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STEAM LEAKS COSTLY

Published by the
AMERICAN DISTRICT STEAM COMPANY

NORTH TONAWANDA, N.Y.
EXPANSION and contraction goes on forever in your pipe lines. The old way of compensating it was to put a hairpin bend in the pipe at intervals — an inefficient, cumbersome space-wasting method.

Today’s method of controlling it — on the longest and most involved steam line installations in the country — is through the use of ADSCO Expansion Joints.

There is an ADSCO Expansion Joint for every condition of temperature and pressure — for steam, water, oil and every other fluid conveyed by pipes.

ADSCO will gladly aid you in selecting the ones best suited for your specific needs.

Mail the enclosed data blank for prices on Adsco Expansion Joints.

ADSCO Expansion Joints

AMERICAN DISTRICT STEAM COMPANY
NORTH TONAWANDA, N.Y.

ADSCO Varitors (Packless Expansion Joints). For pressures up to 125 pounds. Thousands of varitors installed from 15 to 35 years ago are in service today without ever having been touched.

ADSCO Slip Type Expansion Joints. Built with brass, cast iron or steel body, for every pressure and service condition; for saturated or superheated steam, low and high pressure oils, — all liquids and gases.

District Heating Puts New Life Into Lagging Sub-Divisions

ANY real estate projects are launched with advertising campaigns and high pressure salesmanship. Enthusiasm is worked up to a high pitch. People buy — some with the intention of building homes in what promises to be a desirable development — others with the prospect of profit through increased values. Then something happens! People have a habit of putting things off; the new homes aren't built as fast as anticipated. The large number of people who bought lots on speculation become anxious to sell, though they only break even or take a loss.

With the number of lots up for resale far in excess of the demand, the owners of vacant property can sell only at a tremendous sacrifice and the developers find it practically impossible to dispose of the remaining lots. Contractors who bought lots on which to build homes find it difficult to sell the houses after they are erected — and at little or no profit. Disheartened contractors and lot-owners in many cases decide that they would rather forfeit their "con-
Tracts", than continue to carry their holdings. Foundations of incomplete houses in many instances stand out like sore thumbs telling the story of "grief" more graphically than any pen can describe it.

The developers of the property are blamed for the conditions, although their intentions were perfectly good, and they themselves are the big losers. Their expenses for advertising and salesmen's commissions were high, and even though the purchaser forfeited his lot after a few payments, they are out money on the transaction. Usually the real estate man will foreclose only after giving the purchaser every opportunity to pay up, and often the transaction drags on for years with only a small amount having been paid on the lot.

The unsold lots to which the real estate man looked for his real profits remain a "white elephant" on his hands, with interest on his money and taxes eating up any profit that he might hope to make.

How can the real estate man put new life into a lagging sub-division? How can he focus all eyes on his property and make people want to buy? The answer is District Heating! When a real estate man can advertise all the conveniences of an apartment with the advantages of the suburb, he has an argument that is stronger than any other.

People will build on his lots. Others will want lots where District Heating Service is available. Contractors will purchase lots and build houses. Wherever District Heating has been installed in real estate developments, progress has been several times as fast as it would have been without this inducement.

If the real estate developers haven't the available capital, there are ways in which the District Heating project can be financed. A meeting of the property owners might be held and the matter put up to them, showing them how the installation of a District Heating system will help them sell their property. Several large contractors might be interested by pointing out that they can sell houses almost as fast as they can build them when they can offer this service to the public.

In connection with the financing of a community District Heating project, it is within the realm of sound reasoning to state that the purchaser will gladly pay a liberal premium for a homesite or home where District Heating is available, for it takes little figuring to see that this extra cost will be largely or completely offset by the saving through the elimination of the individual heating plant.

This added return to the developer can be used to pay the cost of the District Heating installation, and his District Heating service, in addition to its value as a selling adjunct, assumes interesting profit possibilities from purely a public utility standpoint.

If District Heating is a boon to the lagging sub-division, it stands to reason that it is also a wonderful force in the development of a new section in which there has been no falling off of public interest.

Building makes values. The more houses that are erected and sold in a new sub-division, the higher the land values will rise. Individuals and contractors are anxious to build wherever District Steam Heating Service is available. The realty developers who install District Steam Heating will find no difficulty in selling as many homes as they care to build.

With plenty of building activity and a brisk demand for homes, the realtor can dispose of his vacant property at a good profit. It is conservative to say that the time required to build up the average sub-division can be cut in half by installing a District Heating system.

The increase in property values and the saving in advertising and selling expense affected by cleaning up the job in less than half the time will go a long way towards paying for the District Heating system—in fact, in some cases it might cover the entire cost. The District Heating system, on the other hand, can be operated at a good profit, giving the realtor adequate return on his investment with minimum expense for depreciation and maintenance.

After all, the successful real estate man is a promotor. The sooner he can wind up one property and go on to another, the more money he can make from his time and effort.

The real estate operator who has the vision to see the possibilities in District Heating as a force in the disposal of his property will find ample precedent upon which to base his conclusions; and any advice or information he may need is freely available through the ADSCO Engineering Department.
Favorable Comment from Wall Street on New York Steam Corporation Securities

This chart shows graphically the financial progress of the New York Steam Corporation.

When the Wall Street Journal discusses an investment opportunity, it bears every advantage and every disadvantage impartially. With cold discernment, this financial publication strips the subject of all supposition and reveals the proposition in its true light.

Hence the favorable comment in a recent issue of the Journal on the opportunity offered in the securities of the New York Steam Corporation indicates the importance and high standing of New York's great heating development.

The Journal reports: "Both gross and net income have tended to increase rapidly during the last few years, gross for the 1927 fiscal year being more than 80%, greater than that shown for 1921, (editor's note: from less than $2,000,000 to over $6,000,000) while net income was about seven times that of the earlier year. Most of this improvement was shown during the last two years reported, and correspondingly favorable results are expected when reports for the current year are available.

This company owns and operates four large generating plants located at favorable spots along the water front in New York City and supplies steam for heating and power purposes in the financial district and important uptown residential sections. Operations are conducted under a very favorable franchise granted by the city authorities in 1880, without time limit or burdensome restrictions, giving the company the right to lay pipes in any of the streets of Manhattan and Brooklyn."

With the opening of the great new Kips Bay Station, the plants and equipment of this company mounted to a value of over $35,000,000, with assets exceeding $40,000,000. The distribution system of the New York Steam Corporation comprises over 250,000 feet of mains, serving more than 2,300 New York buildings with steam.

With publications of the Wall Street Journal's recognized standing commenting favorably on District Heating, it must be obvious to specialist and layman alike that the securities of the District Heating utility offer excellent opportunities for safe and sound investment.

Sunlight and Air—The Health Builders

Libraries could be filled with the volumes written about sunlight as a health builder, and the beneficial effect of clean, fresh air on the entire system.

Men and women, financially able to escape from the devitalized atmosphere of the city, whenever possible race to the country or the "shore" to bask in the sunlight and fill their lungs with clean, fresh air.

But even these people must spend part of their time in the city . . . and what about the general public—those hundreds of thousands of people who are chained to the city by circumstances?

They need air; they need sunshine, but how shall they get it when the smoke and soot from a thousand active chimneys hang like a pall in the air?

There is only one way to provide sunshine and fresh air to the city and that is to eliminate the smoke and soot. True, the automobile is a factor in the contamination of city air, but its evil is confined largely to monoxide gas which is quickly dissipated into the air. Its ill effects are insignificant compared with those of the smoke stacks.

The automobile plays no part whatsoever in the soot precipitations in the cities of this country where from 500 to 2,000 tons of waste matter settles out of the air per square mile in a year.

It is this deluge of soot from the city's chimneys that affects the health and life of every one living within range of its influence.

Sunlight and air are twin agents of health. In the ultra-violet rays of the sun are stored almost miraculous curative powers. They build red corpuscles, increase the phosphorus, iron and calcium so necessary to the development of sturdy bodies. They are germicidal . . . they kill the germs of disease.

In a carefully prepared treatise on sunlight, the Metropolitan Life Insurance Company states: "There is a marked seasonal variation in the composition of the sun's rays. In the temperate zone, the rays are richer in ultra-violet during the spring and summer. The thyroid gland is said to be richer in its secretion of iodine in the summer when we get more sunlight. There is a marked tendency toward anemia in many of those who spend most of their time indoors during the winter months. When this condition is accompanied by lack of exercise, insufficient fresh air and the

(Continued on Page Ten)
ADSCO Engineers are helping Electric Utilities, Industrial Plants, Real Estate Companies and others to profitably apply the idea of DISTRICT HEATING.

ONE of the most valuable of all aids to those contemplating the development of a District Heating Service, as well as those already in the field, is the immeasurable assistance they can get from ADSCO's corps of engineers. Like every other project involving the mathematics of engineering, District Heating requires the application of fixed principles — principles based upon years of research and hard experience.

By drawing upon the knowledge of these District Heating specialists, the newcomer in the industry can avoid the costly pitfalls into which the uninitiated may blindly step. And the established District Heating enterprise can use their counsel in the expansion and improvement of its service.

ADSCO Engineers have cooperated in the development of most of the world's largest and most successful District Heating enterprises. The illustration at the right may suggest how they can serve you.

Make use of this special ADSCO Service. You will receive interested assistance — gladly rendered.

Mail enclosed data sheet for prices on Adsco Equipment.
wrong food, it is little wonder that influenza, grip and colds are common.

"Following exposure to the sun, there is an increase in body energy. Sun baths make one feel and be stronger. The mind becomes more active, and seems able to do more work. There is developed or increased the feeling of well-being, of hopefulness, and of the joy of living. Dr. Schuind eloquently describes the effects of sun baths on the mind. He says, 'Real resurrections are attained, and to improve health.'

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But cast a film of smoke across the sun's rays, fill the air with soot — and their benefits practically have been nullified.

How much sunlight breaks through the clouds of smoke in your city? How much pure air do you breathe? Those questions are of vital concern to any one and every one interested in the message of District Heating.

For the covenant of District Heating not only bears a promise of greater efficiency and convenience in the heating of the city's buildings — but also brings welcome assurance of increased cleanliness and more fresh air and sunshine.

Reduction of the tonnage of soot and smoke — that is the aim of every smoke abatement organization in the country — and District Heating is their ally. In no other way can the complete solution to this problem be discovered and applied.

Bright Future
Forecast for District Heating

Ninety-four District Heating Executives Study Past and Future at Annual Convention

EACH year the world of District Heating awaits with keen interest the news of the Annual Convention of the National District Heating Association. These meetings turn the searchlight on past progress and point the way to future developments.

This year the convention at Atlantic City, June 12th to the 15th, drew close to a record attendance, and the memorandum book of many a District Heating executive carries permanent evidence of the diversity and importance of the subjects treated.

The regular sessions were devoted to the study and discussion of all the phases of District Heating, its rates, meters, smoke abatement, operating costs, hot water systems, research, the work and accomplishment of the Manufacturers' Division, and the progress of District Heating as a whole — both in Canada and the United States.

Delegates were unanimous in the opinion that two of the most interesting sessions of the convention were those in which Professor C. H. B. Hotchkiss, head of the Department of Heating and Ventilating, Purdue University, reviewed the results of the District Heating School at Purdue, and the illustrated talk of A. H. O'Reilly of the Winnipeg Steam Heating Department (City Utilities) on the use of off-peak hydro-electric power in their District Heating operations.

Professor Hotchkiss asserted that while the training course this year at Purdue University showed much improvement over that of the previous year, there was still much room for development in the methods of presenting the subjects. He expressed the opinion that a pronounced good had resulted, saying, "I find among those who have attended that a definite benefit is derived from taking such a basic course." Upon the conclusion of Professor Hotchkiss' speech, John W. Meyer, newly elected President of the N. D. H. A., is manager of the Steam Heat Sales Division, Philadelphia Electric Company, Philadelphia, Pa., expressed the opinion that the school should
be continued and extended, and that courses in design, turbine operation and other specialized phases be added.

In a lecture, illustrated with slides, A. H. O'Reilly, delegate from the City of Winnipeg, Canada, described in detail the methods by which the city Steam Heating Department utilizes the off-peak load of Winnipeg's hydro-electric power development for generating steam in electric boilers. The complete story of Winnipeg's District Heating System was covered in a recent issue of the ADVOCATE.

Other District Heating projects were subjects of discussion. Past-President Charles A. Gillham contributed a facts and figures picture of the steady growth of District Heating in New York City. Mr. Gillham stated that the New York Steam Corporation, serving 2,300 buildings, derived during the past year approximately $8,000,000 in operating revenue on a capital investment of $40,000,000. Mr. Gillham also touched upon the subject of rates, disclosing that an investigation revealed a general upward trend in charges for service. Inadequate rates, according to Mr. Gillham, have been the greatest factor in reported cases of low earnings.

Later, L. S. Smith, Chairman of the heat utilization committee, in connection with rates, advocated the study of the Detroit demand rate, saying, "This is the second season that the demand rate has been tried in Detroit. This rate calls for the payment of $1,000 per year per 1,000 lbs. of maximum demand, plus 60c per 1,000 lbs. of steam consumed, all subject to 5% discount, whereas the regular rate is $1.30 per 1,000 lbs. consumed for the first 100,000 lbs. per month, less 10% discount, plus $1.00 per 1,000 lbs. net for excess. The minimum billing demand was reduced from 5,000 to 3,000 lbs. per hour at the beginning of the season, which resulted in 31 customers being placed on this rate. It was necessary, however, to put seven of them back on the regular rate as their load factors were found to be too low to benefit by demand billing. "The dividing line between the two rates is a load factor of about 24%, which is somewhat higher than that for the average office or mercantile building. Hotels, club buildings and hospitals, with load factors between 28% and 43% show savings running from 7% to 19%, while newspaper plants are next with a saving of about 6%.""

Arthur J. Slade, Director of Sales, American District Steam Company, talked briefly on purposes of the Manufacturers' Division, pointing out that the work of this division is primarily the extension of District Heating. The objective of the Division, according to Mr. Slade, is to develop a country-wide interest in District Heating and coincidently a greater District Heating field.

Among other speakers were Stephen Delany, Superintendent of the Hot Water Heating Department of the Atlantic City Electric Company; Henry Meyer, Terre Haute, Indiana; C. H. Howell, Manager of the Atlantic City Electric Company; A. V. Hutchinson, Secretary of the American Society of Heating and Ventilating Engineers; W. Ogden of the Squires Company, Cleveland; J. W. Cunningham of the Republic Flow Meters Company; J. C. Butler, Chairman of the Operating Statistics Committee; J. J. Schenk, Chairman of the Meters and Accessories Committee; E. E. Dubry, Chairman of the Station Operating Committee; W. W. Stevenson, Chairman of the Distribution Committee.

To compensate for the serious hours spent in the daytime study, a lively entertainment program was arranged for the delegates and their families. Atlantic City lived up to its reputation for diversions.

The officers elected for the ensuing year are: president, John W. Meyer; first vice-president, J. C. Butler; second vice-president, L. S. Smith; third vice-president, W. W. Stevenson; secretary, D. L. Gaskill; Executive committee: Charles A. Gillham, J. H. Walker and A. G. Leach.
Steam Leaks Costly
Faulty Insulation and Leaky Connections Can Cost Hundreds of Dollars Yearly

A little hole in a dam, if not repaired, can eventually wreck the structure. Continuous small losses can rob a business of its profits. Literally, molehills become mountains, and quickly.

In the field of District Heating the necessity for protection from radiation losses and faulty connections cannot be stressed too greatly.

Some estimate of the possible cost of improper installations, inefficient connections and careless maintenance can be gained from the following figures:

With steam at an estimated fuel cost of 36 cents for 1,000 lbs., and labor, maintenance, supplies, depreciation and overhead costing 18 cents for 1,000 lbs., a 3/8" diameter leak or its equivalent at 100 lbs. pressure will cause a loss of $327 a year. On the same basis, 100 feet of 4-inch bare pipe will cause a radiation loss of $454 a year.

With these figures to gauge the importance of this subject, it becomes evident that in the planning and installation of steam lines, any special attention given to the insulation and connections will amply justify itself in the long run of service.

This care is doubly essential in the laying of underground systems, which cannot be readily inspected, and upon which any changes or repairs are costly to make.

Underground insulation for steam or hot water pipes must be designed to be durable, water-repelling, strong and above all, an efficient insulator.

For low pressure lines, wood casing of the proper thickness and design is the most efficient insulator against losses in the underground transmission of heat. Actual tests showing that using ADSCO Casing, the steam losses are less than one-quarter to three-quarters of one per cent of the total steam delivered through the lines at full capacity.

The kind and quality of lumber used for the casing is most important. After lengthy tests and experimentation, ADSCO has chosen live white pine and high grade western cedar, free from sap and thoroughly air and kiln dried, as possessing the best qualities for this service.

The casing must be water-tight and strong enough to bear the crushing effect of the weight of the earth and surface loads above it, and the shearing strains of any possible "cave-in" below it.

For high pressure steam and return lines most engineers prefer to insulate the line and then surround it with ADSCO Multicell Tile, which adds further insulation and insures a strong, dependable job with minimum radiation losses.

In guarding against steam or hot water leaks at the connections, one big essential is to use expansion joints designed to stand up under the strain of year in and year out service, without repacking or danger of breaking. ADSCO Expansion Joints, through years of service in hundreds of installations have proved themselves fitted for the task. Their use is the best guarantee you can have that your installation will remain permanently free from the profit-eating effect of leaky joints.

Ever since 1906 the Dayton Power and Light Company has chosen us to do their work

Part of the underground line recently laid for the Dayton Power & Light Company—using Multicell Tile Conduit and ADSCO Expansion Joints.

Seven Successive Times
the Dayton Power & Light Company
has chosen us to do their work

NORTHEASTERN PIPING & CONSTRUCTION CORP.
NORTH TONAWANDA, N.Y.
Branches: New York, Philadelphia, Chicago, Seattle
Subsidiary of
AMERICAN DISTRICT STEAM COMPANY
General Offices and Works
NORTH TONAWANDA, N.Y.
Over 50 years experience in the installation of District Heating systems.
WHENEVER you see a particularly fine structure like the Chanin Building in the course of erection, it's safe to assume that ADSCO Riser Joints will be used on the job . . .

For ADSCO Risers provide positive automatic absorption of the pipe expansion without strain on any fittings. A bronze guidesleeve keeps the slip in alignment — prevents any weaving or twisting in the pipe line from distorting or cramping the slip or causing unequal pressure and wear on the packing. The life of the packing is prolonged, and a tight joint is assured.

Some conception of the proportions of the Chanin contract can be gained by the size of the building and the illustrations shown below of the ADSCO Expansion Joints for this building.

The heating contractors for the Chanin Building chose ADSCO because back of every ADSCO product used stands a fifty year record of economical, trouble-free service in hundreds of like installations.

**AMERICAN DISTRICT STEAM COMPANY**

North Tonawanda, N.Y.

Branches and Agents in Principal Cities

Adasco brass and iron body expansion joints ready for installation in the steam lines and risers of the Chanin Building heating system.

**THE 52-STORY CHANIN BUILDING**

Owners: Chanin Construction Co., Inc.,
285 Madison Ave., New York City
Architects: Sloan & Robertson
420 Lexington Ave., New York City
Cons. Engr.: Clark, MacMullin & Riley,
101 Park Ave., New York City
Heating Contractors: Jarcho Bros., Inc.,
215 E. 37th St., New York City

Mail the endorsed data sheet for prices on Adsco Riser Joints.