STANDARD
CPR
WATER-TANKS

C.P.R. Standard Water Tanks.

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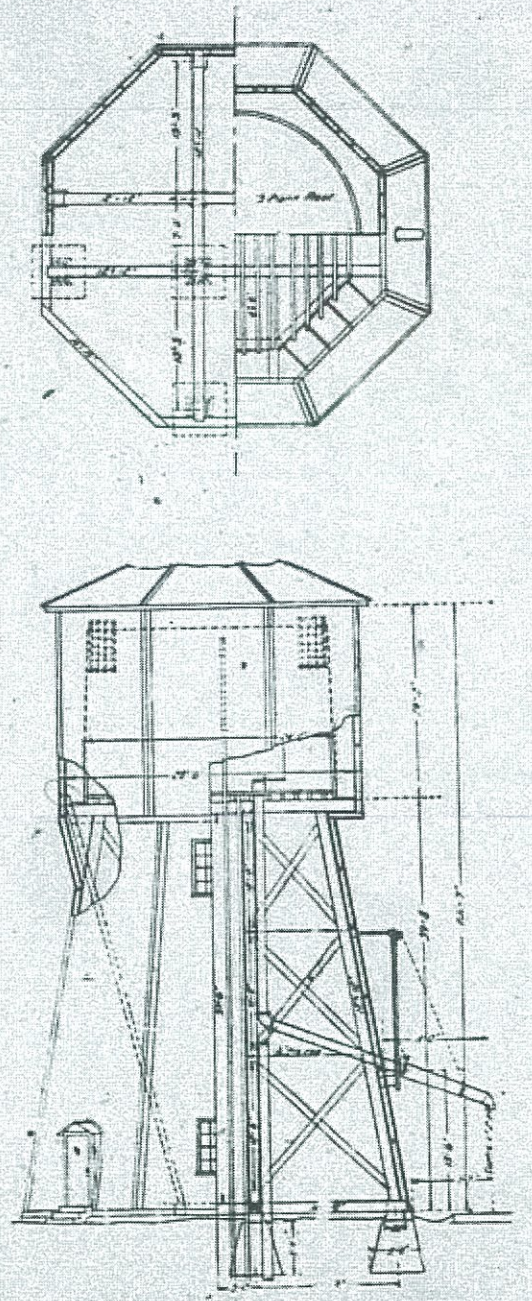

STANDARD HIGH TANK, C.P.R.

U.S., asking for information as to the protection of water tanks from the action of frost. The report of the committee, which has re-

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C.P.R. Standard Water Tanks.

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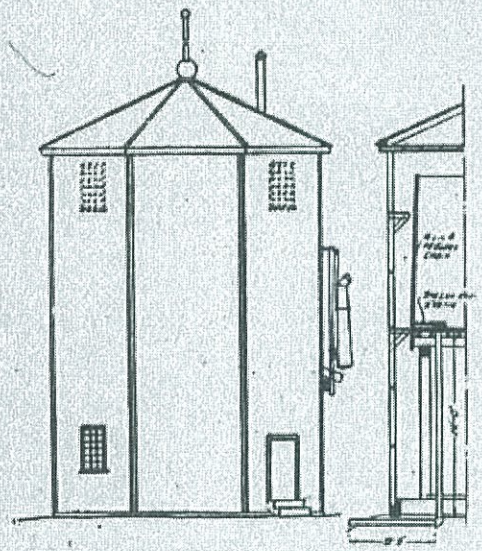


STANDARD ENCLOSED TANK, C.P.R.

cently been published, contains the eight questions submitted, together with extracts from the replies received and illustrations of water tanks in use on the different lines. Following are the questions asked:—

1. Do you use any method to heat water in tanks in order to prevent freezing? If so, please describe the same.

2. Do you use any scheme other than an air space to protect tanks on top and bottom from the action of frost? If so, please give description.

3. Describe the best way in your opinion to obtain an air space on the top and bottom of locomotive water supply tanks.

4. Have you ever found it advisable to protect the side of the tank from the action of frost?

5. Do you advise connecting pipes from the pump or other source of supply so as to deliver into the discharge pipe between the tank and the standpipe and thereby keep the water in the discharge pipe in circulation in place of delivering the supply directly into the tank?

6. Where you use steam pumps do you turn the exhaust steam into the suction pipe?

7. Where the water is delivered directly from the tank to the locomotive without the use of a standpipe, what precautions are used to protect the outlet valve and spout from freezing?

8. In tanks where float valves are used, what precautions are taken to keep the float and valve operating properly in winter and where do you place the valve which is operated by a float?

9. What do you consider the best scheme for protecting pipes between the ground and floor of a tank from the action of frost?

F. P. Gutelius, Engineer of Maintenance of Way, replied on behalf of the C.P.R. as follows:

1. We find it necessary to use heat to prevent the water from freezing in all the tanks on the system except those on the Pacific coast. Numerous methods are used:

(a) To extend the smoke pipe from the stove under the tank through the bottom of the tank so that the water in the tank is in direct contact with this pipe. In many cases the smoke pipe leads from the pump boiler, which is placed underneath the tank; in others a heating stove is used.

(b) When the pump is located sufficiently near the tank, the exhaust pipe from the pump is extended into the tank and the steam from the pump passes through this pipe, which is a coil, located as shown on the accompanying plan of an enclosed tank.

(c) The substructure of the tank in many instances is a 30 in. stone wall, which keeps the bottom of the tank warm without the use of the steam. In severe winters, however, this is not sufficient to prevent ice in the tank.

(d) Our new standard tank encloses the entire structure and is sufficiently large to give workmen access to the bands.

4. It is necessary in Canada generally to protect the side of the tank, and we think it can best be done as per our standard enclosed tank.

5. We lay our pipes leading to the standpipes at such depths that there is no necessity for making special effort to connect the supply pipe into the large pipe leading from the tank to the standpipe. If, however, any length of supply pipe can be saved, we connect the supply pipe to the large pipe leading to the standpipe in preference to extending it to the tank proper.

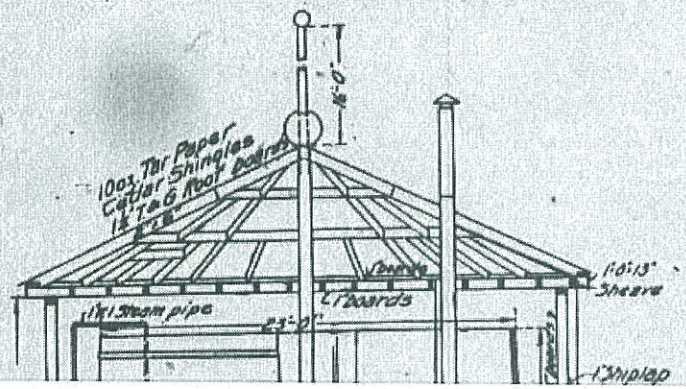
6. We do not turn the exhaust steam into the suction pipe. There might be a few cases on the system where this method of heating would be satisfactory, but as a general proposition it is not approved.

7. In our enclosed tank the outlet valve is located near the centre of the tank, so that the cold air entering the goose-neck is usually not sufficient to freeze up the valve.

8. The enclosed tank prevents the formation of ice in the tank, so that the float valve is not interfered with in the winter.

9. In the enclosed tank we do not require any protection for the pipes leading from the ground to the floor of the tank.

Our standard enclosed tank is giving first-class satisfaction except for the accumulation of ice on the track, caused by water being wasted when locomotives are being supplied.



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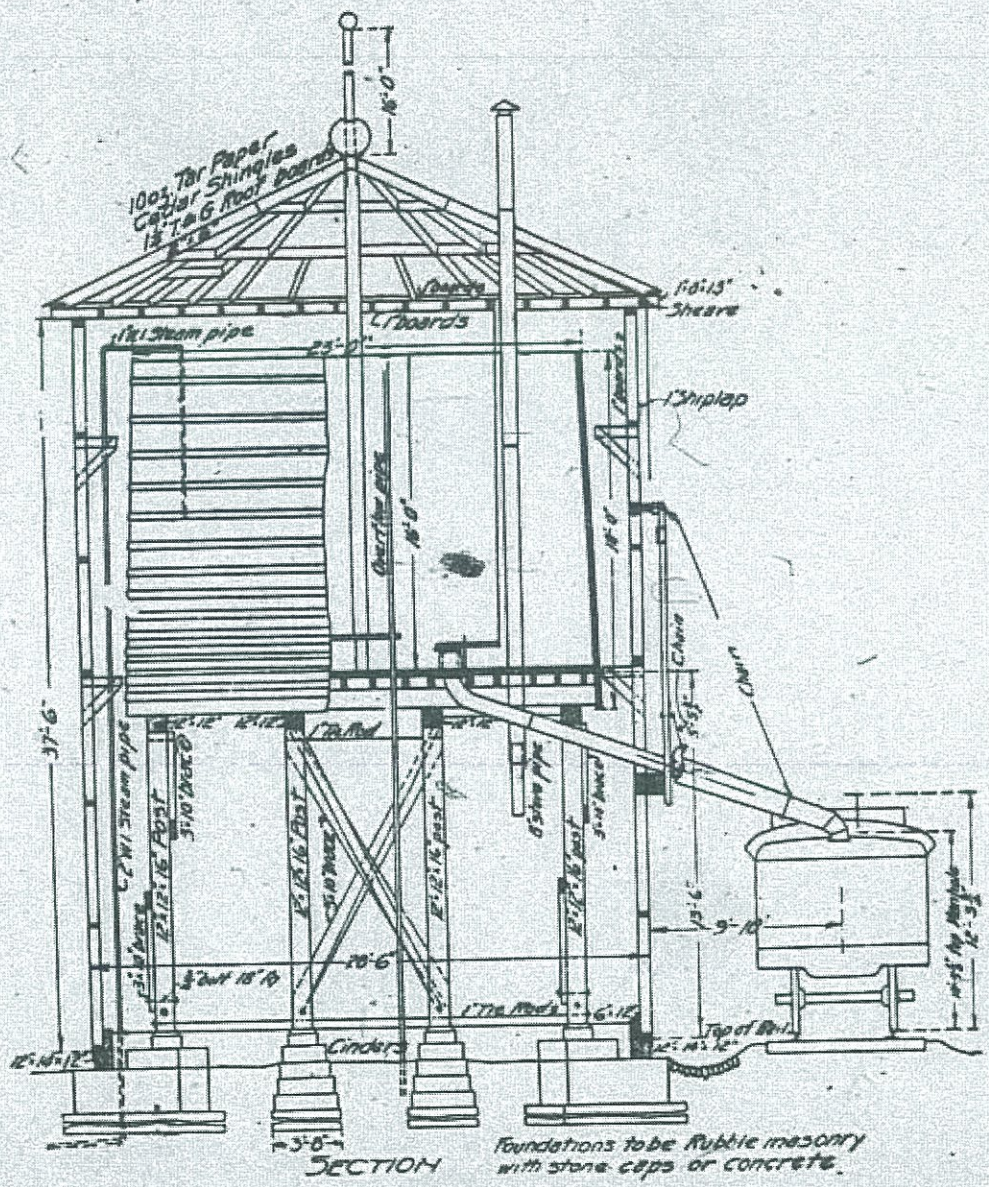
2. Do you use any scheme other than



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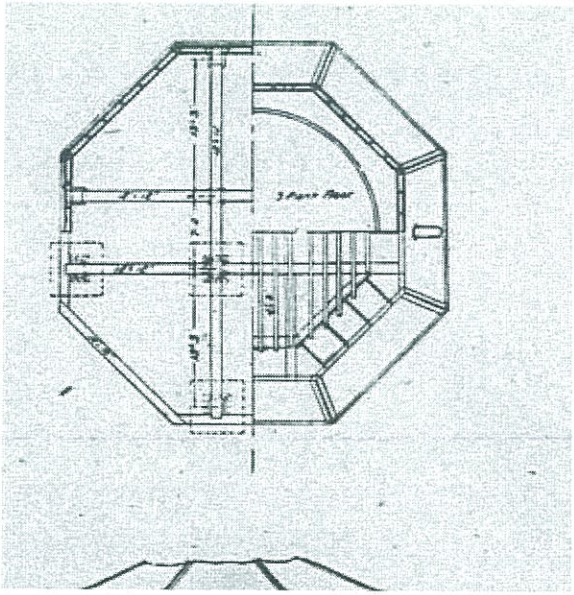

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Division C.P.R., Calgary, Alta., at the Officials' Conference at Field, B.C.)

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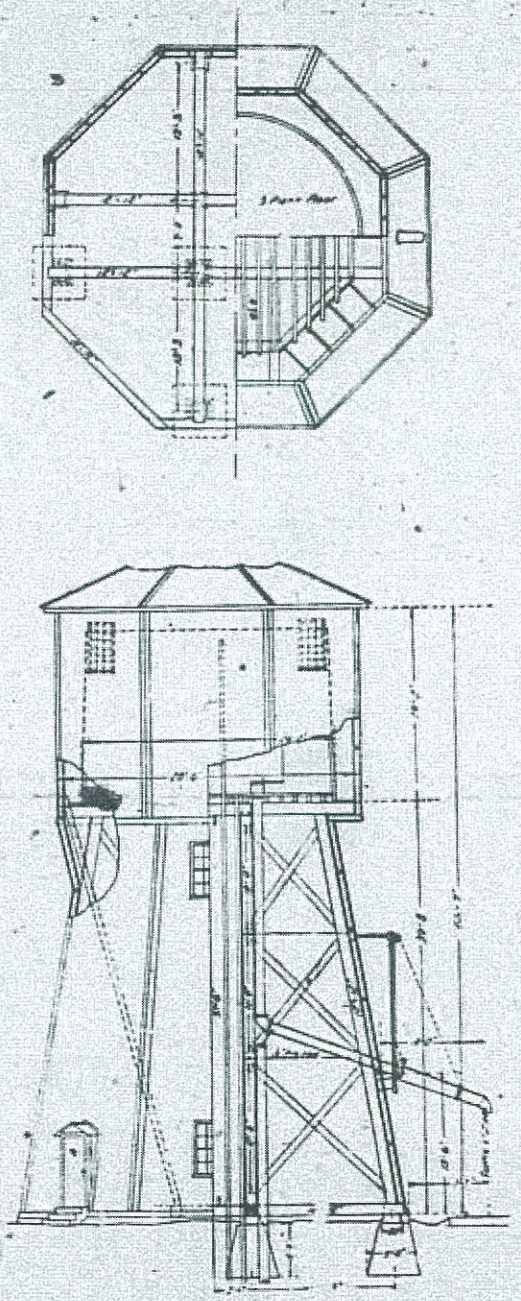

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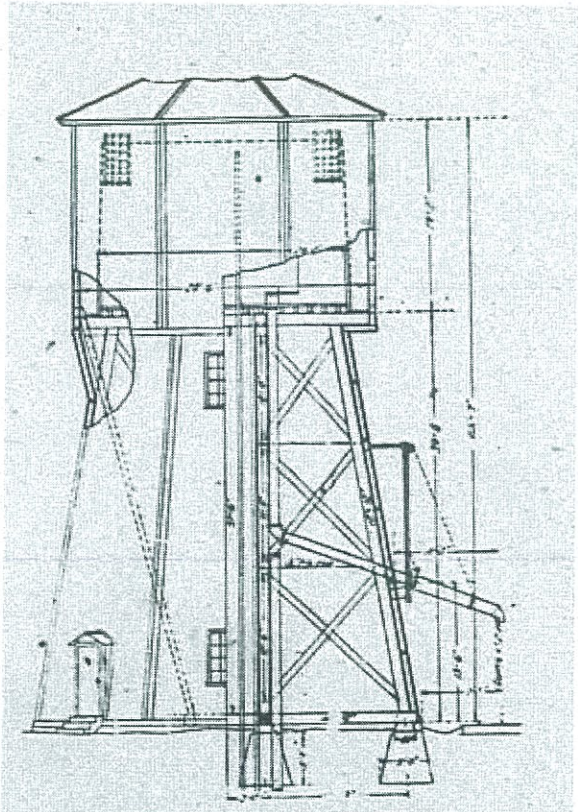

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