Marine & Diesel Division

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Alfa Laval Group
Yard contracting and delivery
- Forecast end of October 2014

Source: maritime-insight

Source: Clarkson – vessels > 2.000 dwt - end of October 2014= 1423 vessels, compared to 1502 vessels 2013
Market outlook – Offshore
- FPSO order forecast

Past Five Years

Actual 72 FPSOs

Low Scenario 65 FPSOs

Most Likely Scenario 77 FPSOs

High Scenario 93 FPSOs

Small FPSOs 23

Midsize FPSOs 20

Large FPSOs 22

Next Five Years

19

31

27

40

28

25

Source: EMA – Feb 2014

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"WTO economists have reduced their forecast for world trade growth in 2014 to 3.1% (down from the 4.7% forecast made in April) and cut their estimate for 2015 to 4.0% from 5.3% previously."
Focus on customer segments

Orders received January – September 2014 (Proforma)
Wider offering; Marine

※ Cargo pumping systems

※ Desalination
※ Ballast water treatment
※ Oil treatment
※ Filtration
※ Fuel conditioning
※ Oily waste treatment
※ Crankcase gas cleaning
※ Cooling and heating
※ Waste heat recovery
※ Exhaust gas cleaning
※ Scrubber water cleaning
※ Thermal fluid heating
※ Gas combustion unit
※ Tank cleaning
※ Inert gas systems
※ Steam and heat generation

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Order value opportunity; Marine

The order value opportunities:

★ Product & chemical tankers: 1.5 – 6 MEUR
★ Gas carrier and container vessels: 0.5 – 3 MEUR
★ Bulkers: 0.3 – 1.2 MEUR
Wider offering; Offshore

- Water injection pumping system
- Sea water lift pumping systems
- Fire water pumping systems
- Cargo pumping system

- Decanters
- Mixing equipment
- Separators
- Air heat exchangers
- Plate heat exchangers
- Water makers
- Spiral heat exchangers
- Compabloc HE

- Desalination
- Ballast water treatment
- Oil treatment
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- Cooling and heating
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Industry split including Framo
- Distribution of invoicing LTM, end September 2014*

Marine: World trade & fleet capacity - 46%
Offshore oil and gas: Oil & gas demand and prices - 11%
Environment & Energy, Marine: Legislation and fuel cost - 8%
Diesel power: Electrical power needs - 5%
Service: World trade - 30%

*) Pro-forma
Focus on customer segments

Orders received January – September 2014 (Proforma)
### Exhaust gas cleaning

- **Alfa Laval PureSOx**

<table>
<thead>
<tr>
<th>Orderintake</th>
<th>2014 YTD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of ships</td>
<td>33</td>
<td>51</td>
</tr>
<tr>
<td>Number of units</td>
<td>35</td>
<td>58</td>
</tr>
</tbody>
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#### Product

- Commercial sales started Q4/12. Sales both for new builds and retrofit. Technology is accepted.
- Development at new test centre in Aalborg to reduce product cost and to cover total market

#### Market

- Ships sailing in the Northern Emission control area (Baltic, North sea, Canada, US) from Jan 1, 2015
Exhaust gas potential
- Alfa Laval PureSOx

Estimated contracting Q1 2013-Q3 2014
* > 200 ships

Market potential
* Retrofit and newbuilds 1000 - 2000 ships
* Ship set value 1-2 M€ depending on scope

Competition
* Wärtsila, Green Tech Marine, Ecospray and a few other players
Products & Systems
- For new fuels

- Waste heat recovery equipment
- Heat exchangers
- Multi fuel burners
- Multi Fuel conditioning modules
- Multi Fuel Boiler

Multi Fuel propulsion
Orders received and Net invoicing
- LTM Marine capital orders and sales (M€)*

*) Capital Sales LTM (Proforma) including Aalborg and Frank Mohn.
The Alfa Laval offering time line

The Shipyard receives an order

≈ 9M (2-10M)
Alfa Laval offering booked

≈ 24M (3-36M)
Delivery
In conclusion…
- Marine & Diesel Division

- Enhanced market position with Marine & Offshore pumping systems
- Structural growth in environmental and energy efficiency products
- World trade drives our traditional portfolio of marine capital sales and service products
- Stable invoicing and profitability over time