
E9
(1988)

Earthing and bonding of cargo tanks/ process plant/piping systems for the control of static electricity

- E9.1** The hazard of an incentive discharge due to the build-up of static electricity resulting from the flow of liquids/gases/vapours can be avoided if the resistance between the cargo tanks/process plant/piping systems and the hull of the ship is not greater than 10⁶ ohm.
- E9.2** This value of resistance will be readily achieved without the use of bonding straps where cargo tanks/process plant/piping systems are directly or via their supports, either welded or bolted to the hull of the ship.
- E9.3** Bonding straps are required for cargo tanks/process plant/piping systems which are not permanently connected to the hull of the ship, e.g.
- a) independent cargo tanks;
 - b) cargo tanks/piping systems which are electrically separated from the hull of the ship;
 - c) pipe connections arranged for the removal of spool pieces.
- E9.4** Where bonding straps are required, they should be:
- a) clearly visible so that any shortcomings can be clearly detected;
 - b) designed and sited so that they are protected against mechanical damage and that they are not affected by high resistivity contamination e.g. corrosive products or paint;
 - c) easy to install and replace.
- E9.5** Checks should be made on the resistance to earth during construction of the ship and at subsequent major surveys, supplemented by visual inspection during annual surveys.

