iii) Passing through fuel oil or ballast tanks and outside the tank to which the sounding pipe serves: column D.

iv) Passing through the bilge well and outside the tank to which the sounding pipe serves: extra heavy thickness (see 4-6-1/3.9).

11.3.4 Materials of Sounding Pipes

The material of sounding pipes for tanks containing flammable liquids is to be steel or equivalent. Plastic pipes may be used in such tanks and all other tanks subject to compliance with the following:

- The plastic pipe is confined to within the tank which the sounding pipe serves.
- The penetration of the tank boundary is of steel.
- The plastic pipes used are in compliance with Section 4-6-3.

11.3.5 Protection of Tank Bottom Plating

Provision is to be made to protect the tank bottom plating from repeated striking by the sounding device. Such provision may be a doubler plate fitted at the tank bottom in way of the sounding pipe, or equivalent.

11.3.6 Deck of Termination and Closing Device

Sounding pipes are to be terminated on decks on which they are always accessible under normal operating conditions so as to enable sounding of the tanks. In general, the exposed end of each sounding pipe is to be provided with a watertight closing device, permanently attached, such as a screw cap attached to the pipe with a chain.

Sounding pipes of double bottom tanks and tanks whose boundaries extend to the shell at or below the deepest load water line are, in addition, to terminate on or above the freeboard deck. This is so that in the event of a shell damage in way of the tank, the opening of the sounding pipe will not cause inadvertent flooding of internal spaces. Termination below the freeboard deck is permitted, however, if the closing device fitted at the open end is a gate valve, or screw cap. For oil tanks, the closing device is to be of the quick acting valve, see also 4-6-4/11.3.7.

11.3.7 Sounding Pipes of Fuel Oil and Lubricating Oil Tanks

Sounding pipes from fuel oil tanks are not to terminate in any spaces where a risk of ignition of spillage exists. In particular, they are not to terminate in passenger or crew spaces, in machinery spaces or in close proximity to internal combustion engines, generators, major electric equipment or surfaces with temperature in excess of 220°C (428°F). Where this is not practicable, the following are to be complied with.

11.3.7(a) Fuel oil tanks. Sounding pipes from fuel oil tanks may terminate in machinery spaces provided that the following are met:

i) The sounding pipes are to terminate in locations remote from the ignition hazards, or effective precautions, such as shielding, are taken to prevent fuel oil spillage from coming into contact with a source of ignition.

ii) The termination of sounding pipes is fitted with a quick-acting self-closing valve and with a small diameter self-closing test cock or equivalent located below the self-closing valve for the purpose of ascertaining that fuel oil is not present before the valve is opened. Provisions are to be made to prevent spillage of fuel oil through the test cock from creating an ignition hazard.

iii) *(2005)* A fuel oil level gauge complying with 4-6-4/13.5.6(b) is fitted. However, short sounding pipes may be used for tanks other than double bottom tanks without the additional closed level gauge, provided an overflow system is fitted. See 4-6-4/13.5.4.