

Looking Along the Scrap Dock Prior to the Commencement of Sorting Operations

# Lackawanna Reduces Scrap Handling Costs 72 Per Cent

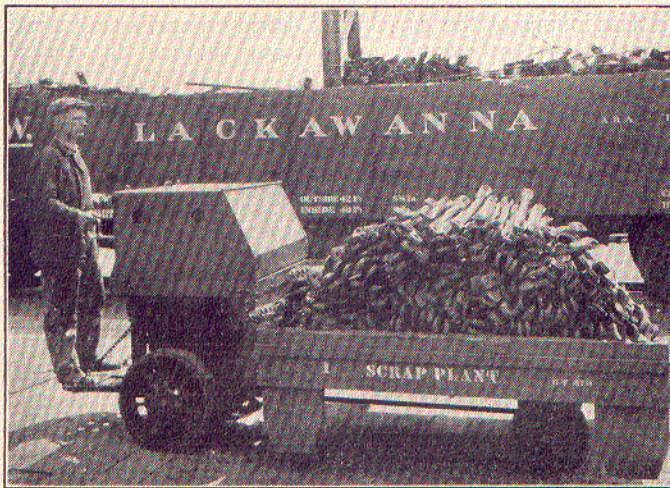
*New facilities at Scranton retire 6 old plants and release 29 men from force*

**T**HE reduction of scrap handling costs to 48 cents per ton or 72 per cent less than under previous methods and an outright release of 29 men from the labor force characterize the operations of a new scrap plant which the Delaware, Lackawanna & Western has launched at Scranton, Pa. The economies are equivalent

tenance of way shop. In accomplishing this the new plant displaces six old docks, all of the elevated platform type. One of these docks was at Kingsland, N. J., which was the eastern point of concentration. A second was at East Buffalo, which is the western extremity of the property. A third was operated at Scranton, Pa., where the system's largest shop for locomotive repairs and also the general storehouse are situated, while the other three docks were also in Scranton, but around the Keyser Valley shops, about three miles distant, where repairs to freight cars are made.

These platform docks had been well constructed and were acceptable facilities in their day, providing the typical bins for various kinds of scrap, all car door high, and equipped with platform tracks for the operation of a push car along the docks with which to facilitate the movement of heavy material to the proper bins while awaiting sale. The docks at Scranton and Kingsland were an unusually fine example of platform docks for instead of the wood construction typical of the others they were built of concrete with the bin partitions well protected by steel plate and angle iron. But as time elapsed (it has been 16 years since the shops were built at Scranton and 21 years at Keyser Valley) the old docks, with the exceptions of the two just mentioned, showed severe wear and tear and all of the docks yielded more and more to the trends which held greater promise for economy under prevailing conditions.

With increases in the cost of labor and the difficulty of its selection and the added attractiveness which increasing volume of scrap and higher prices obtainable gave to this industry, the old docks received more generous aid from power equipment, but the improvements in this respect were at best superficial. The old docks were simply inadequate and obsolete and with practically all operations being done by hand their renewal in kind was not warranted. The accomplishments of other roads in equipment and methods conceived along different lines were not only more in keeping with the enterprise of this road as reflected in its high standards of operation but were better fitted to its



An Electric Lift Truck with a Load of Bottom Connecting Rods to Be Reconditioned in the Shops. Note the Type of Platform Used Which Is Picked up with the Load

to an annual saving of \$30,000 a year from the tonnage handled or sufficient to pay off the investment in less than three years.

## Six Plants Abandoned

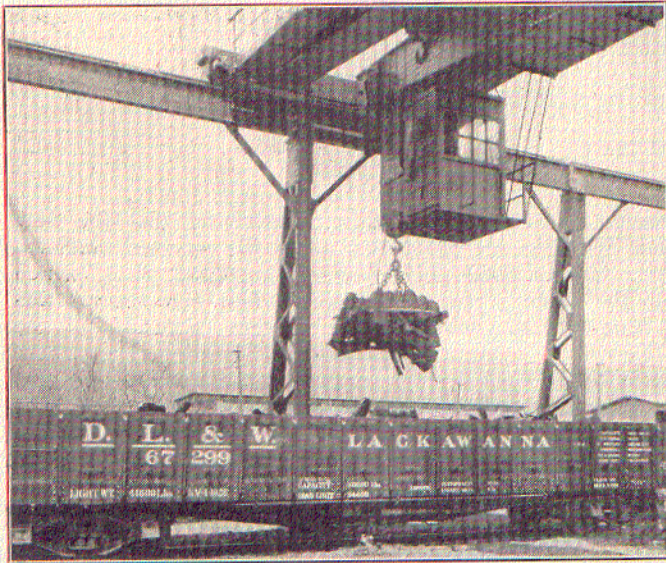
The new plant is a binless facility of the traveling crane type which is built adjacent to the Keyser Valley shops of this road, where it was completed and placed in operation on January 4 of this year. Its function is that of sorting all the mixed scrap of this road with the exception of track scrap, which is handled at a main-

needs. After a careful study, therefore, all of the existing facilities that had been devoted to the handling of scrap were themselves abandoned and their work taken over by a single plant at Keyser Valley.

Keyser Valley is the logical place for this location. As previously mentioned it is the site of the system freight car shop, a heavy producer of scrap itself. But added reasons advised the building of the new plant here. Scranton, Pa., in which Keyser Valley lies, is also the site of the largest locomotive shop, another big producer of scrap. Again, Keyser Valley is the route of freight traffic and therefore readily accessible to scrap movement. In Keyser Valley the dock is also located advantageously from the standpoints of supervision and sale.

### Overhead Traveling Crane Preferred

Like a number of other scrap plants which have been built on railroads during the last few years, the Lackawanna's new plant is simply an expanse of level ground uninterrupted save by standard gage track, and served by a traveling crane operating a magnet. In building this project, however, the company did not adopt the



Handling Scrap at the New Plant

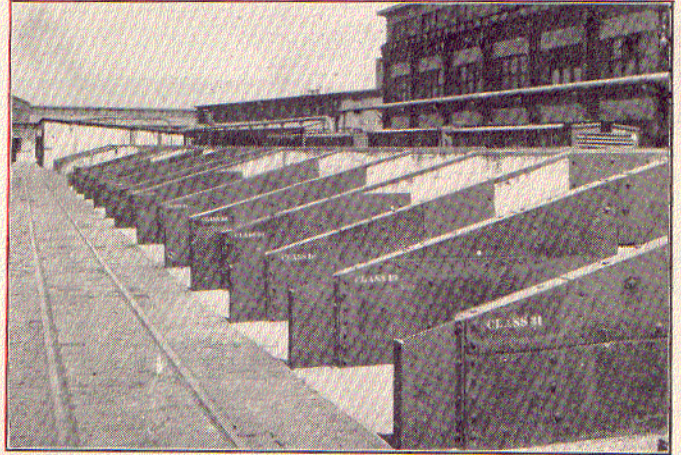
gantry type crane which is distinguished by the fact that the overhead girder from which the hoists operate and supporting legs at each end are one, calling for movement of the entire structure when traveling up or down the dock.

While the gantry crane requires less investment by dispensing with other support than the legs of the crane, local requirements plus a fear concerning the freedom from appreciable limitations placed by this construction upon travel speed, led the company to adhere to the customary practice of relying for service upon the typical traveling crane, consisting of simple girders traveling on runways supported overhead on a row of structural steel supports properly spread at the base to take up the side thrust and keep the craneways straight under all conditions.

In keeping with this design the crane is also marked with the absence of the cantilever construction providing an overhang of the crane beyond the supports, the conditions at Scranton again offering no apparent need or justification for this feature.

The crane has an 85-ft. span and a craneway 700 ft. long, giving an area of operation of approximately 50,000 sq. ft. The hoists on this crane are two in number, one 15-ton main hoist and a 6½-ton auxiliary hoist, which

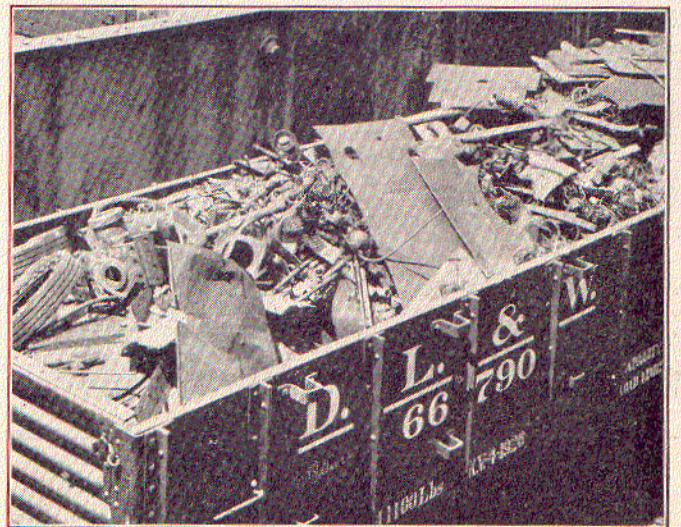
carries a magnet. Lengthwise of the dock this crane travels 375 ft. per min. under load or at the rate of about four miles per hour while the travel is 425 ft. per min. without any load except for the magnet which is 65 in. in diameter and weighs 8,900 lb. Crosswise of the dock the travel is 150 ft. per min. under load and 175 ft. per min. without load, while the available speed for hoisting is 70 ft. per min. under load and 140 ft. per min. without load for the auxiliary hoist and 20 ft. per min. under



The Platform Dock at the Scranton Locomotive Shops Is One of Six Which the New Plant Retires

load and 40 ft. per min. light for the main hoist. With the speeds and lifting power provided, the crane is considered ample for all needs for some time to come.

There are two tracks in the scrap area, one along each side of the craneway. It is the practice to use one track for inbound scrap, and the other for outbound scrap. The scrap arrives in open top cars and is unloaded in the area opposite the car. This scrap comprises all that from the system except, as indicated before, the track



A Typical Load of Scrap Ready for Shipment to the Scrap Plant

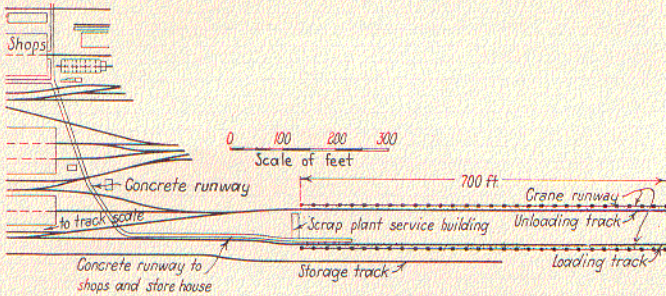
scrap, and with the exception also of such items of mechanical scrap as car wheels, car axles, borings, turnings and drillings, journal bearings, brass, etc., which readily separate themselves at the shops as released and require no sorting. Whenever possible the scrap reaching the dock is sorted into small piles by laborers according to the classification of the American Railway Association

under which it is sold, whereupon it is loaded directly into cars for shipment.

As an aid to sorting, the plant is equipped with a motor drive alligator shear, a small motor drive shear, a portable gas cutting outfit and an air-operated shear for the purpose of shearing yokes from couplers. In addition to this equipment there is a building at the south end of the craneway 12 ft. by 48 ft. in area, which is divided into four sections, one for the foreman's office, one providing a room for the laborers, a third section providing a tool room and the fourth section for the storage of any brass, copper and similar items recovered from the scrap.

**Portable Platforms for Recovered Material**

The Scranton project is essentially a scrap plant, and a place therefore where reclamation activities, for the present at least, are confined simply to the recovery of such materials and scrap as are still serviceable or such repairable materials as were not removed at points of origin, but more or less material of this character finds its way into the scrap. It is interesting, therefore, that for the disposition of such material a concrete runway has been built to connect the new facilities with the shops and storehouse. Also all freight car material, recovered



**The Ground Plan of the New Scrap Dock**

from the scrap, is placed on portable platforms which an electric lift truck can lift bodily and convey to the shop or storehouse. To enlarge upon the efficiency of this detail these materials are never mixed but are so handled that materials of different kinds are loaded on separate platforms so that they can be delivered with minimum handling to the particular machine where the re-conditioning work is to be done.

**Substantial Savings from Operation**

The cost of the new facilities at Scranton was approximately \$75,000, including grading, track work and the concrete runway. A track scale is located just south of the scrap plant. As a return on this investment the cost of handling during the four months of operation has averaged only 48 cents per net ton as compared with the average cost at the six abandoned docks of \$1.75 per net ton—a saving of \$1.27 per net ton. These figures are based upon the same data in both cases, comprising all charges for power, light, heat, telephone, water, repairs to equipment, supplies and all direct charges for labor incident to the handling of scrap and the recovering of any material capable of further use, the labor charges including wages of foremen. Of the 48 cents per net ton, 44 cents represents labor and 4 cents other expenses, the new plant requiring a force of but 12 men as against 41 men required for the same work on the six abandoned docks. In view of the retarding effect upon operations during the first four months by the presence of an unusual amount of snow and ice, which has since disappeared, it is the aim to reduce this figure further, but with 24,000 net tons of scrap passing through the plant per year the

reduction of the cost to 48 cents per net ton is equivalent to a saving in handling (disregarding overhead) of about \$30,000 per annum or sufficient to pay the indebtedness for facilities in less than three years. This saving moreover does not comprehend various benefits which arise from the more thorough classification of the scrap allowed by the new plant and also the recovery of more material capable of further use.

The new plant is the latest development of this company's stores department of which I. H. Lance, is the general storekeeper.

**Freight Car Loading**

WASHINGTON, D. C.

**R**EVENUE freight car loading in the week ended May 22 again exceeded the million mark, amounting to 1,039,385 cars. This was an increase of 52,079 cars as compared with the corresponding week of last year and an increase of 121,161 cars as compared with 1924. Corresponding figures for the last two years were exceeded in all districts and in all classes of commodities except ore, which showed a slight decrease as compared with 1925 and livestock which showed a decrease compared with 1924. The largest increases were in miscellaneous freight, of which 27,343, more cars were loaded than last year and 68,462 cars more than in 1924. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

REVENUE FREIGHT CAR LOADING—WEEK ENDED SATURDAY, MAY 22, 1926

| Districts                 | 1926       | 1925       | 1924       |
|---------------------------|------------|------------|------------|
| Eastern                   | 250,892    | 236,707    | 218,719    |
| Allegheny                 | 212,064    | 201,790    | 188,865    |
| Poconontas                | 57,055     | 50,026     | 38,499     |
| Southern                  | 147,822    | 142,717    | 133,021    |
| Northwestern              | 158,099    | 154,703    | 142,736    |
| Central Western           | 138,655    | 128,057    | 136,364    |
| Southwestern              | 74,798     | 73,306     | 60,020     |
| Total Western districts   | 371,552    | 356,066    | 339,120    |
| Total all roads           | 1,039,385  | 987,306    | 918,224    |
| <b>Commodities</b>        |            |            |            |
| Grain and grain products  | 39,660     | 38,796     | 37,870     |
| Live stock                | 26,846     | 26,684     | 32,360     |
| Coal                      | 165,212    | 152,580    | 139,083    |
| Coke                      | 11,869     | 9,423      | 8,706      |
| Forest products           | 76,968     | 75,704     | 74,245     |
| Ore                       | 62,287     | 62,729     | 55,401     |
| Mdse. L.C.L.              | 266,324    | 258,514    | 248,802    |
| Miscellaneous             | 390,219    | 362,876    | 321,757    |
| May 22                    | 1,039,385  | 987,306    | 918,224    |
| May 15                    | 1,030,162  | 985,879    | 913,201    |
| May 8                     | 996,527    | 983,034    | 908,203    |
| May 1                     | 995,641    | 984,073    | 913,550    |
| April 24                  | 973,304    | 961,186    | 878,387    |
| Cumulative total 21 weeks | 19,843,150 | 19,449,531 | 18,739,419 |

**Car Loading in Canada**

Revenue car loadings at stations in Canada for the week ended May 22 aggregated 63,717 cars, an increase of 303 cars over the previous week and an increase of 13,004 cars over the same week last year. Cumulative loadings to May 22 show an increase in the total for this year, as compared with 1925, of 91,991 cars, the larger increases being 16,182 cars of grain, 11,467 cars of coal, 14,500 cars of merchandise and 25,797 cars of miscellaneous freight.

| COMMODITIES                          | TOTAL FOR CANADA |             |             | CUMULATIVE TOTALS TO DATE |           |
|--------------------------------------|------------------|-------------|-------------|---------------------------|-----------|
|                                      | May 22 1926      | May 15 1926 | May 23 1925 | 1926                      | 1925      |
| Grain and grain products             | 10,348           | 11,177      | 5,490       | 140,522                   | 124,340   |
| Live stock                           | 1,872            | 1,830       | 1,962       | 40,714                    | 44,390    |
| Coal                                 | 5,168            | 4,797       | 1,993       | 88,903                    | 77,436    |
| Coke                                 | 387              | 382         | 191         | 8,825                     | 5,777     |
| Lumber                               | 3,913            | 3,653       | 4,187       | 67,570                    | 65,167    |
| Pulpwood                             | 1,962            | 1,651       | 1,854       | 66,112                    | 65,496    |
| Pulp and Paper                       | 2,447            | 2,446       | 1,831       | 51,451                    | 42,516    |
| Other Forest Products                | 2,750            | 2,794       | 2,649       | 68,864                    | 61,337    |
| Ore                                  | 1,818            | 2,021       | 1,507       | 29,424                    | 24,232    |
| Merchandise, l. c. l.                | 16,824           | 17,182      | 15,999      | 312,642                   | 298,142   |
| Miscellaneous                        | 16,228           | 15,481      | 13,050      | 244,685                   | 218,888   |
| Total cars loaded                    | 63,717           | 63,414      | 50,713      | 1,119,713                 | 1,027,721 |
| Total cars received from connections | 38,193           | 38,065      | 32,754      | 750,235                   | 671,417   |