In This Issue

THE BUSINESS OF HEATING

CLOTHING MANUFACTURER DEVELOPS BIG BUSINESS IN DISTRICT HEATING

RAILROADS PAYING BIG PRICE TO "HEAT GROUND"

DISTRICT STEAM HEATING FOR RESIDENTIAL DISTRICTS

Published by the

AMERICAN DISTRICT STEAM COMPANY

GENERAL OFFICES AND WORKS

NORTH TONAWANDA, N.Y.
District Steam Heating Companies Recommend ADSCO Atmospheric System of Steam Heating to Assure Economical Use of Steam

The ADSCO GRADUATED RADIATOR VALVE provides the exact temperature desired in every room. An ADSCO RETURN ELBOW on small installations reduces cost. On larger heating systems, subject to pressure variations, the ADSCO RADIATOR TRAP prevents steam from entering return line. A constant pressure is maintained by the ADSCO PERFECTION REGULATOR reducing the steam main pressure to the required service pressure. An ADSCO PRESSURE GAUGE conveniently placed, indicates the exact pressure on the system. The ADSCO AIR ELIMINATOR in the return line, allows for the unrestricted escape of air and closes against the escape of steam or water.

District Steam Heating companies recommend the ADSCO Atmospheric System of Steam Heating because it provides greater consumer satisfaction. Where the ADSCO system is used with a boiler, the ADSCO DAMPER REGULATOR maintains a constant pressure and the ADSCO Safety Valve prevents any danger from excessive pressures. Interesting booklet "ADSCO Heating Radiates Comfort" sent free on request.

The Business of Heating

Splendid Outlook for District Heating as a Public Utility

DISTRICT Heating — the heating of buildings from a Central Power Plant — has long been recognized as a Community Service in many cities in this Country and Europe. A full understanding and appreciation of its advantages by that portion of the public which now enjoys them, leaves no doubt as to the general public acceptance of District Heating. There is, however, some doubt as to the full appreciation and understanding of the "Business of Heating" by the Utility Company. The splendid outlook, both immediate and future, for District Heating is naturally predicated upon a better understanding by the Public of its desirability. This, in turn, has attracted and will continue to attract the attention of Management and Investors to the very considerable profit to be secured from heating, 

when it is properly sold.

District Heating has taken tremendous strides during the past few years. This unquestionably has been due to the recognition of District Heating as a BUSINESS in itself. As such, it must be properly organized in its various departments and intelligently directed — and not made secondary or subservient to other interests of the Utility Company. The results of better direction are reflected in the financial statements of such Heating Companies as have awakened to these facts — whether they be companies long in the business or new companies, which have profited by the experience of their older contemporaries.

The merits of any service, such as District Heating, should in themselves be the basis for expounding its value to the public; they should not be subjected to comparison with service which is inferior or antiquated. For instance, the solicitor of an Electric Department would be laughed at, were he to dwell upon the relative candle power of an electric lamp and an oil-burning light hung from a ceiling — when as a matter of fact, one 50 watt bulb burning 6 hours per day at a rate of 6c per KWH would cost more than five times the cost of burning the oil lamp.

The point is that until recently, perhaps five or six years, steam for heating and power has been offered to the public in such a way as to permit the public to argue a comparison with the relative value of coal, wood, gas and more recently oil, when there is no such comparison. None of these things will remove the personal annoyances from the individual premises: none of these fuels will give the customer a constant service, regardless of the hour and regardless of general market conditions, or the dependence upon factors of production and delivery.

Steam from a central plant is a commodity which can be sold to any
public in any community whose business and social development has passed the stage where they have time to break up store boxes for fire wood.

A rate can be procured for such service, under such conditions, which will bring a financial return equal to any other business, when and if the investment has been properly safeguarded by a study of the community's needs.

The present success of the heating business reveals a splendid prospect for its further application in the larger cities because the Utility Company, either privately or Municipally owned, has already the foundation for serving steam heat to its citizens. And, the citizens in turn will be willing to pay a fair return, when they are properly informed of the merits of such Heating Service.

One has but to refer to the Proceedings of the National District Heating Association since its inception and organization in 1909 to realize the amount of study which has been and is being given to the subject of rates for steam service and the rules and regulations for the use of steam. Fundamentally, there has never been any question as to the demand for steam service from the customer's viewpoint.

The question then and now is one of efficient management and economical operation of the service so that the rate which the customer can and will pay will provide a satisfactory return upon the investment. From time to time as the operating statistics of heating plants are disclosed, they show interesting profits over the year's operation. In every case it is discovered that the Operating Company has realized that the public desire the heating service, and further, that the public will pay a fair return, provided always that they are shown wherein they can use steam economically; and that the value of the service is not—as they sometimes attempt to prove to the Utility solicitor— comparable with burning their own fuels.

Anyone who is interested in honestly investigating the facts in any city having steam heating service will find both the customer and the company well pleased. If the service is dependable and the rate is fair to both, such investigation will further disclose that District Heating is a public necessity for any community having buildings of size sufficient to justify the investment.

Clothing Manufacturer Develops Big Business in District Heating

Similar Opportunity open to other manufacturers and owners of large buildings

WHEN some new project is started, who knows what the morrow will bring forth. Industrial history is replete with incidents of by-products that have eclipsed the main line. Many ventures, started in a small way have exceeded the wildest expectations of the founders.

If anyone had told Greene-Swift, Limited, London, Ontario, Canada, fifteen years ago that they would be operating a district heating company, serving practically the entire business district of London, they probably would have laughed and dismissed the subject as an absurdity. Yet this is just what has happened—and in the experience of this company is much from which other industrial concerns can profit.

Greene-Swift, Limited, are manufacturers of men's clothing. They were not ambitious to embark on any other line. About fifteen years ago, however, they discovered that they had a surplus boiler capacity. Here, indeed, was an asset. Should they continue to operate their boilers at less than capacity or could they reduce their own costs for heat and power by selling steam to neighboring buildings?

The matter was taken up with the owners of adjacent buildings, who were quick to realize the advantages. Valuable space taken up by the boiler room could be utilized for profitable commercial purposes. Boiler room labor could be dispensed with.

Some pipes were laid through the basements of buildings. This was the start—simple, logical—and without much trouble for the executives of the Greene-Swift Company.

The idea took—in the language of the street "it went over big." Applications from additional buildings were received. Each year the lines
were extended, until last year approximately three blocks in the heart of the city were being heated from the boiler plant of the clothing manufacturer.

As in any other kind of enterprise, success in district heating depends upon sound management. This is the secret of Greene-Swift success. Common sense business methods were employed from the start. Early in the operation of this embryonic district heating plant, Mr. Robert Greene, the President of the company, appreciated that steam, like any other utility, must be sold on a metered basis. Simplex Condensation Meters were installed and additional meters purchased as new customers were taken on.

The wisdom of this practice was demonstrated within the past year, when the Green-Swift Company took over the district heating business of a sister company on the other side of Richmond Street, which is virtually the main business street of London. This company, a similar manufacturing concern also had a surplus boiler capacity and organized a company to carry on a district heating business.

Instead of installing condensation meters, steam was sold on a flat rate. The plant lost money year after year, despite the fact that new customers were being constantly added.

Last year, after a careful analysis, the company satisfied itself that a considerable investment would be required in metering equipment, boiler plant and distribution system in order to make its operations profitable. Rather than make any further investment, they decided to sell out the plant and franchise to Greene-Swift, Limited.

In due course, the engineers of the American District Steam Company were called in to make a study of the situation and recommend the best method of serving steam to the new group of customers so that the entire heating load might be carried from the main boiler plant of Greene-Swift, Ltd. The outcome of this study disclosed the advisability of installing approximately 4000 ft. of high pressure supply and return line, connecting the two plants and taking on a considerable heat load along the route of mains. A new boiler plant was decided upon, on the Greene-Swift property, which is now practically completed. At the present time work is progressing so that the steam customers on both sides of Richmond Street, including the new London Hotel, City Hall and other buildings, may have steam available at the opening of the coming heating season. A franchise has been applied for and a new company organized under the name of the Cities Heating Company, Limited. From past performance, it is reasonable to expect that this new utility company, the off-shoot of an old established industrial plant, will shortly become one of the most progressive and noticeable stars in the district heating firmament.

There is a moral in the above for any manufacturer or group of individuals interested in the possibilities of District Heating.

Both Greene-Swift Limited and its one-time contemporary had the same opportunity. Both were in the same city. The customers available to each were similar—yet one was able to operate profitably—to build up its plant and equipment and still have enough left to show a profitable return, while the other lost money.

From this it is obvious that the success of any District Heating project requires attentive and interested supervision and the employment of meter rates based on a just return for the service rendered.

In any section or community where district heating is practical, it is bound to be profitable if given the same careful administration that any other kind of business should receive. If "rule of thumb" methods are followed, success cannot be hoped for—nor under like conditions would it be expected in any other field of endeavor.

**Railroads Paying Big Price to “Heat Ground”**

**Industrial Plants, too, are Heavy Losers from Same Source**

Although railroads are one of the largest users of steam, the methods employed on most roads for distributing steam entail a high percentage of loss. Practically all roads heat their various buildings such as store houses, round houses, shops, office buildings, etc. from one central source.

**Losses Do Not Occur in Boiler Plant**

The boiler plant itself is usually efficient with modern boilers and up-to-date equipment. The steam losses of railroads, which run into startling figures every year, do not occur here, but in the lines which transmit the steam from the boiler plant to the various buildings.

While some roads utilize well-insulated underground construction and a few run their lines overhead, depending upon ordinary insulating methods to avoid excessive condensation losses, the majority carry their steam lines underground in uninsulated wooden boxes.

This and other makeshift methods are costing the railroads hundreds of thousands of dollars every year.

**Adsco Wood Casing — For 50 Lb. Pressure or Less**

This casing is circular in form with accurately machined solid staves held firmly in position by heavy banding. It withstands the crushing weight of the earth and surface loads above it. The casing is constructed to leave a one inch dead air space between the Pipe and the Casing. The lumber used is thoroughly kiln dried and kept free from the absorption of moisture by a special process of water proofing.

**Adsco Wood Casing with proper under-drainage, necessary for greatest efficiency from any underground line, will last 25 years and longer as proven by actual performance.**

This long life makes it far cheaper to run steam lines in Adsco Casing than in wood boxes, which are susceptible to rapid decay due to heat and moisture.

**Saving Will Quickly Pay Cost of Under-ground Mains**

On the average railroad where steam lines are run in wood boxes, a good percentage of the coal now consumed to provide heat and power to buildings can be saved by installing Adsco Casing. The saving will quickly pay for the installation. Instead of having wasteful, makeshift construction to replace every few years, the railroads that operate Adsco mains can forget them for a quarter century or more. This freedom from upkeep and interruption of service makes Adsco mains far cheaper in the long run.
ADSCO PRODUCTS

That will help you put your Heating System in Shape for the Winter

**ADSCO NELSON GATE VALVE**

125 lb. and 250 lb. designs. Bronze mounted; cast iron body; one-piece manganese bronze stem with tensile strength over 70,000 lbs. Redesigned especially for underground steam distribution lines.

**ADSCO EXPANSION JOINTS**

Thousands of sizes and types for pipe lines carrying steam, water, oil, air, gas or liquids. Cut shown Duplex-Sleeve Guided Expansion Joint for high pressure and superheat. Air Cooled slip eliminates excessive packing and maintenance costs and assures a tight joint. Valuable book—"Reference Data on Expansion in Pipe Lines"—mailed free on request.

**ADSCO SIMPLEX CONDENSATION METER**

Accurately records steam condensation by metering the con-...densation. If live steam is to be measured, use the St. Louis Steam Flow Meter. These meters are extensive...used by District Heating companies for metering steam service to customers and by factories for determining steam consumption by departments.

**ADSCO EXPANSION VARIATORS**

Reduces initial steam pressure of 20 lbs. or less to low (1 oz. to 5 lbs.) delivery pressures. Desired pressure secured and maintained by adjusting weight on lever arm. Extremely sensitive. Ruggedly built—no delicate parts to wear out.

**PERFECTION REDUCING VALVE**

Will outlast the line itself and render uninterrupted service. Packingless design. Expansion and contraction in pipe line absorbed by heavy annealed corrugated copper diaphragms supported by steel backing plates. For pressure ranges up to 125 lbs.

**EMPIRE STEAM TRAP FOR LOW PRESSURE**

Capacity ranges from vacuum to 20 lbs. pressure. Interchangeable inverted valve seat prevents sediment accumulating between valve seat and valve, assuring a tight seat. Blow-off hole under valve seat permits blowing out trap while in service.
Pays to Follow Example of District Heating Companies

After all, users of steam can do no better than to follow the practice adopted for the economical distribution of steam by successful District Heating Companies. Many of the largest district heating companies in the United States and Canada use ADSCO Wood Casing for low pressures and ADSCO Multi-cell tile construction for higher pressures. These companies can afford nothing but the most economical and efficient construction. They must figure economy, not in first cost but in final cost. Depreciation and maintenance must be kept to a minimum. Interruption of service must be avoided. They have studied every type of construction and know from experience which will give the best results.

District Steam Heating Helps Sell Homes

Home owners are awakening to the fact that they can now buy steam for heating like they buy electricity for lighting and gas for cooking, and after they once experience the relief from looking after a furnace in the basement, shovelling coal and handling ashes and the comforts of clean basements, they are certain to place this utility at the head of the list of "requirements for the new home."

In every case, however, the construction of these district heating plants was prompted by the desire to satisfy the fast increasing demand for greater convenience and certainty in heating homes.

This point is made clearer by an incident which occurred a short time ago. A middle-aged gentleman summed up his reasons for buying a new home in these words: "My wife and I are beginning to feel that we would like to get rid of the nuisance of looking after a furnace, running up and down stairs, fussing around with a lot of ashes and a dirty basement and house, so we started looking around for a house heated from a central plant.

"While we had to sacrifice a few other things we would have liked, we finally found a house in a desirable section. Today, I can truthfully say that central heating is certainly a blessing. We have heat twenty-four hours of the day; just as much as we need and besides that, we don't need to worry any more about ordering coal."

Whatever shortcomings the house this man purchased may have had, faded into the background with the joy and real comfort experienced by the new convenience.

Boiler plant of Overbrook Steam Heat Company, Overbrook, Pa., which supplies steam heat to Overbrook—one of Philadelphia's exclusive sub-divisions.
Real Estate Companies in Philadelphia
Capitalize Central Plant Heat in
Newspaper Advertising to Public

W. Raymond Evans, builder of central-heated homes in Yeadon, a suburb of Philadelphia, devotes most of his newspaper advertising to the advantages of central-heated homes.

Note that he advertises that central heat for his moderate priced homes costs no more than coal.

McWilliams & Melony, owners and builders of Overbrook, another Philadelphia suburb, advertise--and the Central Plant heat that goes so far toward making life here a glorious game of playing house--costs only $116.00 a year--less than coal.

Appeals to Developers of New Tracts

Men who have been and are responsible for the development of new tracts of land are offering their customers this improved way of answering the heating problem, and so we find the older, well-established sections of north, west and south Philadelphia as well as the new sections of the city served from central heating plants.

The sizes of these plants vary considerably; in fact, the principle of district steam heating is applied to as few as twenty homes in Philadelphia up to plants with many miles of distribution lines.

Let us briefly outline the inception and development of one of these plants; and as features of interest vary, it will be best to outline these separately.

The district steam heating plant in question was started in 1918 as a service to a private development of 40 acres, and was acquired by the present owner in that year. In 1925, seventy houses were served with steam for heating—today 242 homes are heated from this plant, and it is planned that this figure will be doubled within six months.

The present district heating plant serves approximately 15 city blocks, with the farthest house about 3,000 feet away from the steam plant. The immediate plans include the extension of the steam lines so that about 20 more city blocks will be served and the farthest house from the steam plant will be about 6,000 feet distant.

Cost to Consumer is Reasonable

The houses served are mostly of the semi-detached type with six rooms and bath. The average cost for steam for heating the houses is $140.00 per season, or ranging from about $110 to $175.

The cost of steam is largely dependent on how careful a house occupant is in operating the simple controls provided for him to regulate the temperature.

Omitting the depreciation on boiler investment, interest on money paid for coal usually purchased well before the heating season begins, damage to furnishings and janitor service, it is estimated that the cost of district steam heating service is approximately 10% above the bare cost of coal. Where the items enumerated are balanced against the service, however, the district steam heating cost is well below the cost of operating a heating plant in the basement.

The mechanical design of this district steam heating plant is briefly, as follows:

Steam is generated at a boiler plant conveniently located to a railroad siding. An ice plant is operated in connection with the heating plant and exhaust steam from engines together with live steam is supplied to the underground distribution system for the district heating plant. The pressure carried varies from approximately 5 to 15 lbs., depending on the demand for steam, governed by weather conditions.

In the service line to each house is installed a sensitive regulating valve which maintains a constant and uniform pressure in the heating system of the house so a varying pressure in the underground distribution mains has no effect on the heating system in the house.

Atmospheric System Lowers Consumer's Cost

By using atmospheric heating systems in the homes a very low pressure is required (2 to 8 ounces) and with an accurately calibrated valve on each radiator, the room temperatures are easily controlled to the desires of the occupants, at the same time permitting them to regulate the amount of steam consumed.
By the atmospheric system, the heat of both the steam and condensation is radiated into the rooms and when the water leaves the radiator very little heat remains in it.

The condensation is collected into a vented receiver from which it is discharged into a tilting bucket or "weighing type" condensation meter, and the monthly charge for steam is based on the reading of this meter—so that each customer pays for the actual amount of steam used and pays after it has been consumed. The condensate from the meter is discharged into the sewer.

Another interesting feature of this district steam heating plant is the furnishing of steam for water heaters. A "U" tube type of heater is installed in each house which is supplied with steam at approximately 5 lbs. The pressure is secured by making the connection to the heater ahead of the reducing valve which controls the pressure in the heating system.

By the use of this type of heater, a constant supply of hot water is always on hand—and no gas or other method is required for heating water during the period steam is supplied.

One of the interesting factors in connection with the development of Philadelphia's new residential sections is the featuring of district heating in newspaper advertising. The farsighted men interested in these properties appreciate the value of this utility in modern home life. They are in reality pioneers, blazing the way for the nationwide public acceptance of district heating as a necessary adjunct to greater comfort and convenience—better and more healthful living.

Consumers Power Company
Increase Their Revenue in Saginaw
Through the Extension of
Steam Mains

Saginaw, Michigan, is only one of the several cities in a number of states, in which the “Consumers Power Company” and its affiliated companies, operate District Heating Plants.

The executives of this rapidly growing utility are much too busy with important plans for greater development, and improved operation to undertake the infinite details and assume the immediate responsibilities of underground construction work.

The wisdom of their policy in calling on specialists for this special work is apparent to any executive. The experience and facilities of the Northeastern Piping & Construction Corp. are available not only to the Consumers Power Company, but to all other Utility Companies, or any others contemplating new District Heating projects or extensions to present operating plants.

The Northeastern Piping & Construction Corp. maintains a large staff of experienced construction engineers and have complete equipment for economical and rapid installations of underground piping.

NORTHEASTERN PIPING & CONSTRUCTION CORP.
NORTH TONAWANDA, N. Y.
Branches, New York, Philadelphia, Chicago, Seattle.
Subsidiary of
AMERICAN DISTRICT STEAM COMPANY
NORTH TONAWANDA, N.Y.
Over 50 years experience in the installation of district heating systems