the increases are 51.7% and 75.6% respectively.

On the basis of total employees, regardless of the average time worked, the increases were larger. For 1940-43 the increases were 35.4% for killed and 52% for injured. For 1943 the increases were 75.7% and 103.6% respectively.

Engineering Problems

Extremely difficult problems have been faced by the engineering departments of both railways. In the first days of the war, industries were springing up all over the country, these had to be served with industrial spurs and other trackage and facilities as quickly as possible. Hundreds of camp sites and air fields had to be given transportation facilities. Marshalling and storage yards had to be built, and lines had to be strengthened to meet the sudden heavy war traffic. Some highly intricate problems arose in transporting equipment. To move landing barges, it was necessary for the railway tracks to be depressed to permit the load to pass under bridges, and in certain sections signal towers had to be stripped and switch stands removed. Giant boilers offered serious problems, because they were often so big that they had to be loaded on two flat cars. The load being too wide for clearance, it was necessary that single track branch lines be used as much as possible. When the load did come onto a double track main line, no train could pass on the other track during the run, which meant train schedules had to be very carefully arranged.

One of the most important shipments ever made on Canadian railways was the moving of a steel tower from Lachine, Quebec, to the government-owned Polymer synthetic rubber plant at Sarnia, Ontario. The steel tower measured 165 feet in height and 12½ feet in diameter and weighed 150 tons. It had to be specially built, loaded on three flat cars and hauled by a special train. The train consisted of an engine, a rusted rock car used as a "floater" between the load and the engine, the three flat cars bearing the tower, and two cabooses for the crew. Since it could be moved only in daylight at 15 miles an hour, it took five days for the 500-mile trip. Everywhere the special train was given the right of way. The slow speed was an extra precaution for safety, and track men rode with the train to inspect the rails and briges before the load went across. This steel tower comprised the largest unit shipment ever made in Canada.

Munitions

Not only are the railways handling the largest volume of traffic known in their history, but they are also engaging in various other wartime activities. For example, in their own shops and in munitions plants operated by them have been produced tanks, naval guns, cargo ships, mine sweepers, marine engines and guns of heavy calibres, as well as secret devices.

The Canadian Pacific's shops at Montreal, the Angus shops, were converted to the production of Valentine tanks for the use of Soviet armies. It was stated by the chairman of the Soviet Government Purchasing Commission in the United States that these tanks were the best of all imported tanks. When the Soviet contract was completed, Angus shops then turned to the manufacture of huge main marine engines and condensers for the Royal Canadian Navy escort vessels. While on the tank contract, company engineers devised a plan of using one-piece cast turrets and cast noses for tanks in place of the previously used built-up parts. This method added to the fighting effectiveness of the tanks and at the same time simplified construction. It was widely applied thereafter in tank construction in Canada and elsewhere.

The Canadian Pacific's Ogden Shops in Calgary also produce naval guns, anti-aircraft gun mounts, gun barrels and sights and breech housing mechanism