

Main Locomotive Shop.—This building is designed to contain the erecting shop, machine shop, blacksmith shop, and boiler shop.

The erecting shop is of a transverse lift-over type, and contains thirty-five bays, each twenty-five feet between centres, and is 778 feet long by 75 feet wide. The entire area is served by two travelling electric cranes, carried on two levels. The 120-ton crane, furnished with two 50-ton trolleys, is carried on the upper level, and is used for transferring, wheeling and unwheeling locomotives and handling parts. One of the trolleys on this crane is equipped with a ten-ton auxiliary hoist for handling light material at a high hoisting speed.

Another ten-ton travelling electric crane operates at high speed, and serve the entire area of the erecting shop for handling material in that shop and transferring same to the blacksmith shop and machine shop. The machine shop and the boiler shop are located in adjacent bays on either side of the erecting shop.

Provision is made on the crane columns in the erecting shop for attaching portable jib cranes for use in dismantling and erecting material on the front ends of locomotives. These cranes are placed where desired by means of the overhead travelling electric cranes.

Entrance for locomotives to the erecting shop is provided through four doors, located in the west side of the shop, two of these doors being located at either end.

For providing additional means for entrance of locomotives, six door openings are provided in the east wall of the machine shop, two of these being at the north end and four at the south end.

All of these entrance tracks are connected up with the erecting pits of the several stalls where they enter the building to permit of the locomotives moving into and out of the shop through these entrances should this movement become desirable or necessary.

The machine shop to contain heavy machine tools is located parallel with and adjoining the erecting shop on one side, and is 60 feet 9 inches wide and the same length as the erecting shop. A high-speed travelling crane of ten-ton capacity covers the entire area of this shop. Material can be brought into the shop through a door provided in the end of the building the material being brought up to the end of the machine shop by the travelling electric yard crane, which travels across the end and outside of the locomotive shop.

Space for the lighter machine tools is provided in a shop 60 feet 9 inches wide parallel with and alongside of the heavy machine shop and of the same length as that shop. An overhead trolley beam is provided on the bottom chord of the roof truss to permit of using a travelling electric trolley for handling material longitudinally in this shop. Provision has been made for a foreman's office elevated above the floor and having liberal glass surface in the walls so as to give the best possible view of the shop.

The blacksmith shop is located alongside of and parallel with the erecting shop on the opposite side from the machine shop. This building consists of two bays, each 332 feet long, 60 feet 9 inches and 50 feet wide, respectively.

Space is provided for heavy forging work, steam hammers, etc., in the building immediately adjoining the erecting shop.

The blacksmith shop will not be served by a travelling crane, but provision has been made for jib cranes to handle the material from steam hammers, forgings, etc.

In a building of lower cross-section alongside are located the furnaces, bolt headers and other blacksmith shop machinery. This portion of the shop is served by a trolley its full length to facilitate the longitudinal movement of material through the shop.

The space for the boiler shop is provided in a two-bay building, alongside of and parallel with the erecting shop at the end of the blacksmith shop, 352 feet long and the same width as the latter shop.

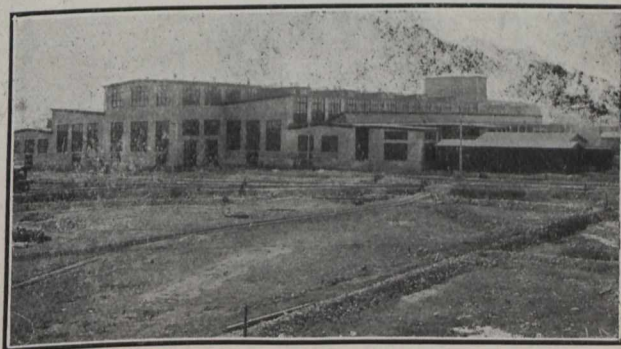
That part of the boiler shop immediately adjoining the erecting shop is provided with a 40-ton travelling electric crane equipped with two 20-ton trolleys serving the entire area of the boiler shop for handling the boilers and other material.

The riveting tower is located between two of the roof trusses in the end of the boiler shop, with a 25-ton crane for serving the hydraulic riveter.

In the outer of the two bays of the boiler shop space is provided for a flue shop and boiler shop tools. The entire length of this space is served by a 3-ton overhead travelling trolley for handling material through the shop. Space for a flue rattler is provided immediately outside of and adjacent to the low bay of the boiler shop.

An entrance track is provided through the outside wall of the boiler shop, on which boilers or other equipment going to this department can be delivered on cars under the travelling crane for unloading or may be loaded out for shipment in the same way. This facilitates the handling of boilers from steam shovels, pile-drivers, Lidgerwoods, etc.

Jib cranes are provided for serving the individual machines in the boiler shop where such service may be necessary.



Northwest View, Showing Roof Arrangements With Reference to Lighting of Erecting and Machine Shops.

The heating throughout is done by indirect fan system. For distributing the heated air underground concrete and tile ducts are used.

The general illumination consists of Cooper-Howitt lamps, with circuit and plug boxes for extension loop cords. Provision has also been made for incandescent lighting circuits for individual lighting at machine tools where required, and for outlet boxes for connecting extension lamp cords to provide lighting for the interior of the locomotive boilers on the erecting floor.

Toilets, lavatories, and metal lockers are provided in the various departments of this shop.

A suitable system of piping is provided for distributing live steam, compressed air, fuel oil, and water for fire protection, drinking and hydraulic pressure.

Outlets for compressed air are provided in duplicate in the sides of each of the engine pits to supply compressed air for operating pneumatic tools.

In the main locomotive shop the electrical feeders from the power company's transmission lines are carried in underground ducts, bringing the current at the voltage delivered by the power company, namely, 2,200 volts, to a sub-station located adjacent to and immediately outside of the low machine bay, the transformers for stepping down to 440 volts being located in this sub-station. In this sub-