

AC comments presented at Final Workshop (7.2.2012 Aalto University, Espoo)

No meeting was held during the workshop.

Present

Yoshitaka Ogawa, NMRI  
Christoph Peickert, GL  
Andrew Paul, CAR  
Stefan Eriksson, STA (representing Erik Eklund)  
Bo Fagerholm, TraFi

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Speech by Bo Fagerholm

#### *Background facts*

SLF 47 was held in September 2004 where Finland had a submission

SLF 47/INF.6 *Survivability investigation of large passenger ships.*

The document provided a practical assessment of how semi-watertight and non-watertight boundaries can be treated in time-domain flooding simulations.

It was written by Anna-Lea Routi (STX) and was based on her design experiences and on two leakage tests of semi-watertight doors that had been supervised and approved by the Finnish Maritime Administration (nowadays Finnish Transport Safety Agency = TraFi). In the aftermath of Estonia it was decided that the doors on the car deck should be able to withstand a water pressure of 3.5 m with small deformation and leakage. It was considered that this would be equal to the sloshing effect of the water on the car deck.

In the document summary was written (partly quoted below)

Only a few semi watertight doors have been tested. The lack of testing results of fire and joiner doors has lead to assumed values of leakage and collapse pressure. There is a need for systematic tests of various types of doors to give a more detailed input into the process of time-domain flooding simulation. More tests are needed of different types of windows to establish the leakage and collapse pressure thresholds.

Was this document the "compelling need" that initiated the FLOOD part of the FLOODSTAND project?

#### *What has been reported to IMO up till now*

So far have the results from FLOODSTAND been presented at IMO in following documents submitted by Finland. Finland has acted as submitter alone, because it is sometimes difficult and at least very time consuming to get other member states to act as co-sponsors.

SLF 53/INF.2 *Research project on internal flooding and management of stability and crises*

SLF 54/INF.8 *Modelling of leaking and collapsing of closed non-watertight doors*

SLF 54/4 *An analysis of the recommendation on a standard method for evaluation of cross-flooding arrangements as presented in resolution MSC.245(83)*

Japan had also a proposal on amendments to MSC.245(83). Both documents were presented in the plenary and later on discussed in the working group. Both proposals will be evaluated and commented on in the correspondence group and a common position will be presented to SLF 55.

#### *The recommendations from the Papenburg meeting are repeated*

The work of FLOODSTAND is valuable for the rule making in IMO. The results of various work packages can be further refined and should be submitted to next SLF meetings, hopefully by other member states.

1. Many of the results and general conclusions from WP2 relate to intermediate stage flooding and progressive flooding. This information can be helpful in the work underway at SLF to refine the current intermediate stage flooding guidance in the *Explanatory Notes*, resolution MSC.281(85).
2. The focus of WP3 relates to SOLAS regulation 22-1 *Flooding detection systems for passenger ships*, and the guidelines for these systems in MSC.1/Circ.1291. Information and results from WP3 could be used to update guidance for sensors and their arrangements, locations, types, etc.
3. Parts of WP4 relate to SOLAS regulation 22.4 and the provision to allow certain watertight doors to remain open during navigation. If the results from this WP indicate a potential dramatic impact on ship survivability then this could provide a basis for SLF to reconsider regulation 22.4
4. WP5 regarding muster, abandonment, and rescue processes relate primarily to the Ship Design & Equipment (DE) Sub-Committee at IMO.
5. The focus of WP6 on development of a standard for decision making in flooding crises relates to SOLAS regulation 19.5 and providing stability guidance to the master. This is an area that SLF has struggled with under the new SOLAS 2009 probabilistic stability standard. The results from this WP could be very helpful to SLF in this area.

#### *Final words*

This has been a very interesting and rewarding research project lasting for 3 years. I, with my fellow AC members, have had the honour to sit in the front row – being able to participate in the meetings, see many presentations and watch some experiments. We have tried in the AC to give our best advice to the Steering Committee on how to enhance and where to introduce the project results in IMO instruments.

If the results from FLOODSTAND can be introduced into some SOLAS regulations, one can easily say – the FLOODSTAND findings will live for a long time, anyway longer than on the FLOODSTAND website. The results of FLOODSTAND could also be combined with findings from GOALDS and EMSA2 to produce even stronger arguments for new IMO rules.

A warm thank to Risto for an excellent co-ordinating job and also thanks to the SC and all participants in this project for all fine WP deliveries. Now it only remains for member states to take this matter forward.

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