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### THE HANDLING OF LOCOMOTIVE COAL AND ASHES.

By C. F. WHITTON, S. Can. Soc. C. E.

(To be read before the Mechanical Section, March 19, 1908.)

The intelligent application of modern methods to the handling of locomotive coal and ashes has become one of the important features of modern railroad operation.

The endeavour of the present paper is to treat briefly on current practice and designs for coaling and ash-handling plants. Plans of stations representative of five methods are shown, with a brief presentation of the salient features and operating cost of each. Most of the latter figures are of general interest only, a few of them having been estimated. In order to facilitate comparison of costs, most of the figures furnished by the railroad companies being total costs for a single year, the writer has endeavoured, as far as possible, to analyze these according to information personally obtained regarding the actual working of the various stations.

The total expense for handling coal, which has been reduced to a tonnage basis, includes:

- Fixed charges.
- Operating charges.
- Maintenance charges.
- Pro-rata charges.

The fixed charges, which comprise interest, depreciation, insurance, and taxes, have been taken as 10% of the total initial cost of the plant. Maintenance and operating charges vary so widely