

is in use a fair number of hours each year—as depreciation is almost as rapid in an idle conveyer as in one that is in continual use, for proper attention and care is rarely accorded the equipment unless it is in actual service. In fact, unless the conveyer belt is carefully cleaned, removed from the conveyer and stored in a place of even temperature, free from acid, hydro-carbonaceous fumes,

formulae that have been given need be made to fit almost any special use of belt conveyers. Reference will also be made to this class of conveyer when describing certain special installations and operations, for such equipment is found in almost any modern enterprise.

THE CANADIAN LOCOMOTIVE COMPANY'S NEW PLANT.

AN idea of the radically different layout of shops at the Canadian Locomotive Company's plant, at Kingston, Ont., as at present being changed, may be gathered from the accompanying plan. On the completion of the buildings there shown, the whole plant will be essentially new, as while three of the buildings are shown as being old, the only one of these three that goes back ten years is the machine shop to the right, completed some few years ago. The power house has only been in operation about eight years, and the boiler shop is less than two years old, so that with the new shops, the plant will be almost entirely new throughout, replacing the antiquated buildings with which the company has heretofore been compelled to do business.

The whole area shown in the plan has been more or less covered with a miscellaneous collection of old stone buildings, scarcely adapted to the work done, except under adverse conditions of operation. The problem presented was that of removing these old buildings, and re-

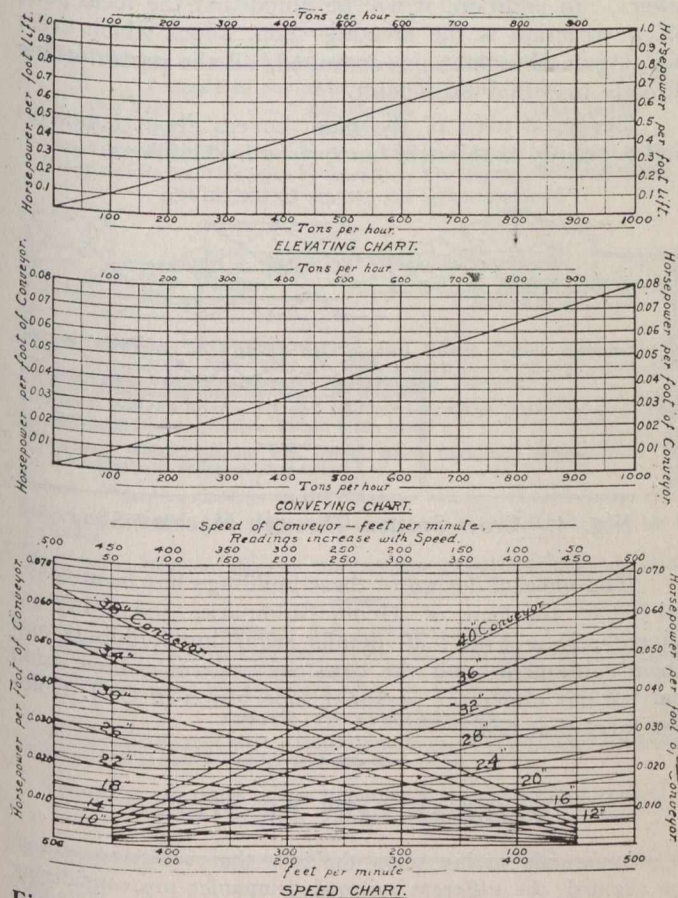


Fig. 3.—Horse-power Required for Conveyers Continuously and Uniformly Loaded.

NOTE.—To ascertain total horsepower required, multiply the sum of Speed Chart and Conveying Chart readings by total length of Conveyer in feet and add the Elevating Chart reading multiplied by total lift in feet. For each discharging device add an additional 1/8 horsepower for each inch of Conveyer (belt) in excess of 10 inches.

moisture, etc., etc., its deterioration may be even more rapid than if actually used for carrying material for, in use, particles of the load have a tendency to stick to the belt and to protect it from the injurious effects of many agents. This all emphasizes the economic fact that the more economic a piece of apparatus the greater the necessity of its continual use in order to realize the maximum benefits.

In this discussion, no attempt has been made to indicate the wide use to which belt conveyers may be put, such as picking conveyers for the sorting of ores, etc., the handling of mail in post offices, packages in department shops, cements in bags, etc., etc., but the discussion has been limited rather to one of conveyers for handling material in bulk. The laws and rules that have been laid down, however, can easily be modified to meet almost any condition of service, for the power consumption of belt conveyers depends almost entirely upon the load carried, distance of transfer, and inclination of conveyer. The question of width of conveyer (size) has little effect upon the consumption of power. Initial cost, on the other hand, really depends almost entirely upon the size of the conveyer so that only a modification of the various

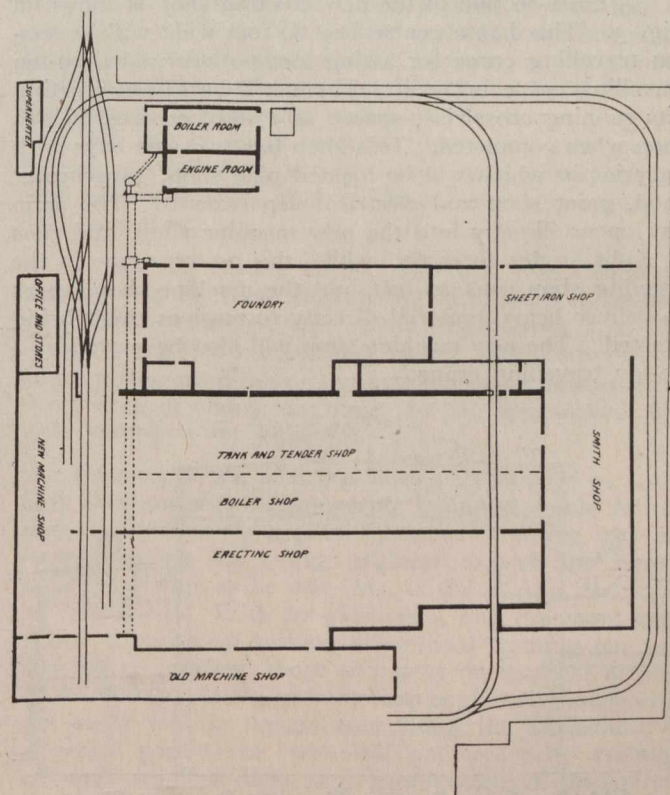


Fig. 1.—General Plan of Works.

placing them with newer ones without interfering with the locomotive construction work. This is being accomplished by razing the old buildings one at a time, and on the cleared site, erecting the new ones.

The work of reconstruction was first commenced on the buildings to the north of the old boiler shop, erecting the new tank and tender shop on ground unoccupied, and then tearing down the old tender shop for the erection of