

**Resolution A.797(19)**  
*adopted on 23 November 1995*  
*(Agenda item 10)*

**SAFETY OF SHIPS CARRYING SOLID BULK CARGOES**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

RECALLING FURTHER that, by resolution A.713(17), it adopted interim measures to be taken to improve the safety of ships carrying solid bulk cargoes,

RECALLING ALSO that, when adopting resolution A.713(17), it recognized the concern that the nature of cargo and ballast operations can subject the ships which carry solid bulk cargoes to more severe patterns of bending and shear forces; that the speed and methods of loading and the equipment employed in unloading operations at solid bulk cargo terminals may contribute towards local overstressing and damage; that some solid bulk cargoes can, through their high density and propensity to shift, pose dangers; and that there was a need for continued and effective maintenance of the ships concerned,

BEING CONCERNED at the continued loss of ships carrying solid bulk cargoes, sometimes without a trace, and the heavy loss of life incurred,

BEING AWARE of the work undertaken by Governments, classification societies and other segments of the private sector in this regard,

BEING INFORMED that the Maritime Safety Committee has initiated further measures to enhance the safety of ships carrying solid bulk cargoes, and is in the process of defining the problems and suggesting solutions, both in the short term and in the long term; is considering all relevant aspects of risks to ships carrying solid bulk cargoes as a ship type, so that all elements of safety are assessed in their totality; and has carried out a review of recent losses involving ships carrying solid bulk cargoes with special reference as to whether they had been subjected to enhanced surveys,

NOTING the work done by the International Association of Classification Societies (IACS) in developing survey and maintenance requirements for ships carrying solid bulk cargoes,

1. URGES Governments, classification societies, shipowners, ship operators, shipmasters and terminal operators, pending the development of the above-mentioned requirements, to take immediate measures along the lines specified in the annex to the present resolution;
2. REQUESTS the Maritime Safety Committee to carry out, with high priority, its work on the safety of ships carrying solid bulk cargoes, and to develop as soon as possible requirements and recommendations covering survivability standards, design and construction standards, operational standards, survey requirements, ship/shore interface aspects and management and training;
3. INVITES Governments thoroughly to investigate accidents occurring to ships carrying solid bulk cargoes entitled to fly their flag, and to submit to the Organization the conclusions arrived at and recommendations made, so as to assist in the adoption of appropriate remedial measures;

4. INVITES FURTHER Governments in whose territories solid bulk cargo loading and unloading terminals are situated to advise the Organization of any studies on cargo handling practices at such terminals for information purposes;
5. INVITES ALSO Governments to take appropriate measures for educating all concerned on the avoidance of inadvertent overloading;
6. AUTHORIZES the Maritime Safety Committee to circulate the requirements and recommendations developed in accordance with paragraph 1 above to Governments, classification societies and others concerned, recommending their implementation;
7. REQUESTS the Maritime Safety Committee to keep this subject under continuous review and to amend or extend the measures set out in the annex as necessary.

## Annex

### **MEASURES TO IMPROVE THE SAFETY OF SHIPS CARRYING SOLID BULK CARGOES**

- 1 Port State authorities, whether acting independently or in regional co-operation, should take appropriate measures to ensure that, in respect of ships carrying solid bulk cargoes:
  - .1 terminal operators use the Ship/Shore Safety Checklist for Loading or Unloading Dry Bulk Cargo Carriers (MSC/Circ.690);
  - .2 port authorities are encouraged to permit repair and maintenance work by the crew in port;
  - .3 stevedores are required to ensure that cargo operations are carried out without damage to ships' structures but where damage is caused, it is reported without delay to the responsible ships' officers;
  - .4 port authorities and terminal operators are aware of areas of specific concern relating to loading and unloading operations so they can be investigated and, if necessary, rectified;
  - .5 locations, where shore-based cargo weighing equipment for the transfer of high density cargoes is inadequate, are identified and measures to improve such equipment are examined;
  - .6 terminal operators appoint a "terminal representative" who has responsibilities for operations conducted by that terminal or facility with regard to the particular ship. The person so appointed should be knowledgeable about operational aspects of dry bulk trades and should have the authority to intervene when safety is being compromised;
  - .7 confirmation is submitted to the Organization that loading and unloading terminals for solid bulk cargoes comply with the IMO codes and recommendations on ship/shore co-operation; and
  - .8 measures are taken by port State control officers specific to the safety of ships carrying solid bulk cargoes, as set out in the annex to resolution A.787(19).
- 2 Flag State Administrations should take appropriate measures to ensure that, in respect of ships carrying solid bulk cargoes:
  - .1 the documentation for the loading and unloading operations recommended by the Maritime Safety Committee to improve bulk carrier safety is included as an essential item in the International Safety Management (ISM) Code certification;
  - .2 masters are provided with information on the strength of the hull girder system for representative scenarios of loading and discharging of intended loading conditions; and

- .3 single-hull ships of 20,000 tonnes deadweight and above and over 10 years of age are not permitted to carry high-density cargoes (e.g. ore), unless prior to completion of the first annual survey after adoption of this resolution:
    - .3.1 a survey of all cargo holds to the extent specified for the five-yearly periodical survey in accordance with the Guidelines on the Enhanced Programme of Inspections during Surveys of Bulk Carriers (resolution A.744(18), annex A) has been successfully completed and appropriate documentation is carried on board; or
    - .3.2 a survey related to cargo holds has been successfully completed and appropriate documentation is carried on board; such a survey should comprise:
      - .3.2.1 internal examination of all cargo holds including close-up examination, particular attention being paid to tank tops, transverse watertight bulkheads, stool construction, side plating, framing and attachments;
      - .3.2.2 internal examination of topside ballast tanks selected on the basis of survey records; when extensive corrosion is found the examination should be extended to other ballast tanks, as necessary; and
      - .3.2.3 thickness gauging to confirm the findings in 2.3.2.1 and 2.3.2.2 above.
- 3 Shipowners should take appropriate measures to ensure that, in respect of ships carrying solid bulk cargoes:
- .1 such ships use the Ship/Shore Safety Checklist for Loading or Unloading Dry Bulk Cargo Carriers (MSC/Circ.690);
  - .2 such ships use weather routing services to obtain accurate and up-to-date information on weather and sea conditions;
  - .3 a planned maintenance scheme is implemented;
  - .4 the restoration of damage to hold coatings caused by cargo operations is included in the planned maintenance scheme;
  - .5 damage to the structure of the ship's holds caused by cargo operations is properly surveyed and repaired;
  - .6 only appropriately qualified personnel are authorized to carry out repairs involving welding;
  - .7 where practicable, the washing of the ship's holds is followed by a freshwater rinse as a measure to prevent corrosion;
  - .8 "owners' surveys" of cargo holds are conducted before loading and after unloading, and that an appropriate log of such surveys is kept on board; and
  - .9 such ships are manned by an adequate number of properly qualified and trained crew.
- 4 Classification societies should take appropriate measures to ensure that, in respect of ships carrying solid bulk cargoes:
- .1 research and development is continued, in co-operation with shipbuilders, and that an appropriate feedback mechanism with survey practices, class rules and design standards is maintained; and
  - .2 the practicability of the application of common principles in their computerized programmes for ships' design, construction and maintenance is reviewed.