
A Practical Manual of Steam and Hot-Water Heating

lection for steam enter into the careful selection for water heating, namely: The size of the fire-pot (see section 34). The kind of coal to be used (see section 28). The number of hours to be run with one firing (see section 25). The division of the fire-surface (see sections 33, 34, 35). The stack temperature required to produce the rating, is of even greater importance to the man who is to select a water-boiler than it is to the steam-fitter (see section 25.)

The manner of selecting a hot-water boiler from the B. t. u. transmitted is in no manner different than with the steam-boiler. The only difference is in the divisor. With steam there is a tacit agreement on the part of the manufacturers to consider 240 B. t. u. per sq. ft. per hour as the value of radiation, but it is different with water, and it may be found that the majority of the manufacturers are still rating their boilers on the percentage basis, 65 per cent more for water than their steam-rating for a given boiler. It will be necessary, then, for the hot-water fitter to exercise the responsibility that the manufacturer has so freely thrown upon him and select a radiator value to please himself.

We will assume that the fitter is not desirous of wild-cat fame, but wishes to give his client the safest, easiest to handle and most economical sort of a heating job.

This would mean that a room temperature of 70 deg. is to be secured at zero weather with the average temperature of the water flowing through the pipes at from 150 to 160 deg., the difference being only 80 or 90 deg. As the radiator has a heating value of 1.5 B. t. u. per deg. of difference, the divisor would be either 120 or 135 B. t. u. in the place of the 240 B. t. u. used for steam. ($150 - 70$ or $160 - 70 \times 1.5 = 120$ or 135).