VINNOVA

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Your Reg.no.

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Mr Anders Björkman
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RE: Your e-mail of the 8th of June 2008 where you accuse VINNOVA of providing misleading reports of the sinking studies of the MV Estonia.

Dear Mr Björkman,

I am sorry that you did not appear at the workshop in Stockholm on the 23d of May where you could have had an opportunity to debate your views on the final reports of the MV Estonia sinking sequence.

You have summarized your views in four points and we have asked the project leader of the SSPA consortium to comment on them. Please see enclosed "Comments from the SSPA Consortium 2008-06-13".

Yours Sincerely,

Per Eriksson
Director General

Enclosure: Comments from the SSPA Consortium 2008-06-13
Copies: Lena Gustafsson and Eva Lindencrona

Comments from the SSPA Consortium 2008-06-13

The comments from SSPA Consortium are in red.

Bullet point No 1:

- Model tests by SSPA use a manipulated model that cannot capsize or sink and is remotely controlled to produce a strange heeling and sinking that contradicts all laws of physics. The model deck house is made air tight to prevent too rapid flooding/capsize upside down and the model hull is arranged to allow air to escape when it is upside down so that it sinks (otherwise it would not sink).

Model tests by SSPA use a manipulated model that cannot capsize or sink

The model did both capsize and sink

and is remotely controlled

Correct regarding opening of ramp, propeller revs, rudders and valves for air release scaling air compressibility see below

to produce a strange heeling and sinking that contradicts all laws of physics

Heeling follow well the testimonies and scaling law is explained in Allenström. B. "Foundering tests" SSPA report 40064100-4, Appendix 1 April 2008 (Project Report No 12)

The model deck house is made air tight to prevent too rapid flooding/capsize upside down

The deck levels 4, 5 and 6 (defined here as superstructure) are not air tight, see SSPA report 40064100-4 page 9: "Since it was not possible in a controlled way to release trapped air in the superstructure 5 holes (diameter 5 mm) were drilled on port side close to deck level 4,5 and 6 at frames 20 52 75, 85 and 110. These holes allowed some air trapped in the superstructure to escape when the heel angle reached 150-160 degrees. Before that the air could escape through other openings such as doors.

and the model hull is arranged to allow air to escape when it is upside down so that it sinks (otherwise it would not sink).

Correct, air was released because of the scaling laws of air compressibility, see SSPA report 40064100-4 page 7: "A number of tests were carried out where the model capsized trapped air and remained floating upside down. The volume of this trapped air was measured, and a mean value was found to be around 40 liters. Also the pressure of the trapped air was measured. The scaling laws give for the present situation that about 20% of the trapped air should be evacuated to give a proper remaining amount of trapped air in the model see Appendix 1 In this case around 8 liters could be let out in order to fulfill the scale laws The two valves in the bottom of the model were calibrated giving a flow of 6 7 liters

each per minute at the actual pressure. This means that one valve could be held open a little more than 1minute during the test

Bullet point No 2:

- Computer animations by Strathclyde are simply falsified to copy the behaviour of the faked model tests. The animations cannot be supported by correct mathematical calculations of stability and floatability.

The computer animation is described in Jasionowski, A "Virtual demonstrator" Safety at Sea Report No VIES01-RE-004-AJ, May 2008 (Project Report No 15). The mathematical model and the simulation approach by use of the program PROTEUS3 are described in detail in Vassalos, D, Jasionowski, A, Prigara J, Guarin, L. "WP2.2 Definition of foundering scenarios. WP3.5 CFD Computations and validations, WP4.1 Comprehensive modelling of MV Estonia", Safety at Sea Report No VIES01-RE-001-AJ, September 2006 (Project Report No 1) and Jasionowski, A: "PROTEUS3 Simulations of foundering scenarios", Safety at Sea Report No VIES01-RE-002-AJ, May 2008 (Project Report No 14). The latter report contains a Literature List on page 14-15 where references [2]-[8] are scientific papers, reports and one PhD covering the development and validation of the PROTEUS3 program

Bullet point No 3:

- Laboratory tests by MARIN about inflow into a superstructure (sic - should be deck house) are also manipulated to support the above fakery.

The laboratory tests by MARIN are described and analysed in detail in Blok, J J. Huisman, H: "Model experiments on MV Estonia Flooding tests of superstructure deck No 4" MARIN Report No 20374-1-RD, April 2008 (Project Report No 6) and Tukker J, Blok J J: "Model experiments on MV Estonia: PIV Measurements of flow velocity in flooding tests of superstructure deck No. 4". MARIN Report No. 20374-3-RD April 2008 (Project Report No 8). A summary of the MARIN work is also given in Blok, J J. van Daalen, E F G, Tukker, J, Ypma, E L: "Overall summary report of MARIN research", MARIN Report No. 20374-4-RD April 2008 (Project Report No 9)

Bullet point No 4:

- Chalmers (Department of Shipping and Marine Technology) have contributed with various reports to support what can be seen in the false model tests and animations. Professor Rutgersson is no doubt aware of the manipulations of SSPA and Strathclyde and has adjusted his findings and reports accordingly.

The work by Chalmers is documented in the reports Rutgersson O. Schreuder M. Bergholtz, J: "WP2 Review of evidence and forming of loss hypothesis", Department of Shipping and Marine Technology, Chalmers Technical Report October 2006 (Project Report No 2), Bergholtz, J, Rutgersson, O. Schreuder, M. "WP2.1 Review of evidence Report No 2 Conceivable course of events", Department

of Shipping and Marine Technology, Chalmers, Technical Report, May 2008 (Project Report No 5) and Schreuder, M: "WP4.1-4.3 Numerical simulations of foundering scenarios", Department of Shipping and Marine Technology, Chalmers, Technical Report, April 2008 (Project Report No 10).