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All coal is delivered by rail; the length of haul varying from 300 to 760 miles. Coal is handled mechanically from track hoppers to overhead bunker by conveyors and bucket elevators. Ashes are removed from furnace ashpits by 8 in. pneumatic conveyors that deposit them in overhead bins from which they are spouted direct to railroad cars for disposal.

Boiler feed water is obtained from the city water mains. It is treated by two methods. For coal-fired boilers, it is softened by the Zeolite system. The lime-soda system is used to soften water for the electric boilers. All feed water is passed through deaerating feed water heaters before it is used in the boilers. Blow down is continuous and is metered after passing through heat exchangers.

No electricity is generated by steam, as the Washington Water Power Company has numerous hydroelectric plants in this region with a capacity totaling 222,000 kw.

Boilers are operated at 150 psig and steam is delivered to the distribution system at 140 and 8 psig. The high pressure and low pressure distribution systems are operated separately. No connections from the high pressure system are used as boosters for the low pressure system.

Employees in the production department number twenty-five, and there are five in the distribution department.

The maximum hourly send out for 1946 was 190,000 lbs and the total send out for the year was 430,592 M lb. Steam mains total 26,500 lineal feet and services, 13,788 lineal feet.

The area served throughout the year for space heating, water heating and manufacturing consists of the greater portion of the business district of Spokane; the steam plant being located in the approximate center of an area comprising 110 city blocks in which there are 340 customers.

Northern Commercial Company Supplies Steam In Fairbanks, Alaska

For the past fifteen years the business district of Fairbanks, an interior Alaskan city, located on a branch of the Yukon River and on the Alcan Highway, has been supplied steam by the Northern Commercial Company. This is probably the only Alaskan community to have such service.

Steam for heating is taken from the turbines in the company's electric generating station at 7½ psig and delivered to the customers through 8000 feet of mains.

About 2000 feet of 10 in., 8 in. and 6 in. steam lines and return lines are installed in a concrete tunnel. This tunnel also carries the mains for domestic water supply and fire fighting. The remaining steam and water lines are in wood ducts filled with sawdust or shavings. The steam lines, of course, are properly insulated.

The ducts are of such size as to permit at least 4 in. of sawdust around the pipes. The water mains are carried in these mains to prevent freezing. It really gets cold in Alaska. At Fairbanks the lowest temperature this past winter was -62 F and there was a period of 16 days during which the highest temperature was -50 F.

In all there are 225 customers, 90 per cent being business establishments and the remainder residences. There are 270 days in the heating season. The mean temperature for 43 years is 26.2 F. Annual steam sales is estimated at 200,000 M lbs. The first block of steam sells at $ .80 per M.

Extensions to both generating plant and distribution system are being considered.

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