

## **EffShip Project Meeting 4 Meeting Minutes**

**Meeting date and time:** 2010-09-21, 9:00 – 11:30

**Location:** SSPA, Chalmers Tvärgata 10, Göteborg, Mässrummet

### **Meeting Attendees:**

Björn Allenström, SSPA  
Per Fagerlund, ScandiNAOS  
Bengt Ramne, ScandiNAOS  
Per Holmström, DEC Marine  
Martin Rokka, Göteborgs Energi  
Anders Knös, S-Man AB

Thomas Stenhede, Wärtsilä  
Per Stefenson, Stena  
Joanne Ellis, SSPA  
Rickard Bensow, Chalmers  
Venkata Koneru, DEC Marine

### 1. Information from project management (WP1)

Reporting of project costs: Partners should report man-months worked for the first nine months of the project, up to and including August 2010, to Bengt Ramne (BR). Expenses should also be reported for this period. Please specify the applicable WP against which time and expenses were incurred.

Supplementary Agreement related to WP6: Wärtsilä will not be participating in WP6 and work will be re-allocated to ScandiNAOS, SSPA, and Stena. Björn Allenström (BA) has contacted Vinnova and they will be satisfied with a supplementary agreement signed by those four partners to reflect the changes. It is not necessary for all consortium members to be signatory to the supplementary agreement.

Project Schedule: BR has updated the Excel master schedule and this was reviewed for the group. WP6 needs to have a work plan and schedule finalised and work on this is underway.

### 2. WP 2, Present and Future Maritime Fuels

**Workshop:** Per Stefenson (PS) described the work and planning that has been undertaken for the first workshop on alternative marine fuels. The work group for this has been Per Stefenson, Lennart Haraldson and Per Fagerlund. The workshop will be held 16 November at Sjöräddningssällskapet, Långedrag, from 9:00 to 16:30. PS distributed a draft invitation letter and program for discussion. All invited speakers and opponents were interested in attending. This workshop is by invitation only, to allow time for a focused discussion. In April there will be a whole stream at “Stora Marindagar” dedicated to this topic and this will be open to everyone.

Points discussed included:

- Adding Vinnova to the list of invited opponents.
- Having a short 10 minute introduction to Effship at the start of the day, given by Bengt Ramne
- Producing a short written summary of each of the presentations and main discussion points raised
- Having a summary at the end of the day to ensure all speakers stay for discussions
- Each partner in Effship should advise Per Stefenson who will be attending from their organization by 24 September.

Inventory of Present and Future Maritime Fuels: BR said that work is proceeding on development of the catalogue style inventory. A poster has been put up at Chalmers regarding part time work for naval architect students, who could participate in the project. The possibility of formulating an “ex-job” project is also being considered.

3. WP3, Exhaust Gas Cleaning: Venkata Koneru reported that work is proceeding on the collection of information on exhaust gas cleaning technologies. Information on NOx and VOCs systems has been collected. More investigation is still needed for SOx technologies. More information on CSNOx is also required and this is difficult to get. The possibility of directing questions through a ship operator was discussed.

4. WP4, Energy Efficiency and Heat Recovery: Anders Knös said that they have been on board TransPaper and S-borg and have had one WP meeting. Quite good information is available from logs and crew notes. The first measurements will be taken onboard the S-Borg in the middle of October and an analysis will be done. Other ship types will be considered after results of the first ship study are available.

5. WP5, Energy Transformers: Thomas Stenhede (TS) reported that they are looking for a ship to test the system onboard, after testing at Högsbo. The size is 250 KW and operating temperature should be in the range of 95 to 138 degrees. It would be better suited to a tanker. TS will send some technical data to PS, who will see what may be possible at Stena.

6. WP6, System Impact when Using Wind, Wave, and Solar Energy: The project plan for this WP has not been finished yet, because of previous uncertainties with Wärtsilä participation. Stena will now be participating in the WP. BA will send out the work plan and description when it is available. There will be a comparison of fixed sails, Flettner rotor, kites, and conventional sails. The WP will also look at solar panels, solar cells and wind turbines for producing energy for auxiliary power. Björn Södahl will also look at wave energy (will write a half-page or so).

BA stated that CFD calculations with Fluent are being done instead of using wind tunnel testing. He has had contact with someone in the US who has done testing on Flettner rotors, but the information obtained can't be published. Simulations will be done for a Stena panamax. Modelling of a kite has also been carried out after talking to SkySails, who have been very good to cooperate with.

7. WP7, Logistic System Analysis: Work on this is scheduled to begin in January 2011.

8. WP8, Demonstration of Findings: BR reported that the two platforms for the project have been defined. One is a RoRo ship which is a “concept ship” (not constructed). The other is a Stena Panamax, a product and crude tanker built according to a standard design by Dalian Shipyard. Descriptions of the platforms are on the home page.

9. WP9, Dissemination: There has been one article in Sjöfartstidningen, and the idea for the second article is to describe the activities at Högsbo regarding energy transformers. The seminars planned in WP2 are also dissemination activities. Stora Marindagen 2011 is planned for April 5 and Effship will be presented there.

10. Other business: There was some discussion about whether EffShip should be presented at “EnergiTinget”, which is usually held in mid-March. BA will contact Björn Södahl, who was moderator of the marine session last year, to discuss the possibility.

11. Next Meeting:

Date and time: 12 January 2011, 9:00 – 12:00

Place: SSPA Sweden AB, Chalmers Tvärgata 10