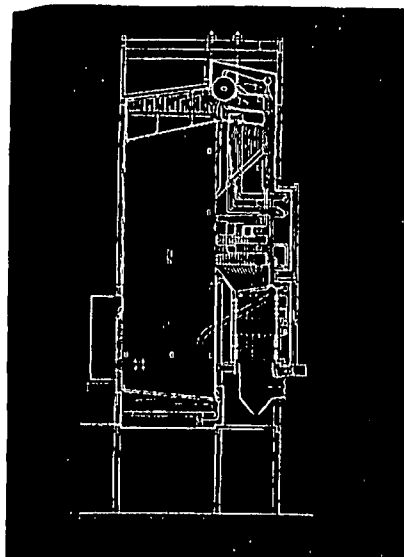


"Operation SUB-ZERO"

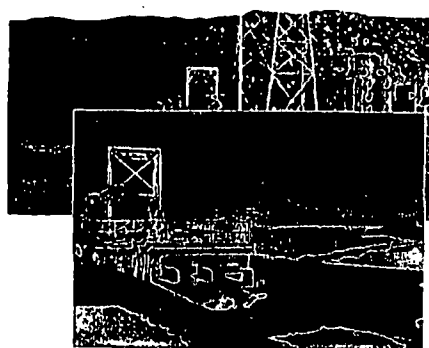
Proves Efficient and Economical

Bird Steam Plant shows 11,400 Btu per kwh station output for all purposes



Cross section of the Foster Wheeler single-drum steam generator for the Frank W. Bird Station of Montana Power Co. at Billings, Montana.

Capacity	675,000 lb per hr
Pressure	920 psig
Final Steam Temperature	903 F
Temperature Feedwater Inlet	359 F



Circulating water intake showing severe conditions of winter operation.

Under the severe operating conditions of temperatures as low as -40°F at an elevation of 3100 feet, this semi-outdoor plant of the Montana Power Company engineered by Ebasco Services Inc., has proved efficient and economical in operation and construction. Here are the facts:

HIGH STATION EFFICIENCY

During October 1952, with a metered daily average kwh output of 65,917, the fuel burned for a day consisted of 1,464 bbl of oil, plus 7,630,536 cu ft of natural gas. The oil provided 6,400,000 Btu per bbl, the gas 1,140 Btu per cu ft. Total Btu for all purposes per kwh station output was 11,400.

OPERATED ABOVE RATED CAPACITY

Although normal load condition did not require regular operation above 600,000 lb steam per hour and 60 megawatts, load was picked up to 705,000 lb steam per hour and 76 megawatts in fifteen minutes and carried for two hours.

MINIMUM PERSONNEL

Efficiently operated by only 4 men on each 8-hour shift.

CONSTRUCTED COST

Complete cost, on the basis of 66,000 kw, was approximately \$87 per kw.

Once again, the operating facts of an installation indicate the ability of Foster Wheeler to design and fabricate power-producing equipment to meet your needs.

FOSTER WHEELER CORPORATION
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