

An examination of Table XIV will show that the loss due to unburnt carbon monoxide represents only about two-thirds of the total loss due to the escape of combustible gases. Based on these results, use will be made of the approximation that the loss due to the unmeasured incombustible gases during trials 71, 72, 73, 83, 84, and 85, was in each case equal to one-half of the measured loss due to carbon monoxide, the unaccounted for losses would then be reduced from 12.0 per cent, 14.7 per cent, and 10.9 per cent; to 10.1 per cent, 12.0 per cent and 8.5 per cent for those trials carried out on the water tube boiler. These figures while still high, are not so conspicuously high as before.

In applying the same assumption to the trials on the fire tube boiler, the unaccounted for losses are reduced from 15.1 per cent, 10.3 per cent, and 20.9 per cent, to 11.5 per cent, 12.6 per cent, and 12.9 per cent, respectively, which are much more uniform. The percentages of heat in the peat fired which remains unused in the form of combustible gases may be estimated as 5.7, 8.1, and 7.2 for trials 71, 72, and 73, while for trials 83, 84, and 85, they are probably 10.8, 11.1, and 24.2, respectively.

It is clear that an increase of from 3 to 4 per cent in the thermal efficiency of the boiler might be expected for the first three trials, and of from 5 to 12 per cent for the three latter trials might be expected if all the combustible gases could be burned.