The Next Generation Azipod®

...Steering to Success
Azipod® Propulsion Unit System Features:

- Diesel-electric propulsion system
  - High efficiency
  - Excellent manoeuvrability
  - Improved transportation capacity
- Over 4 million Azipod machine hours until now
Azipod® Propulsion Unit System Features:

- Freely 360 degree rotating Azipod unit
- Fixed pitch pulling propeller
- Extremely low vibrations
- Undisturbed water flow to propeller
Next Generation Azipod® System is Designed to Provide

- Reduced life cycle costs
- Minimized emissions
- Enhanced maintainability
- Flexible integration to ship hull
- Improved reliability and availability
Main Components and New Features

- Steering torque reduced even over 20%
- Easy access to Azipod unit
- Advanced condition monitoring

Diagram:
- Non-drive-end hybrid bearing
- Drive-end bearing
- Exciter
- Interspace seal arrangement
- Synchronous machine
Interspace – Revolutionary Shaft Seal Arrangement

- Seal change possible inside the Azipod unit *)
- Simple, robust and proven technology
- Development of biodegradable lubrication in progress

Patent pending (* depending on frame size)
Hybrid bearing is a new integrated innovation by ABB which combines the advantages of two different types of bearings.

- Well-known and proven technologies
- Designed to be robust with minimum maintenance cost

**Thrust pad change inside Azipod unit**

**Non-drive-end radial roller bearing**

**Slide thrust bearing**

**Redundant lubrication**

*Patent pending*
Electric Steering

- Low noise
- Low vibration
- Easy installation
- Proven solution from Compact Azipod
- Redundant steering drive system
- Environmentally friendly
Electric Steering

4 x \( \frac{1}{3} \) = 1 \( \frac{1}{3} \) capacity
Intelligent Bridge Control Interface

- Enhanced usability of Azipod user interface on bridge
Intelligent Bridge Control Interface

- Real time information for optimized operating practices
- Improved presentation of system state for deck officer
- Fieldbus-based modular system architecture
Summary

- Power up to 20+ MW per unit
- Energy efficient
- Designed for extended docking intervals of future needs
- Electric steering and intelligent control systems
- Optimised maintainability
- Advanced condition monitoring
- Available for sales in Q3 2009

...Steering to Success!
Azipod®
Steering to Success