray booths
(up to 4000tons/month)



3.6 Mould production workshop



Mould production workshop

- Total moulds: 2000+ sets
- Manufacturing Capacity:
 - In-house:
3 sets/month
 - Out-sourcing:
8-12 sets/month (CNC manufacture)

Wood mould



Resin mould



- Mould produce lead-time: 3~4 weeks
- Mould material: Wooden & Resin & Aluminum

4. Products display



4.1 Grey iron product pictures



4.2 Ductile iron product pictures

4.1 Product Pictures (Grey Iron)

TMHMF I.C Forklift
(top-coat)



JCB Tele-handler
(top-coat)



Genie AWP
(top-coat)



TMHMI Rear-Frame
(top-coat, CNC machined)



Volvo Excavator
(primer, machined)



Kalmar RS
(Primer, 12.7 tons)



Haulotte, AWP
(structured coat)



Claas, tractors
(machining, top-coat)



4.2 Product Pictures (Ductile Iron)

TMHMF Forklift Bridge/40Kg, Housing/20Kg



Doosan Korea Push link/14.77Kg



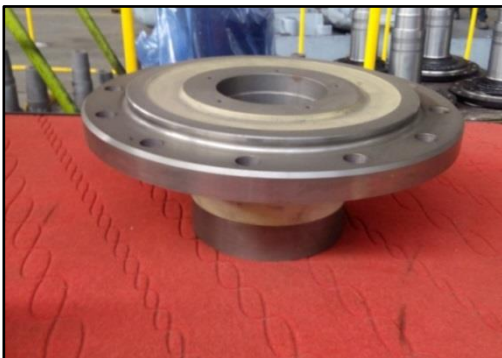
Kalmar Straddle, Bearing Case/60Kg Junttan Cranes, Winch-Drum/196Kg



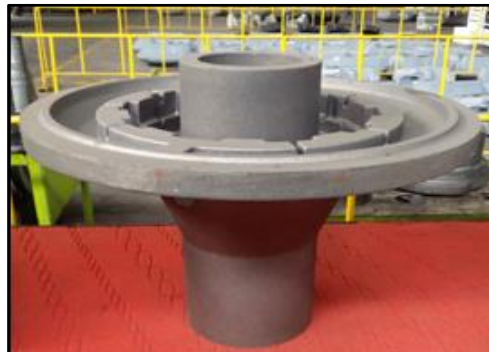
JDH Pump, valve & pipe fittings



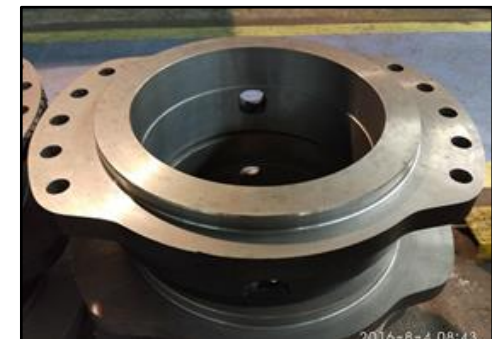
Kalmar Hub/85Kg



Doosan Norway Axle rear cover/189Kg



TMHMI Adapter Housing/57.44Kg



4.2 Product Pictures (Ductile Iron)

Komatsu Bracket/35kg, 203.5kg



Komatsu Lever/47.4kg



ERG Carrier/50kg



KUKA Robot Arm/143.7kg



Doosan Norway Axle/378Kg



TMHMI Front Axle Unit/473.10Kg



5. Quality Assurance & Package

 5.1 Quality Assurance devices

 5.2 Ductile iron package design

5.1 Quality Assurance (1)

Chemical Analysis



Wireless thermometer



Sand properties test



3D- Automated CMM



X-Ray machine

5.1 Quality Assurance (2)

Micro-Structural Analysis



Spectrometer



3D- Coordinate Measuring Machine (CMM)



**Mechanical
Inspection
(Digital)**

5.1 Quality Assurance (3)

Impact test



MT (Magnetic) Test



UT (Ultrasonic) Test

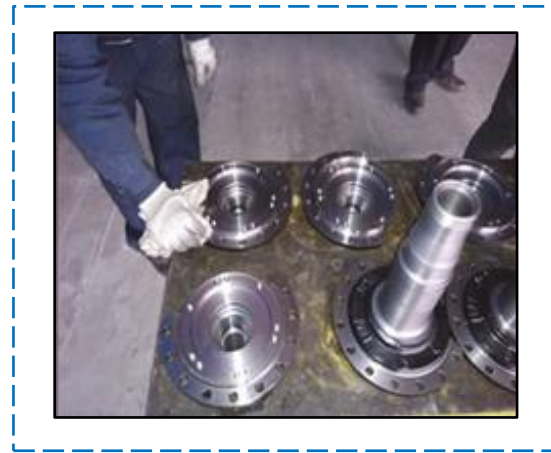
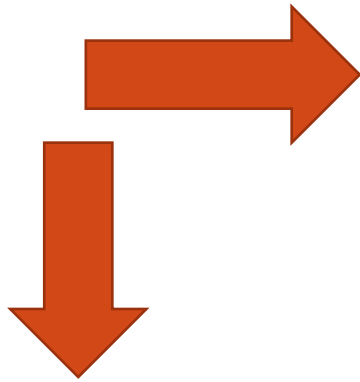


Hardness tester (Digital)



5.2 Anti-rust and Package

Anti-rust Treatment



Package



6. Huaxiang Group Certification



China Quality Certification
中国质量认证中心
International Certificate Network
国际认证联盟



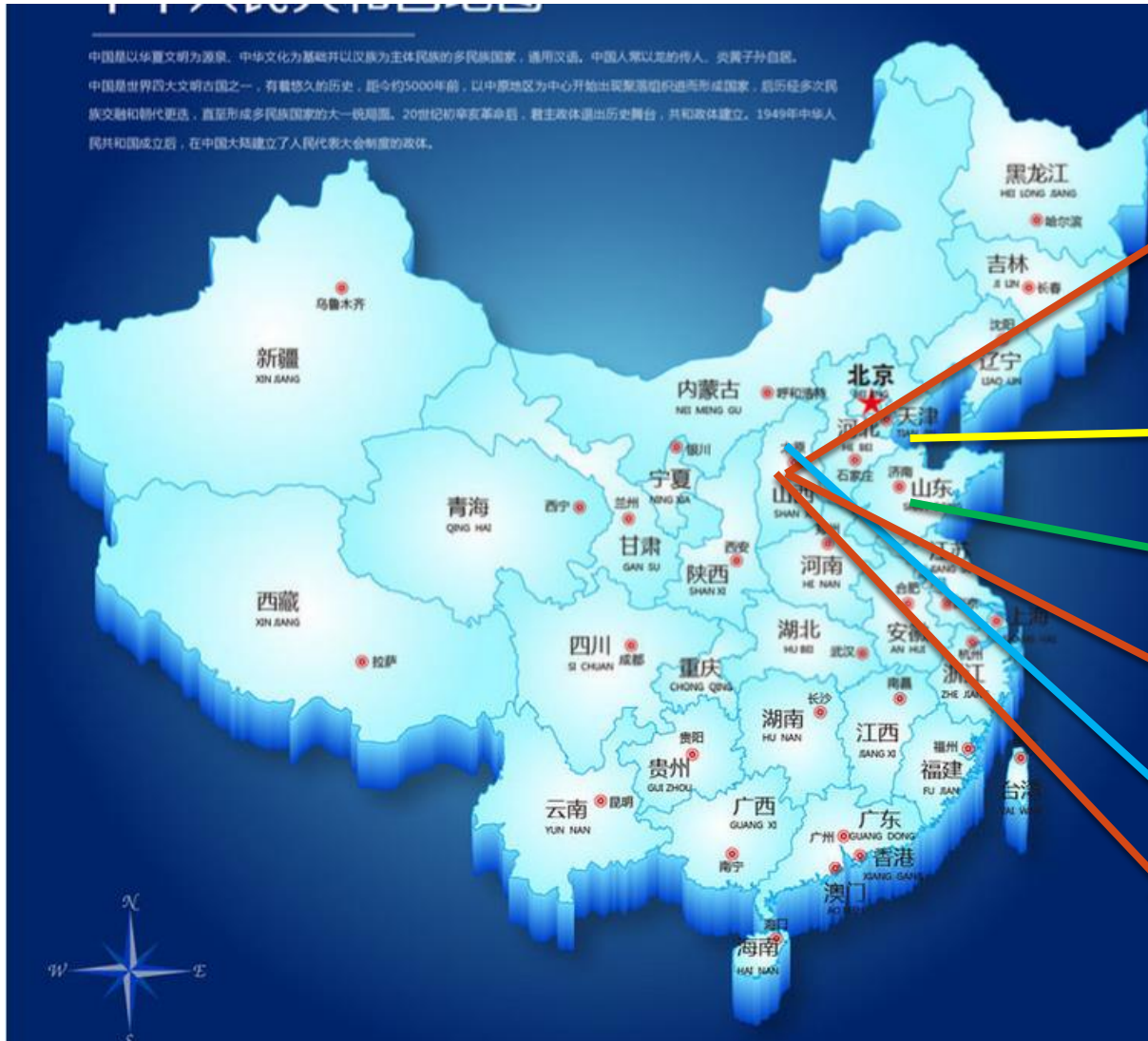
- Quality Management System: ISO9001: 2008, ISO/TS-16949
- Environmental Management System: ISO14001: 2004
- Occupational & Safety Management System Certificate:
- OHSAS 18001: 2007

6. Huaxiang Environment & D-U-N-S Registered



7. Location of Huaxiang Group

中国是以华夏文明为源泉，中华文化为基础并以汉族为主体民族的多民族国家，通用汉语，中国人常以龙的传人、炎黄子孙自居。中国是世界四大文明古国之一，有着悠久的历史，距今约5000年前，以中原地区为中心开始出现聚落组织进而形成国家，后历经多次民族交融和朝代更迭，直至形成多民族国家的大一统局面。20世纪初辛亥革命后，君主政体退出历史舞台，共和政体建立。1949年中华人民共和国成立后，在中国大陆建立了人民代表大会制度的政体。



Legend

- - Huaxiang Group (Linfen city)
- to
- - Tianjin port (18hrs, 827km, G5)
- - Qingdao port (22hrs, 1066km, G1511)
- ✈ - Linfen commercial airport (15mins)
- ✈ - Taiyuan Wusu comm. airport (2hrs 30mins)
- 🚄 - High speed provincial train (35mins)

---Thank you for your
attention.