WELCOME TO WÄRTSILÄ 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 milestones of Wärtsilä in China

1978
Signing of licensee agreement between Sulzer with CSSC

1982
Developing agent relationship with Kemklen Industrial Suppliers Ltd., Hong Kong

1986
Establishing Wärtsilä Diesel (China) Ltd., Hong Kong as Joint Venture with Kemklen Hong Kong

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1991
Wärtsilä Diesel (China) Ltd., Hong Kong became a wholly owned company under Wärtsilä Diesel Finland Oy, Helsinki

1994
Establishing Shanghai Representative Office, Beijing Representative Office, Wärtsilä Diesel Panyu Service Station (Joint Venture)

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1995
Setting up Hong Kong Service Station

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1996
First Investment in Taicang Electric Power Co., Ltd. (partial ownership)

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1997
Merging with New Sulzer Diesel Hong Kong Ltd.

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Establishing Dalian Representative Office

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Upgrading Shanghai Representative Office to Wärtsilä NSD Engine (Shanghai) Ltd. with business scope of trading and servicing

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Setting up Waigaoqiao Workshop in Shanghai

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Major milestones of Wärtsilä in China

2002
Integration of John Crane-Lips operation in Shanghai following global acquisition in April 2002

2004
Wärtsilä-CME Zhenjiang Propeller Co. Ltd. founded in June. In the JV Wärtsilä has 55% and CME has 45% ownership

2005
Wärtsilä acquired Deutz medium and high speed engine marine service business and started to handle the business from April.
Inauguration of Wärtsilä Propulsion (Wuxi) Co. Ltd. (wholly owned) in June

2006
Inauguration of Wärtsilä Qiyao Diesel (Shanghai) (a 50/50 JV with CSIC SMDERI to manufacture marine auxiliary engines) in June 2006

2007
Inauguration of Tangzhen Service Station in March

2008
The top management of Wärtsilä Ship Power moved to China

2009
Inauguration of Qingdao Qiyao Wärtsilä MHI Linshan Marine Diesel Co Ltd (QMD) in April. (CSIC 50%, Wärtsilä 27% and Mitsubishi 23%)
Inauguration of Wärtsilä Ship Design (Shanghai) Co. in June
Zhoushan Services Station set up in Sept
Signing of Strategic Cooperation Framework Agreement with CSSC in Nov

2010
Wärtsilä China Engineering Center set up

2011
Inauguration of CPP production at Wärtsilä-CME Zhenjiang Propeller Co., Ltd. in June

2012
Wärtsilä (Suzhou) Marine Equipment Co., Ltd became a wholly-owned Wärtsilä company through the global acquisition of Hamworthy
Wärtsilä footprint in China

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

WCN, Dalian 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

Hefei Rong’an Power Machinery Co Ltd
Wärtsilä (Suzhou) Ltd.
Formal name is Hamworthy (Suzhou) Ltd.
Sewage Water Treatment Plant, Inert Gas System, Control Panel

CSSC Guangzhou Marine Diesel Engine Co Ltd

Wärtsilä Ship Design (Shanghai) Co Ltd
Wärtsilä HRDD Services Station
Wärtsilä Zhoushan IMC-YY Services Station
Hudong Heavy Machinery Co Ltd

WCN, Beijing Rep. Office

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

WCN, Nansha Office

Wärtsilä Zhoushan IMC-YY Services Station

CSSC MES Diesel Co Ltd

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

CSSC Guangzhou Marine Diesel Engine Co Ltd

Wärtsilä Zhoushan IMC-YY Services Station

Wärtsilä Services (Shanghai) Co Ltd, Nansha Office
WCN Longxue Shipbuilding Service Station

Wärtsilä China Ltd. (H.K)

Yuchai Marine Power Co Ltd

WCN Yiulian (Shekou) Dockyards Service Station

• 4 JVs, 2 fully-owned factories,
  8 licensees for 2-stroke, and
  8 service centers
• 2000+ employees

© Wärtsilä 7 June 2013
We provide total and 24/7 services

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

50 largest Repair Yards in China that dock foreign ships

© Wärtsilä 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
- Main activities:
  - 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.
Wärtsilä China manufacturing facilities

We provide market leading products
Wärtsilä Propulsion (Wuxi) Co., Ltd
Inauguration phase 2 November 2007
Employees: 161 (April 2013)
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%, CSSC¹ 45%)

Note: CSSC¹ = China State Shipbuilding Corporation
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%, CSIC\(^1\) 50%, MHI\(^2\) 16%)
Note: 1 CSIC = China Shipbuilding Industry Corporation, 2 Mitsubishi Heavy Industries
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
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
Top 10 countries

- China: 8%
- South Korea: 7%
- The Netherlands: 5%
- USA: 5%
- United Kingdom: 5%
- Brazil: 4%
- Dominican Republic: 3%
- Indonesia: 3%
- Singapore: 3%
- Norway: 3%

% of 2012 net sales
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.
China has a good market share in merchant vessels...

Merchant vessels: contracting volumes (DWT), share by region

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Source: Wärtsilä’s Marine Market Database (MMDB)
...but now moving towards more complex & high value ships

Offshore vessels: contracting volumes (GT), share by region

Special* vessels: contracting volume (GT), share by region

* Special includes: cruise, ferries (ropax and pax only), dredgers, and tugs
Source: Wärtsilä’s Marine Market Database (MMDB)
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 its 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.

**China LNG Imports**

<table>
<thead>
<tr>
<th>Year</th>
<th>LNG Imports (Million Cu. M.)</th>
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<tbody>
<tr>
<td>2005</td>
<td>2</td>
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<td>2006</td>
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<td>2007</td>
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<td>2008</td>
<td>10</td>
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<td>2009</td>
<td>15</td>
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<td>2010</td>
<td>20</td>
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<tr>
<td>2011</td>
<td>25</td>
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<tr>
<td>2012</td>
<td>30</td>
</tr>
</tbody>
</table>

**Offshore Deliveries in China**

<table>
<thead>
<tr>
<th>Year</th>
<th>PSV</th>
<th>AHTS</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>10</td>
<td></td>
<td></td>
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<tr>
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<tr>
<td>2011</td>
<td>45</td>
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<tr>
<td>2012</td>
<td>50</td>
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</tr>
</tbody>
</table>
Main state-owned shipyards – CSSC, CSIC & COSCO

COSCO Dalian
CSIC Bohai
CSIC Shanhaiguan
CSIC Dalian Shipbuild.
CSIC Beihai
CSIC Xingang
CSSC Jiangnan
CSSC Changxing
CSSC Waigaoqiao
CSSC Hudong Zhonghua
CSSC Chengxi
CSIC Wuchang
CSIC Chuangdong
CSSC Huangpu
CSSC GSI
CSSC Longxue
CSSC Wenchong

State Owned Shipyards

Wärtsilä Premises
Wärtsilä Services centres
CSIC Shipyards
CSSC Shipyards
COSCO Shipyards
Opportunities for power industry in China

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
Potential NGDE projects in China by 2020

By 2015
• Complete the main CHP/CCHP equipments development through demonstration projects
• To have independent local CHP/CCHP equipment manufacturing capability equal to 60% of localized equipments

5 GW Installed
Localization will reach 60%

10 GW installed
Localization will reach 90%

By 2020
• CHP/CCHP widely used in Chinese cities
• 50 GW installed (3.5% total installed capacity)

SOURCE: NDRC 9-10 2011 internal bulletin
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>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Strong focus on Gas</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Extensive Marine portfolio including Environmental Products</td>
<td>✓</td>
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<td>✓</td>
<td></td>
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<tr>
<td>System Integration including Ship Design and E&amp;A</td>
<td>✓</td>
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<td>✓</td>
<td></td>
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<tr>
<td>Worldwide Service network</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Extensive manufacturing footprint in China</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
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<tr>
<td>Top-side/Cargo handling equipments (Oil/LPG/LNG)</td>
<td>✓</td>
<td></td>
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<tr>
<td>Partnerships with local Chinese companies / customers(e.g. JV)</td>
<td>✓</td>
<td></td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Currency advantage of imported products (at present)</td>
<td></td>
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<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
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
Wärtsilä can offer integrated solution & support local Chinese yards in technically complex vessels to address ship-owner’s concerns.