WELCOME TO WÄRTSILÄ CHINA

James Han, President of Wartsila China
Wärtsilä China today

- 20+ years history in China
- Strong manufacturing footprint through JVs, fully owned companies and 2-stroke engine licensing

- In marine market, some leading Chinese ship owners and shipyards are not only Wärtsilä customers, but also JV partners
- Wärtsilä Services provides service and maintenance for its customers in China through eight locations
Major Milestone of Wärtsilä in China

1978
As the first western company to license 2 stroke engine in China

1994
1st China sales office opened in Shanghai

2004
1st manufacturing JV with CSSC for propeller in Zhenjiang, Jiangsu Province

2005
1st wholly own manufacturing venture for propulsion in Wuxi

2006
Formed 4 stroke engine JV with CSIC in Shanghai

2007
Inauguration of Tangzhen Service Station and Wartsila China headquarter in Shanghai

2008
Top management of Wartsila Ship Power moved to China

2009
Established 2 stroke engine JV with CSIC and Mitsubishi

2010
Wartsila China Engineering Center was setup in Shanghai

2011
Inauguration of CPP production at Wartsila Zhenjiang Propeller JV
Wärtsilä footprint in China

- Wärtsilä Ventures
- 2-Stroke Engine Licensees
- Joint Ventures

WCN, Dalian Rep. Office
- Wärtsilä Qiyao Diesel Shanghai Co Ltd
- Wärtsilä Auxpac 20 and 26 gensets

Wärtsilä Services (Shanghai) Co Ltd
- Wärtsilä Ship Design (Shanghai) Co Ltd
- Wärtsilä HRDD Services Station

Wärtsilä China Ltd. (H.K)
- Wärtsilä Services (Shanghai) Co Ltd, Nansha Office
- WCN Longxue Shipbuilding Service Station
- WCN Yiulian (Shekou) Dockyards Service Station
- Wärtsilä China Ltd. (H.K)

WCN, Beijing Rep. Office
- Qingdao Qiyao Wärtsilä MHI Linshan Marine Diesel Co Ltd
- Low-speed engines

Wärtsilä CME Zhenjiang Propeller Co Ltd
- FPPs, CPPs, shaft lines, blades and hubs

Zhenjiang CME Co Ltd

Cosco-Shipyard Total Automation Co Ltd

CSSC-MES Diesel Co Ltd

Wärtsilä Services (Shanghai) Co Ltd
- Wärtsilä Zhoushan IMC-YY Services Station

Hudong Heavy Machinery Co Ltd

Yuchai Marine Power Co Ltd

CSSC Guangzhou Marine Diesel Engine Co Ltd

Hefei Rong’an Power Machinery Co Ltd

Yichang Marine Diesel Engine Co Ltd

WCN Shanhaiguan Shipyard Service Station

WCN, Beijing Rep. Office

Dalian Marine Diesel Works

Qingdao Qiyao Wärtsilä MHI Linshan Marine Diesel Co Ltd
- Low-speed engines

Wärtsilä CME Zhenjiang Propeller Co Ltd
- FPPs, CPPs, shaft lines, blades and hubs

Zhenjiang CME Co Ltd

Cosco-Shipyard Total Automation Co Ltd

CSSC-MES Diesel Co Ltd

Wärtsilä Services (Shanghai) Co Ltd
- Wärtsilä Zhoushan IMC-YY Services Station

Hudong Heavy Machinery Co Ltd

Wärtsilä Qiyao Diesel Shanghai Co Ltd
- Wärtsilä Auxpac 20 and 26 gensets

Wärtsilä Propulsion (Wuxi) Co Ltd
- TTs, LCTs, seals & bearings and components

Wärtsilä Services (Shanghai) Co Ltd
- WCN Longxue Shipbuilding Service Station
- WCN Yiulian (Shekou) Dockyards Service Station
- Wärtsilä China Ltd. (H.K)

Yuchai Marine Power Co Ltd

- 4 JVs, 2 fully-owned factories,
- 8 licensees for 2-stroke, and
- 8 service centers
- 2000+ employees
Key success factors for doing business in China

- Strong brand with leading technologies
- Product portfolio meeting growing market demands and regulatory changes
- Forging strategic local partnerships with strong market players
- Localization of manufacturing / supply chain / innovation capability
- Extensive market coverage through own sales and service network
- Strong local business creation capability
- High customer satisfaction rate
- Local talent and organizational development
Chinese shipbuilding is moving from low-cost merchant ships towards more complex high value vessels.

Shipbuilding overcapacity will drive consolidation with government plans to support top shipyards.

Growing intra-Asian trade and drive towards securing raw material imports and energy supply will enable growth of Chinese ship owners.

Improved local footprint and leading system integration capabilities enables Wärtsilä to be the most valued partner to our customers.
Shipbuilding Market Share in 2012

**Million DWT**

- **China**: 106.95
- **Korea**: 68.6
- **Japan**: 58.22
- **Others**: 60.21

**In Terms of Percentage**

- **China**: 43.60%
- **Korea**: 41.50%
- **Japan**: 32.80%
- **Others**: 19.80%

**Data from CANSI**
China is quickly moving towards more complex and high value ships both for energy security and shipbuilding competitiveness

- China has a strong strategic ambition to secure it’s energy import
- There has been tremendous growth in LNG imports to China but LNG still represents only about 4% of the energy mix in China vs. a global average of 24%
- This will in turn increase opportunity for more and more LNG carriers owned and built in China

- Shipbuilding in the offshore segment is witnessing huge growth in China
- Many international ship-owners are still wary of Chinese shipyards capability to build such complex vessels
- Wärtsilä can form strategic partnerships with internal owners as well as local shipyards to provide complete solution to such vessels while the yards build the vessels “around” it
Main state-owned shipyards – CSSC, CSIC & COSCO

Wärtsilä Premises
Wärtsilä Services centres
CSIC Shipyards
CSSC Shipyards
COSCO Shipyards

State Owned Shipyards
Some of the main private / JV shipyards in China

- Rongsheng SHI
- New Times & New Century S/Ys
- NACKS
- Rongsheng SHI
- Sino-Pacific Offshore Qidong
- Xin Ya
- Ouhua Shipyards
- Jinhai Heavy
- Jiangsu Yangzhijiang
- Jiangsu Eastern
- Fujian Mawei Shipyards
- Yiu Lian

Private/JV Shipyards
The competition is tough but outside engines it is more fragmented.
The very competitive market demands multiple offerings in terms of products, solutions, pricing and services to differentiate.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Wärtsilä</th>
<th>MAN</th>
<th>Caterpillar</th>
<th>Rolls-Royce</th>
<th>Himsen (Hyundai)</th>
<th>Local Chinese brands</th>
<th>Japanese Import</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established Global Engine Brand</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Strong focus on Gas</td>
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<td>Extensive Marine portfolio including Environmental Products</td>
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<td>System Integration including Ship Design and E&amp;A</td>
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<td>Worldwide Service network</td>
<td>✓</td>
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<tr>
<td>Extensive manufacturing footprint in China</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Top-side/Cargo handling equipments (Oil/LPG/LNG )</td>
<td>✓</td>
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<tr>
<td>Partnerships with local Chinese companies / customers (e.g. JV)</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Currency advantage of imported products (at present)</td>
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<td>✓</td>
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Wärtsilä can offer integrated solution & support local Chinese yards in technically complex vessels to address ship-owner’s concerns.
Ambitious national target being set to slash the carbon emission level in 2020 to 40% ~45% of 2005 level.

Policy maker is shifting to support low carbon economy with clean energy from Gas, Nuclear, Wind, and Solar.

Power generating capacity to grow to ~1,500 GW by 2020 with gas to reach ~100 GW, or 6% of total capacity.

Wind power has been developed at brisk pace with total installed capacity of 45 GW in 2010, and expected to exceed 5% of grid load in 5 years.
Wärtsilä Power Plants history in China

1990’s to early 2000 when availability of electricity from grid could not meet increasing demand, Wärtsilä focuses on captive power plants for industrial parks.

2000 – 2005 China ramped up the construction of large coal fired power plants. Wärtsilä targets the market for black start units for large power stations.

2006 – 2009 China mining and construction companies started to expand overseas. Wärtsilä supplies power plants to Chinese EPC contractors for overseas projects in remote areas.

2010 – Present China is putting focus on renewable energy, smart grid concept and power system energy efficiency, providing opportunities for Wärtsilä’s solutions
We provide total and 24/7 services

- **Wärtsilä Engine Services**
- **Wärtsilä Propulsion System**
- **Wärtsilä Automation**
- **Wärtsilä Boiler**
- **Wärtsilä In-situ Machining**
- **Wärtsilä Training**
- **Wärtsilä Reconditioning**

50 largest Repair Yards in China that dock foreign ships

- Shanhaiguan
- Dalian
- HRDD
- Shanghai
- Zhoushan
- Taipei
- Yiulian
- Kaohsiung
- Guangzhou
- Longxue
- Hong Kong

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7 June 2013
Major Wärtsilä Services workshops in China

Shanghai
- Established: 1999
- Location: Tangzhen Shanghai
- Main activities:
  - Reconditioning
  - External Field Services
  - In-situ and Afloat repair
  - Automation
  - Commissioning and Start-ups

Guangzhou
- Established: 1994
- Location: Nansha, Guangzhou
- Field service covering southern China
- Specialized in servicing Woodward governors and ABB/Napier Turbo Chargers
- Workshop reconditioning of entire gensets

Hong Kong
- Established: 1991
- Located in Hong Kong United Dockyards (HUD)
- Supporting visiting vessels, Hong Kong ship owners and ship management companies
Service cooperation with Chinese shipyards

In order to serve customers better, Wärtsilä China entered a cooperation with major shipyards in China.

A team of Wärtsilä experts is permanently stationed there and jointly provide a full range of field services.
We provide market leading products
Wärtsilä Propulsion (Wuxi) Co., Ltd

Inauguration phase 2 November 2007
Employees: 161 (April 2013)
Delivery Centre – CPP & FPP / Zhenjiang

Wärtsilä CME Zhenjiang Propeller Co., Ltd

Founded in 2004 and new CPP factory inauguration in June 2011
Employees: 407 (April 2013)
Joint Venture (Wärtsilä 55%, CSSC 45%)

Note: CSSC 1 = China State Shipbuilding Corporation
Delivery Centre - Auxpac 20 & 26 / Shanghai

Wärtsilä Qiyao Diesel Company Ltd. (Shanghai)

Inaugurated in 2006
Employees: 141 (April 2013)
Joint Venture (Wärtsilä 50%, CSIC¹ 50%)

Note: CSIC¹ = China Shipbuilding Industry Corporation
Qingdao Qiyao Wärtsilä MHI Linshan Marine Diesel Co., Ltd
Inauguration April 2009
Employees: 490 (April 2013)
Joint Venture (Wärtsilä 34%, CSIC¹ 50%, MHI² 16%)

Note: 1 CSIC = China Shipbuilding Industry Corporation, 2 Mitsubishi Heavy Industries

2-stroke engine
QMD doers
One million horsepower produced

© Wärtsilä
• Inauguration in 1998 (former Hamworthy Suzhou)
• Employee: 103 (April 2013)
• Products: sewage water treatment plants, inert gas systems, control panels
Sourcing in China

- Supports both local needs in China (cost and short lead times) and export to Europe (cost)
- Increasing part of our purchase volume will be sourced in China.
- Significant part of our strategic sourcing organisation located in China – one critical factor for success
- Other critical factors for success: local engineering, focus on quality, multi-functional task, local production

Supporting Wärtsilä’s growth strategy in China
New JV for Wärtsilä medium speed engines in China

Wärtsilä -Yuchai Engine Ltd. Co.

Location: Zhuhai, China

Products: W20, W26, W32

Operations planned to start in 2014
Growth drivers in China

- World second largest economy and biggest trading nation
- Sustained GDP growth expected to continue
- 2015 and beyond: starting to rival US in economic scale
- One fifth of world population with rapidly rising middle class population and urbanization
- Domestic consumption provides a huge market for the world
- Target to remain one of the largest shipbuilding countries
- Shifting policy to clean energy and low carbon economy
Wärtsilä China Future Strategy

- Launch key initiatives (e.g. 4-stroke engine JV) to support long term growth
- Strengthen high level customer contacts and external relationships (government, JV partners, etc) to ensure business success.
- Simplify operating model with entrepreneurial driven organization to be more agile and react faster
- Create a strong China organization by introducing best practices, professionalism and high performance culture
- Attract develop and retain the best talents to create highly motivated workforce