

Cleaning
boilers.

Whenever the Chief or senior Engineer may report to the Captain the necessity of removing the incrustation and deposits which form in the interior of boilers after service under steam, the Captain is to allow the necessary time for performing this work.

Expansion of
steam.

As a considerable saving in the consumption of fuel may frequently be effected by reducing the engine power, so as not materially to diminish the speed of the Ship, the Captain is to make himself acquainted with the principle and effect of the expansion of steam—observing that the expansion gear should at all times be employed when the engines are not worked up to their full power.

Trial of ship
under steam.

In order to ascertain the capabilities of the Ship under his command, he is, as soon as he proceeds to sea, to make careful and repeated trials of using the steam expansively under every variety of wind and weather, draught of water, and other circumstances, so as to be at all times enabled to apply the principle of expansion according to the nature of the service on which he may be engaged, and to calculate with accuracy the number of days and hours the Ship can be under steam (according to the different steps of the cam, or other means of gradation, at which the steam can be cut off) without being obliged to put into port for a fresh supply of fuel.

Use of steam
power to be
avoided as
much as
possible.

Except for the experiments ordered in the foregoing Article (and which will be necessary only when the information required cannot be obtained from reports of the performances and capabilities of the Ship on former occasions) the Captain is most carefully to avoid getting up, or keeping up, the steam in any case where the use of sails alone would enable him to perform, in a satisfactory manner, the duty on which he is engaged. For the slightest neglect of this part of his instructions,—a neglect which might perhaps cripple the resources of his Ship at the very time that her services may be most urgently required,—he will be held responsible. The engine-room fires are not to be lighted, without the permission of the senior Officer present, except in cases of emergency or danger, where such senior Officer cannot be conveniently communicated with by signal or otherwise.

Fires not to
be lighted
without
permission.