

Sec. 32. (a.) No boiler or steam chamber is to be so constructed, fitted or arranged as that the escape of steam from it through the safety-valve can be wholly or partially intercepted by the action of any other valve.

(b.) A stop valve must always be fitted between the boiler and the steam pipe, and (when two or more boilers are connected with a steam receiver or super-heater) between each boiler and super-heater or steam receiver. The object of this is obvious, viz., to avoid the failure of all the boilers through the failure of one. The necks of stop valves should be as short as practicable.

Sec. 33. (a.) Each boiler must be fitted with glass water gauge, at least two test cocks, and steam gauge, that is to say, each boiler must be fitted with all the fittings as complete as if there was only one boiler.

(b.) Boilers that fire at both ends, and those of unusual width, must have water gauges and test cocks at each end or side, as the case may be. When a steamer has more than one boiler, and those boilers are fitted with stop valves, each boiler must be treated as a separate one, and have all the requisite fittings.

Sec. 34. Inspectors shall be most careful not to give any official sanction to any new arrangement or construction of marine steam boilers without first obtaining the permission of the Chairman in writing, nor shall they give any written approval of any invention or arrangement unless by direction of the Chairman, and whenever they know that any invention or new arrangement is to be fitted to a vessel that is intended to have a passenger certificate, they shall as soon as possible obtain plans and specifications and submit the same to the Chairman.

Sec. 35. When the longitudinal seams in cylindrical furnaces are not welded or made with a butt strap, the following constants will be substituted for 90,000 :

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| (a.) Furnaces with butt joints and drilled rivet holes.   | 90,000 where the longitudinal seams are double riveted and fitted with single butt straps ; 80,000 where the longitudinal seams are single riveted and fitted with single butt straps ; 90,000 where the longitudinal seams are single riveted and fitted with double butt straps.             |
| (b.) Furnaces with butt joints and punched rivet holes.   | 85,000 where the longitudinal seams are double riveted and fitted with single butt straps ; 75,000 where the longitudinal seams are single riveted and fitted with single butt straps ; 85,000 where the longitudinal seams are single riveted and fitted with double butt straps.             |
| (c.) Furnaces with lapped joints and drilled rivet holes. | 80,000 where the longitudinal seams are double riveted and bevelled ; 75,000 where the longitudinal seams are double riveted and not bevelled ; 70,000 where the longitudinal seams are single riveted and bevelled ; 65,000 where the longitudinal seams are single riveted and not bevelled. |
| (d.) Furnaces with lapped joints and punched rivet holes. | 75,000 where the longitudinal seams are double riveted and bevelled ; 70,000 where the longitudinal seams are double riveted and not bevelled ; 65,000 where the longitudinal seams are single riveted and bevelled ; 60,000 where the longitudinal seams are single riveted and not bevelled. |

#### *Steel Boilers.*

Sec. 36. (a.) The following rules should guide Inspectors when the general quality of the steel has been found suitable for marine boilers :—

(b.) The steel makers or boiler makers should test one or more