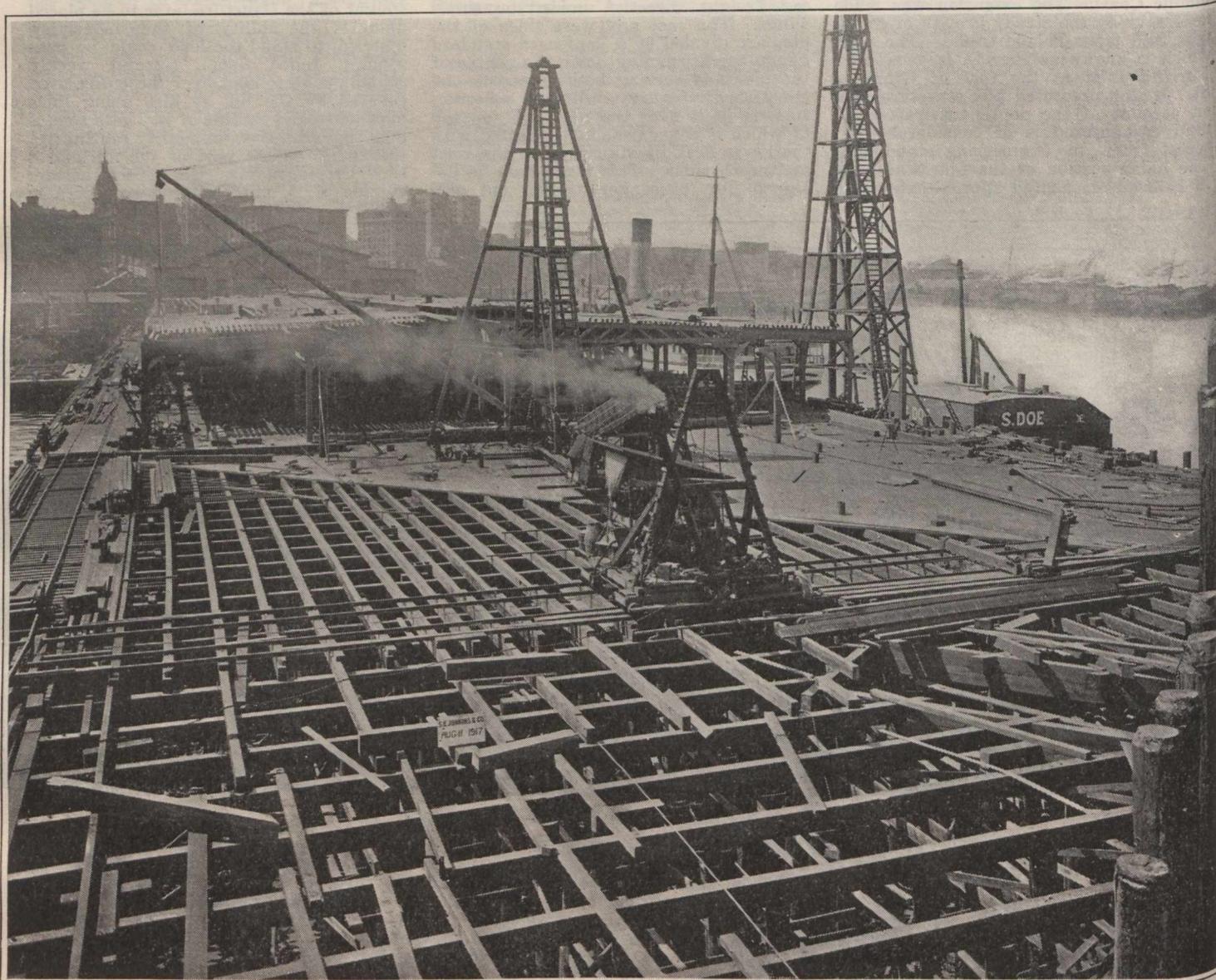


from 85 to 125 ft. long. It was also decided that all deck timber, which was either in contact with the water or near enough to it to be continually damp should be treated. Bracing, caps, stringers and laminated deck timber were therefore specified for 12 lb. treatment under the boiling process. All timber was to be of Douglas fir and of standard specifications. The pile driving work was given to S. Doe, of Victoria. As there was no rig available for handling piles of the weight and lengths of those to be used, Mr. Doe built a special scow driver, with leads measuring 130 ft. in height.

travelling derrick, running on a track laid across the pier, and so arranged that it could be jacked up on rollers and moved forward under its own power. This moving operation took about two hours. About 40 lin. ft. of pier could be handled from each position of the track. The derrick was used for handling all creosoted timber, which was delivered on scows alongside as required, picking up, moving across the dock and depositing in place. The average time for handling the 7 in. x 12 in. x 40 ft. stringers, from the scow to the far side of the dock, and back again for another load was approxi-

and moored alongside of or near the dock, while field office, storehouse and compressor house were located at the extreme end of the old pier outside of the shed, where they would not interfere with the operation of the pier and yet be easily accessible.

While piles were being treated, inspectors were kept at each plant, and the quantity and quality of creosote used, temperatures, pressures and time of treatment were carefully watched and recorded. Each pile was numbered and stamped after being passed and full data on its treatment recorded. When driv-



Canadian Pacific Railway Pier D, Vancouver. Looking north during construction, Aug., 1917.

So far as is known, this is one of the largest, if not the largest, scow driver ever built.

As there was a large amount of boring and drift bolting to be done, a motor driven air compressor was installed, pipe lines extended from it and connections tapped in at intervals, with hose to the various air tools. These comprised air riveters, with special sets for drift bolt driving, and boring machines of various sizes. The borers were especially useful in laying the 2 x 4 in. Australian hardwood which served as flooring, and which had to be bored for nailing. This boring alone required approximately 70,000 holes.

Another useful machine was a small

mately two minutes.

A skid driver was used to drive the track extension along the old pier, and a few column piles under the old deck which had been omitted in building the original pier. When its pile driving work was finished, it was turned into a skid derrick, with an 80 ft. boom, and used to erect the roof trusses, which were framed and assembled on the deck and lifted complete on to the columns in one operation. This derrick was used to raise the 2 x 6 in. laminated roofing, a team load at a time. It also performed a variety of miscellaneous work, as its long boom and skids made it a very handy rig.

A fully equipped blacksmith shop was built on a small scow, to avoid fire risk,

ing, a report was also made by an inspector on each driver, as to the pile number, location, penetration and length of cutoff. It was thus possible to readily trace the history of any pile from its time of treatment until driven. All piles were spotted by transit and stayed soon after driving.

The driving at all times was extremely hard. Piles were driven on 6 ft. 8 in. x 8 ft. centres. Piles were capped by 10 x 16 in. and 12 x 14 in. creosoted timbers, drift bolted into place. Capping was kept several bents behind the pile driving, so that the jar from the driving would not change the elevation of the piles after cutoff. Creosoted stringers were laid across the caps and drift bolted