ABOUT DAMEN

FOUNDER: KOMMER DAMEN

SHIP BUILDING

SHIP REPAIR

SERVICES
1927
THE COMPANY FOUNDATION

1969
KOMMER DAMEN TOOK OVER

1973
EXPANSION OF DAMEN SHIPYARDS IN GORINchem

1978
START BUILDING ABROAD

1990
FIRST YARD ABROAD ACQUIRED
1992
AMELS WAS ACQUIRED

1994
FIRST REPAIR YARD IS TAKEN OVER

2000
NAVAL SCHELDE JOINS DAMEN

2012
SHIPREPAIR YARDS EXPANSION
Annual turnover: $1.88bn

39 yards worldwide

Over 6,800 employees

Annual deliveries: over 150

Over 1,000 repair jobs per year

Stock hulls > 150

More than 5,000 vessels delivered since 1969

Turnover 2012: $2.21bn

3 yards acquired in 2012

500 employees joined Damen in 2012

164 vessels delivered in 2012

1150 repair jobs in 2012

The Netherlands 24%

Americas 11%

Africa 12%

Rest Of Europe 33%

Middle East 7%

Asia 13%
GLOBAL PRESENCE

DAMEN YARD
PARTNER YARD
BUSINESS COOPERATION

THE NETHERLANDS
<table>
<thead>
<tr>
<th>Product Market Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harbour &amp; Terminal</td>
</tr>
<tr>
<td>Offshore</td>
</tr>
<tr>
<td>Offshore Wind</td>
</tr>
<tr>
<td>Defence &amp; Security</td>
</tr>
<tr>
<td>Public Transport</td>
</tr>
<tr>
<td>Shipping</td>
</tr>
<tr>
<td>Fishing</td>
</tr>
<tr>
<td>Dredging</td>
</tr>
<tr>
<td>Pontoons &amp; Barges</td>
</tr>
<tr>
<td>Yachting</td>
</tr>
</tbody>
</table>
DESIGN CRITERIA

- 80% WEATHER OPERABILITY
- OPTIMAL COMFORT CREW & PASSENGERS
- OPTIMAL LOGISTICAL WORKFLOW
- OPTIMAL EFFICIENCY / ECONOMICS

OPERATIONAL PROFILE

- Standby 60%
- Harbour 10%
- Transit 10%
- DP 20%

MARKET DEMAND

OFFSHORE 30-100 NM
WORKING HOURS

HOURS PER ACTIVITY, BASED ON TRANSFER USING WFSV

- Working Day: 12 Hours
- Preparation: 1 Hour
- Travel Time: 3.5 Hours
- WTG Transfer: 1 Hour
- Lunch Break: 0.5 Hour
- Onshore: 0.5 Hour
- Working Time: 5.5 Hours
DP SYSTEM
HEAVY LIFTING CRANE
TRANSFER SYSTEM
PROPULSION
HULL
ACCOMMODATION
DECK AREA

DESIGN INPUT
**CONCLUSION = MONO HULL**
PSV 3300 BASE HULL

Length Waterline (m): 70.0
Breadth Waterline (m): 19.0
Draught (m): 5.5
Depth (m): 9.6
Displacement (t): 4827

PSV 3300 AS PARENT HULL
Length Waterline (m): 66.6
Breadth Waterline (m): 20.0
Draught (m): 5.5
Depth (m): 9.6
Displacement (t): 4834
Length Waterline (m): 74.1
Breadth Waterline (m): 18.0
Draught (m): 5.5
Depth (m): 9.6
Displacement (t): 4841
Length Waterline (m): 59.1
Breadth Waterline (m): 19
Draught (m): 6.5
Depth (m): 10.6
Displacement (t): 4816
Length Waterline (m): 85.1
Breadth Waterline (m): 19.0
Draught (m): 4.5
Depth (m): 8.6
Displacement (t): 4801
ACCOMMODATION POSITION

MID. ACCOMMODATION

FWD.

AFT.

MID.
CONCLUSION

ACCOMMODATION Y-ACCELERATION

ACCOMMODATION Z-ACCELERATION

Parent Wider Longer Shallow Deeper Catamaran Parent Wider Longer Shallow Deeper Catamaran

PSV 3300 HULL AS PARENT
ACCOMMODATION - CABIN

- Comfort
- Luxury
- Entertainment
- Storage
ACCOMMODATION - ATRIUM
DIESEL ELECTRIC OPTIMISED FOR OPTIMAL LOW & HIGH POWER PERFORMANCE
DYNAMIC POSITIONING SYSTEM

PSV 3300 HULL AS PARENT

TOTAL CONSUMED BRAKE POWER

- Parent
- Wider
- Longer
- Shallow
- Deeper

Percentages shown:
- 110%
- 105%
- 100%
- 95%
- 90%
- 85%
- 80%
- 75%
POWER & SPEED

POWER SPEED RATIO SHALLOW HULL

Total delivered power to 2 thrusters [kW]

Margin Speed [kn]

DESIGN CONDITION DP
TRANSFER SYSTEM

40T BIG ENGINE

LESS FUEL CONSUMPTION

TRANSFER SYSTEM

DAMEN
DESIGN CRITERIA VERIFICATION
DESIGN CRITERIA

- 80% WEATHER OPERABILITY
- OPTIMAL COMFORT CREW & PASSENGERS
- OPTIMAL LOGISTICAL WORKFLOW
- OPTIMAL EFFICIENCY / ECONOMICS

OPERATIONAL PROFILE

- Standby 60%
- Harbour 10%
- DP 20%
- Transit 10%

MARKET DEMAND

OFFSHORE 30-100 NM
SIGNIFICANT WAVE HEIGHT CENTRAL NORTH SEA

P (significant wave height < X) [%]

Significant wave height [m]
ROLL MOTION

Heading: 90 degrees
Speed: 0.0 kn
Area of op.: North Sea
Loading cond.: 200 t
Stability G'M 2.85 m

Roll Motion 90 Degrees
<table>
<thead>
<tr>
<th>Analysis: Worst Case</th>
<th>Roll Motion</th>
<th>88%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heading: All</td>
<td>Bridge Deck (Y-Acc)</td>
<td>95%</td>
</tr>
<tr>
<td>Speed: 0.0 kn</td>
<td>Work Deck (Y-Acc)</td>
<td>100%</td>
</tr>
<tr>
<td>Area of op.: Centr. North Sea</td>
<td>Crew Accommodation fwd. (Z-Acc)</td>
<td>100%</td>
</tr>
<tr>
<td>Loading: 200 t. deckld.</td>
<td>Work Deck fwd. (Y-Acc)</td>
<td>100%</td>
</tr>
<tr>
<td>Stability: GM = 3.5</td>
<td>Crew Accommodation fwd. (Y-Acc)</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hs [m]</th>
<th>Tz [s.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
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<td>2</td>
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</tr>
<tr>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>0</td>
<td>18</td>
</tr>
</tbody>
</table>

Diagram showing the relationship between Hs [m] and Tz [s.].
INTEGRATED SOLUTION = LESS COST & FUEL CONSUMPTION
Overall Average Fuel Consumption = 10.3 ton/day
OPTIMAL MIX = W2W VESSEL
# MAIN CHARACTERISTICS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length o.a. (m)</td>
<td>90.25</td>
</tr>
<tr>
<td>Beam mld. (m)</td>
<td>20.0</td>
</tr>
<tr>
<td>Draught (m)</td>
<td>4.8</td>
</tr>
<tr>
<td>Deadweight (t)</td>
<td>2500</td>
</tr>
<tr>
<td>Cargo Deck Area (m2)</td>
<td>500</td>
</tr>
<tr>
<td>Bollard Pull (t)</td>
<td>75</td>
</tr>
<tr>
<td>Speed (kn)</td>
<td>14.0</td>
</tr>
<tr>
<td>Accommodation (persons)</td>
<td>60</td>
</tr>
</tbody>
</table>
Thank you for your attention.

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Damen Shipyards Group
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Mobile: +31 (0)6 22856004
E-mail: peter.robert@damen.com