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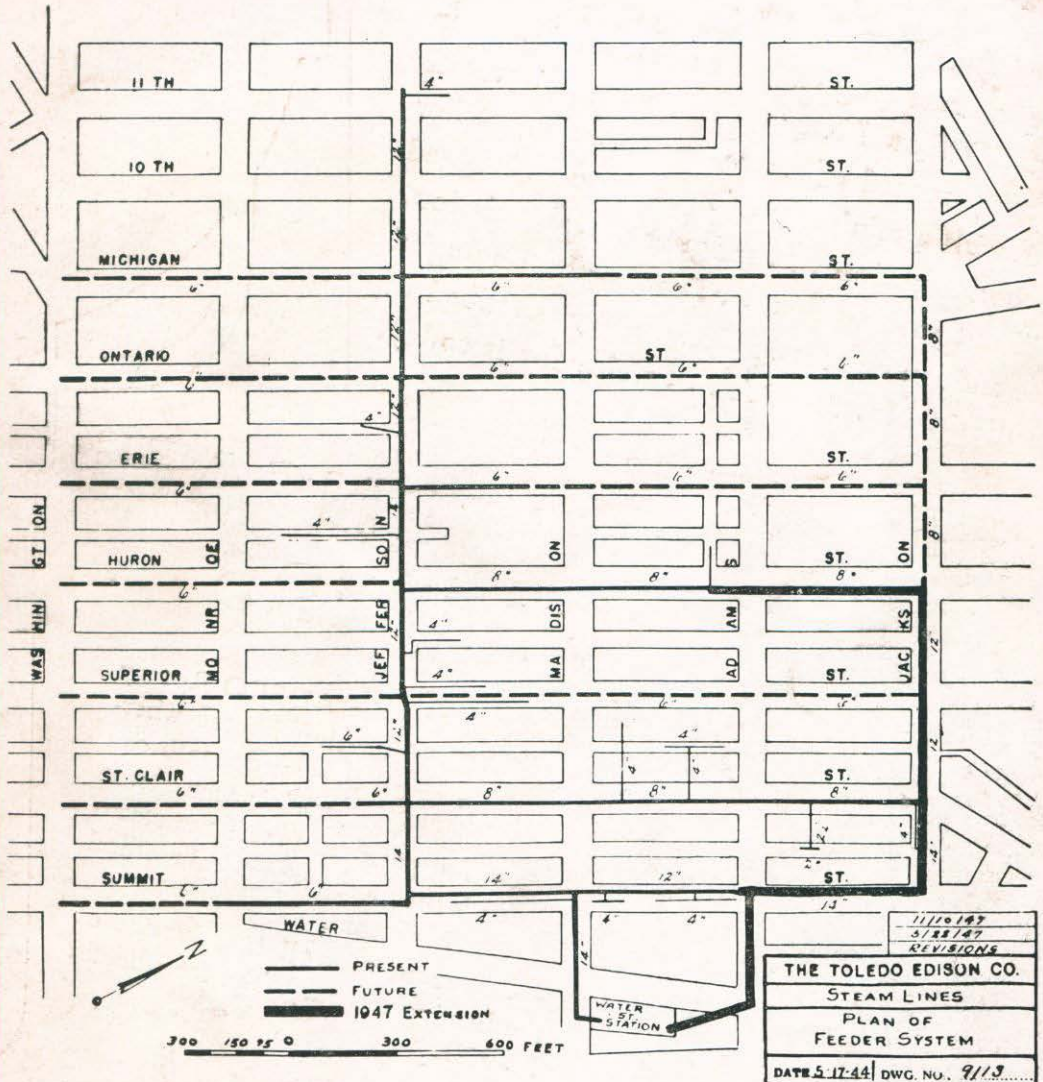
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Desuperheater Operation on District Heating System in Rochester, N. Y.

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The transmission of 650 lb pressure, 750 F. temperature steam over a long distance then the reduction of the pressure to 200 lb and the temperature to a maximum of 550 F has been carried on successfully at Rochester, N. Y. for the past two heating seasons. The steam is generated at the main steam electric generating plant and transmitted to a pressure and temperature reducing station located approximately one mile away. The line has been in continuous service for almost two years, with the exception of two shutdowns of four hours each. These shutdowns were made to reduce the area of the lower inlet

satisfactory but below 25,000 lb per flow there was a tendency to carry over particles of water with the steam. After the changes were made operation at all loads was quite satisfactory.

Schematic diagram No. 1 shows the travel of the steam from its source at Station 3 through the reducing and desuperheating equipment.

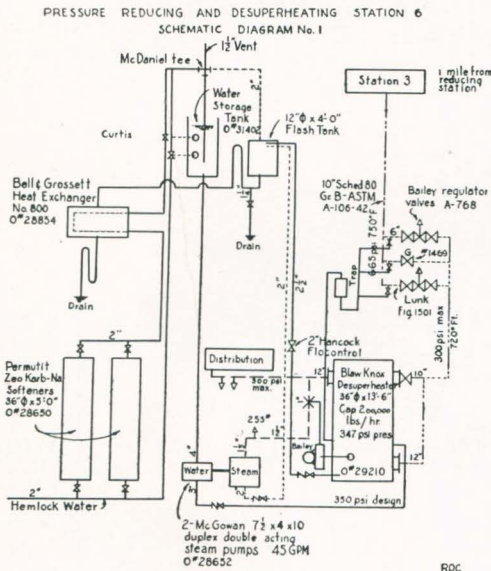


Fig. 1

steam supply line, and to lower the water level carried in the bottom of the desuperheater. Early operation of the equipment was not satisfactory when carrying loads below 25,000 lb per hour. The operation with flows above this quantity was

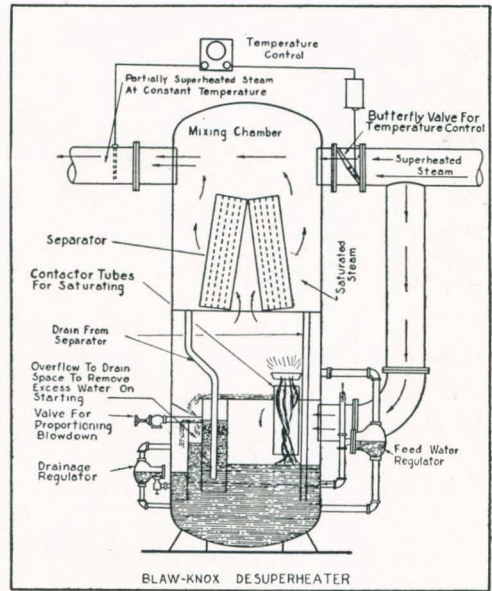
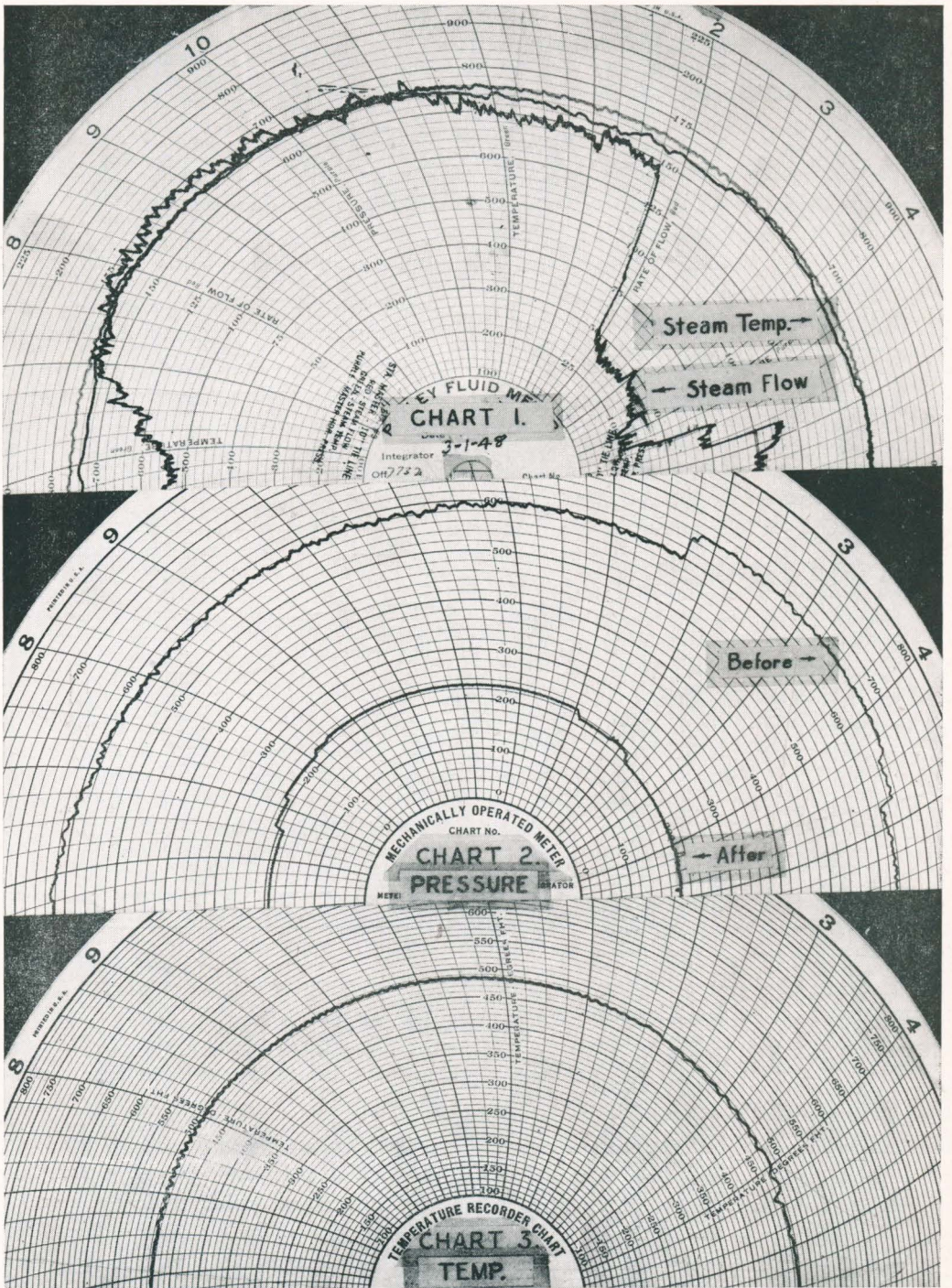


Fig. 2

Drawing No. 2 shows the interior section of the desuperheater. The drawing indicates only one contractor tube, but actually there are several of these nozzles, depending upon the design capacity.

Chart No. 1 is taken from the Steam Flow Meter located at the main generating plant and gives the 24 hour recording of the steam entering the transmission line. The steam then flows through the 10" transmission main to the reduc-

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Charts 1, 2 and 3

ing station one mile distant. The flows shown on this chart range from a low flow of about 25,000 lb per hour to a maximum flow of about 175,000 lb per hour. The maximum flows so far have been about 200,000 lb per hour.

Chart No. 2 is located at the reducing sta-

tion and shows the pressure entering the building and the pressure after passing through the reducing valves.

Chart No. 3 is also located at the reducing station and records the temperature of the steam after leaving the desuperheater.

Our New Members . . . Whom We Welcome

C. L. KELLER

District Heating Personal Member

Mr. Keller is native of Toledo. There he attended Sacred Heart High School, Waite High School and Toledo University. With the Toledo Edison Company he has been successively Clerk, Helper, Repairman and Foreman in the Street Lighting Department and Assistant Superintendent and Superintendent in the Underground Department.

He has a wife and two children. His interesting hobbies are model making, boating, fishing and golf.

JOHN F. O'BRIEN

Associate Personal Member

On completion of his high school course at the town of his birth, Malden, Mass., Mr. O'Brien attended Wentworth Institute in Boston and Stevens Institute in Hoboken, N. J.

He is now New England District Manager of the Yarnall-Waring Company. Mr. O'Brien is married and has one daughter and one son. The latter recently returned from Japan.

L. W. CLARK

District Heating Personal Member

Evansville, Wis., was the birthplace of Mr. Clark. In 1923 he received the degree of B. S. in E. E. from the University of Wisconsin and moved to Pittsburgh, Pa., where for four years he held the position of General Engineer with Westinghouse. During 1927 and 1928 he was Investigating Engineer with A. C. Nielsen Company of Chicago. Since then he has been employed by the Detroit Edison Company, first in the Engineering Division, from 1931-1945 as Utilization Engineer, Electrical System and since 1945 as Assistant Superintendent in the Underground Lines Department.

Mr. Clark is the author of 5 papers on welding and a 6th entitled "Substation Transformer Emergency Overloading Practice".

He has a wife and 3 sons, from 7 to 14 years old. His hobbies are gardening, boy scouts and volley ball.

He is a member of A. I. E. E., A. W. S. and the Engineering Society of Detroit.