

STUDIES ON FUELS FOR TEA DRIERS—III

THE STORAGE OF LIQUID FUEL AND THE DESIGN AND MAINTENANCE OF SUITABLE BURNERS

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GENERAL

Liquid fuel offers possibilities for obtaining higher thermal efficiencies than either wood or coal. When a liquid fuel installation is run properly control of firing is more simple than with other fuels. At the present moment the cost of liquid fuel on a calorific basis is generally higher than that of wood or coal although the actual relative costs are influenced considerably by transport. Despite this fact, however, the possibility of obtaining a higher thermal efficiency with liquid fuel installations may enable oil to compete with other fuels.

Under these circumstances it is most important that the installation should be of proper design. In a later section of this series of articles figures will be given to show how economy of the order of 25 per cent may be achieved by suitable oil burners as compared with a type which is not suited to tea driers. Unsuitable types of liquid fuel burners have been installed in tea driers on numerous occasions and in these cases the advantages of high thermal efficiencies have been lost.

Where it is decided to use liquid fuel it is impossible to over-emphasise the necessity for careful selection of suitable type and size of burner.

The storage of liquid fuel is also of great importance. Careful attention to a few very simple points is repaid manifold by increased efficiency. Every reasonable precaution is exercised to free liquid fuel of water before distribution, but owing to its nature and to

climatic factors complete elimination is not practical. Condensation on the inside of storage tanks on the estate is also liable to occur through large diurnal variations of temperature and humidity. When water gets into the burner an entirely disproportional amount of trouble and loss of efficiency results from it. There is fortunately no valid reason whatsoever for this to occur, since it is very simply avoided by elementary precautions easily understood by coolies when instructed on the lines recommended in the following section.

Finally, attention must be drawn to the services of experts willing to advise on all matters connected with liquid fuel installations, which service is maintained by the Shell Co. of Ceylon, Ltd. who kindly provided the following paper:—