

Presentation 12-4-2017

Event “Kooy Symposium”

Passion
Knowledge
Innovation



VABO
COMPOSITES

Focus markets VABO Composites:



- Accedoo doors and hatches
- Antenna masts and jacuzzi's



- Industrial constructive elements
- Bucket, machine parts



- Art in public space
- HUBS, Olympic games 2012, Louvre (Paris)

- Commercial
- Naval
- Cruiseschip
- Super yachts



- Heavy equipment
- Machine parts
- Handling



- Architectonic projects for public spaces





Composite:

- Light weight
- Freedom of shape
- Less maintenance
- Function-integration



The designer, Ragnar Hansen of Hansen Engineering, described the process which led to approval being received from Panama Maritime Authority on 11th December 2014 for retrofit of **FRP (fibre reinforced plastic)** hatch covers to replace traditional steel ones on a bulk carrier. The design for the 17m x 8m FRP hatch covers has several benefits. **It reduces weight (typically 35-40% of steel)**, resulting in fuel saving and/or increased cargo, as well as easier crane handling and lighter motors. No corrosion means better seal performance, reducing risk of damage to cargo.



Trends

- Implementation new materials
- Saving fuel (costs)
- Less maintenance (total-cost-of-ownership)
- “cleaner” vessels
- Light weight unmanned vessels



‘Het vissersschip heeft een brandstofbesparing van 80-85 procent vergeleken met bestaande vissersschepen in 2010. Het heeft een gunstig verdienmodel, verdient zich binnen tien jaar terug en biedt de visserij weer toekomstperspectief.’

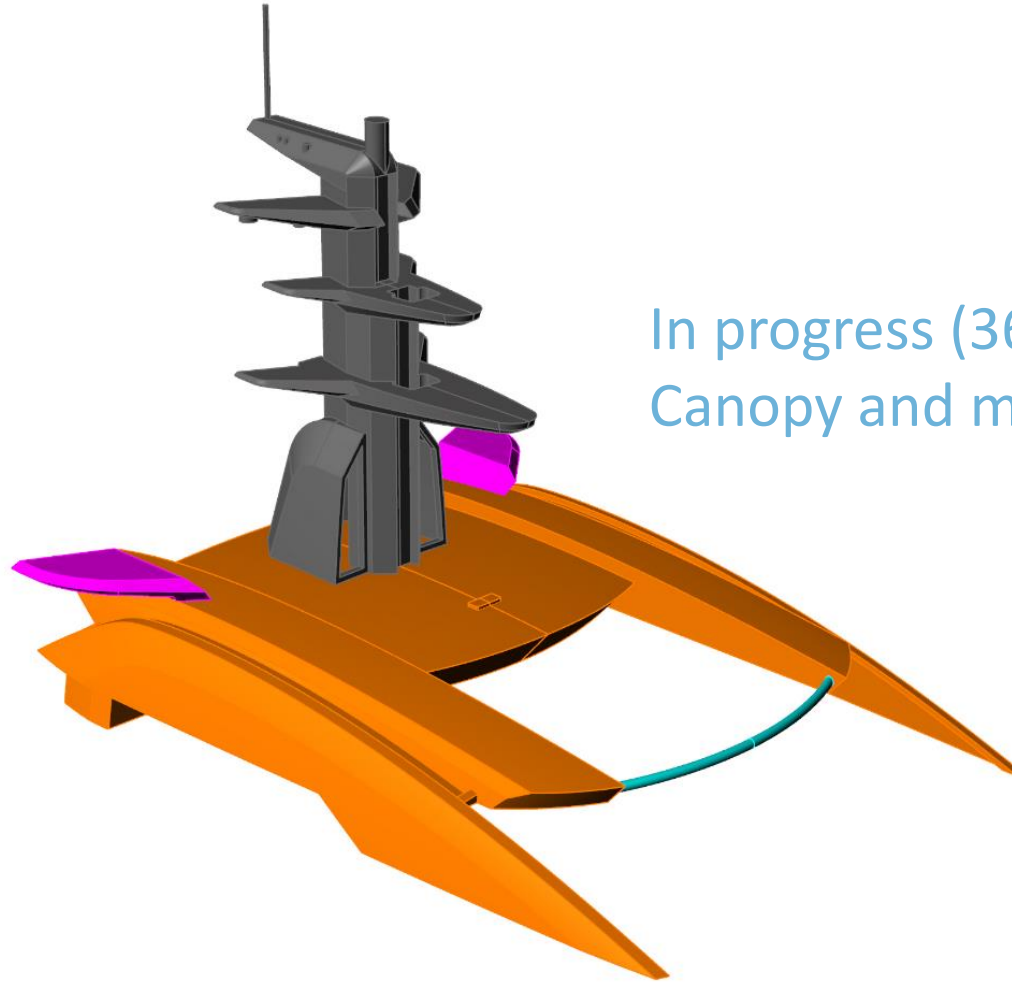


Marine innovations:

- Composite antenna mast
- Composite ship doors and hatches

- Composiet antenna mast
- Weight reduction 30% versus aluminium
- No interference for antennas
- Less maintenance
- Non-magnetic





In progress (360m²)
Canopy and mast (weight 3,5t)

Accedoo is the brand name for Composite plug and play marine doors developed and produced by VABO.

The doors are certified and ready for install by delivery. And all benefits are tested by reputable institutions and witnessed by regulations.

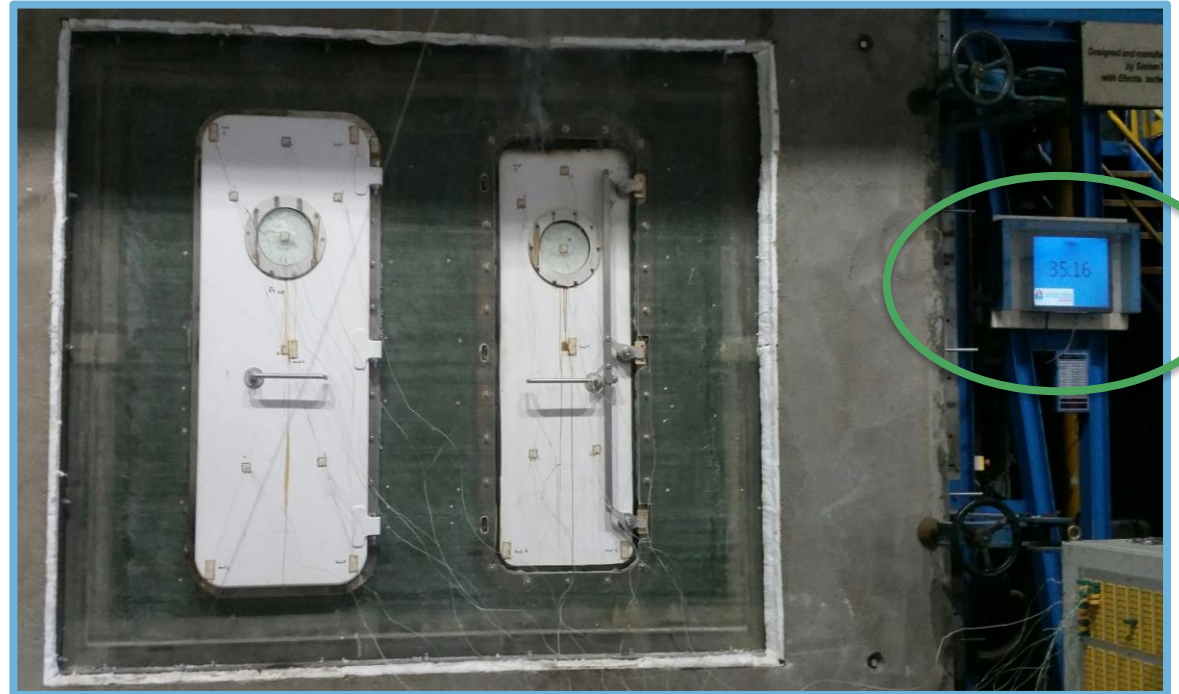
Markets:

- Commercial
- Fast ferry's
- Naval
- Superyachts
- Cruise ships



- Modular mould system, no size limits
- Plug and play (tested in workshop VABO)
- Adjustable toggles and hinges
- Veritas certified
- Non-magnetic
- Weight reduction (50% vs steel)
- Easier to install installation and in usage
- Low maintenance
- Function integration (insulation, fire resistance, EMI)
- Acoustic damping

Fire tests FTP part 3 (B30)





Acoustic tests
Damping of 38dB for the complete range





Composite plug and play ship doors and hatches

- Hinges adjustable
- Toggles adjustable
- Watertight 1800 x 650 <45kg
- Easy to install









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