As the consumption of water and the heat transmitted to the steam were not the same on the two comparative journeys (*see* table), the consumption of fuel per 1,000 train-kilometres was reduced to the same water consumption and heat transmission. Some allowance must also be made for the fact that the locomotive with coal-fuel was quite new, whilst the other had been in use for some time, and therefore was less favourably conditioned.

The annexed table shows the most important results of the tests. It will be noted the superheat temperature of the steam is higher with the locomotive fed with peat-powder fuel than with the one with coal. This is owing to the fact that peat-powder burns with a longer flame than coal, and to the temperature of the products of combustion in the former case being higher than in the latter. A calculation of the boiler efficiency and the temperature of the fire-box gives, for the locomotive for peat-powder, respectively, 73 per cent and 1,670° Cent., and, for the locomotive for coal, 68·8 per cent and 1,510° Cent. Both figures, it will be seen, are higher for the former, which again signifies that the heating value of the peat-powder is better utilized than that of the coal. The main object of the tests was to ascertain the consumption of peat-powder as compared with that of coal for the production of the same quantity of steam and in doing the same work. To attain this, it was necessary to reduce the observed steam production per kilogramme of fuel to what it would have been with the same total heat content, taking as standard the total heat of steam at 190° Cent., reckoned as 665 calories. The calorific value of the fuel also had to be referred to a proper standard, and 7,740 B.t.u. was chosen for the peat-powder, and 12,600 B. t. u. for the coal. The reduced values will be found in the table annexed. In reducing the figures for the coal-fired locomotive, regard has been had to the fact that the locomotive was a new one, wherefore its efficiency was somewhat modified. Tests have shown that locomotives of this type, on an average, give about 6·3 pounds superheated steam per pound of coal; a re-calculation gives an efficiency of 0·65 instead of 0·685, which has been taken into consideration.

The final result deduced from the table is this, that the same quantity of steam can be obtained from $\frac{6.81}{4.71} = 1{\cdot}45$ pounds of peat-powder as from 1 pound of coal, when the respective values are 7,740 B.t.u. and 12,600 B.t.u., and the boiler efficiency is, respectively, 0·73 and 0·65.

With a supply of four tons of peat-powder, which the tender can hold, a freight train of 650 tons and a passenger train of 300 tons behind the tender can be hauled, respectively, 62 and 81 miles.