Survival Capability of Oil Tankers

Note by the Secretariat

At the request of the Committee an extract from the report of the fifteenth session of the Sub-Committee on Subdivision and Stability (STAB XV/II) in respect of the provisions of Regulation 25 of Annex I of the draft Convention is given below:

"6. In response to the request by the Committee, the Sub-Committee reviewed the provisions of Regulation 25 of Annex I of the draft International Convention for the Prevention of Pollution from Ships, 1973. In particular, the Sub-Committee considered comments and proposals submitted by France, the United Kingdom, the United States and IACS in respect of:

(a) assumed bottom damage length;
(b) conditions of loading for which calculations should be carried out; and
(c) permissible angle of heel."
7. The Sub-Committee agreed that the assumed bottom damage length within forward 0.3L of ship as drafted in Regulation 25(2)(a) with reference to Regulation 22(b) of the above Convention would present serious difficulties in the design of oil tankers and should be reduced. The following re-draft of Regulation 25(2)(a) could, therefore, be recommended:

"(2)(a) the extent of side or bottom damage shall be as specified in Regulation 22 of this Annex, except that the longitudinal extent of bottom damage forward of 0.3L from the forward perpendicular shall be the same as for side damage, as specified in Regulation 22(a)(i). If any damage of lesser extent results in a more severe condition such damage shall be assumed."

The Sub-Committee also recommends that the references to "Regulation 22(a)(i) of this Annex" in sub-paragraphs (2)(b) and (2)(c)(i) of Regulation 25 be amended to "sub-paragraph (a) of this paragraph".

8. Some delegations expressed doubts about the need for inclusion of bottom damage requirements in this Regulation.

9. The Sub-Committee considered a proposal that if (for ships of more than 150 metres in length) it can be shown to the satisfaction of the Administration that the requirements of Regulation 25(2) are fully complied with at all conceivable locations of damage along the length of the ship, assuming that the initial draught is the summer draught and two adjacent side compartments are empty, calculations at lesser draughts need not be carried out.

10. The Sub-Committee, whilst recognizing the desirability of reducing the number of calculations, considered it premature to propose introduction in Regulation 25 of any general provisions
to this effect, until more experience is gained on the
to the application of this Regulation. The number of calculations
should be determined by the Administration to ensure that
the ship has achieved the desired degree of survival
capability required under that Regulation. After sufficient
information has been obtained on the damage stability in
various loading conditions, it might be possible in the
future to formulate general guidelines in this respect.

11. The Sub-Committee discussed the desirability of reducing
the maximum permissible angle of heel of 25 degrees as drafted
in Regulation 25(3)(b). Some delegations were in favour of
the reduction of the angle of heel to a smaller value, e.g.
20 degrees, since in their view such angles could be
obtainable in most large oil tankers. Discussion revealed,
however, that reducing the angle of equilibrium might make
special equalization measures necessary for certain designs.
(The Sub-Committee had previously discussed equalization
measures and concluded that such measures should be discouraged).
Therefore, recognizing that the aim of this Regulation is
primarily the prevention of the pollution resulting from the
loss of the ship, it was recommended to retain the values
of the angle of equilibrium as contained in draft Regulation
25(3)(b).

12. The Sub-Committee also considered footnote 51 to
Regulation 25(4)(a) concerning the effect of outflow of liquids
from damaged compartments, but did not foresee any difficulty
in this respect and therefore no further study would be required.

13. The Sub-Committee invited its Members to convey the
foregoing observations to their respective delegations attending
the 1973 Marine Pollution Conference so that they may be
duly taken into account at that Conference.