

Subject: Upgrading Mains to a Higher Operating Pressure

G. O. 112A, pages 45 - 48, delineates the procedure to follow to qualify a gas main or system for a higher maximum allowable operating pressure.

845.23 - Specifies the steps necessary to qualify a steel main or pipeline for a new and higher allowable operating pressure that will produce a hoop stress of 30% or more of the S.M.Y.S. of the pipe.

845.34 - Specifies the steps necessary to qualify a high pressure steel distribution system for a new and higher maximum allowable operating pressure that will produce a hoop stress of less than 30% of the S.M.Y.S. of the pipe.

845.34 - Outlines the procedure to qualify a cast-iron high pressure main or system for a new and higher maximum allowable working pressure.

845.43 - Delineates the procedure for converting a low pressure distribution system to a high pressure distribution system.

In general, when converting a system or main to a higher operating pressure, a check of maintenance and leakage records is made, a calculation of the hoop stress at proposed MAOP is made, and the design of the original installation and subsequent additions are reviewed to determine the lowest rated valves and fittings in the system. Necessary repairs must be made and underrated valves and fittings replaced before the main or system is upgraded. G. O. 112A and the pertinent section listed above specify the entire procedure for the particular type facility to be upgraded.

Following are the proper accounts to use when converting main from one pressure to another, such as SHP to HP or HP to TP, etc:

1. When installing a piece of main to connect to the main to be converted, use Account 1224 or Account 1124.

Example:     Account 1224     395' of 3" D.W. HP  
  Labor  
  Material  
  Tie-ins  
  Convert 300' of 3" SHP main to HP

2. When a section of main is cut and dead-ended and a valve is opened to convert section of main, work is to be charged to Account 1603 or 1503.

Example:     Account 1603     Cut, cap and convert  
  300' of SHP main to HP     \$100

3. When valves are operated to convert main, charge labor to 1954.

Example:     Account 1954     Convert 300' of HP main to TP \$ 20

LIST 2014 File

MAIN UPGRADING INFORMATION

Description of System  
Present:

District \_\_\_\_\_  
GM/NO # \_\_\_\_\_

Proposed:

Pipe Specifications:

* #	Size	Footage	Year Inst.	Grade	Wall Th.	M.Y.S.	Existing Pressure	% Yield	Proposed Pressure	% Yield

\*See attached sketch

SOURCE OF INFORMATION:

CATHODIC PROTECTION:

LEAKAGE HISTORY:

TYPE OF WRAP:

CONDITION:

WORK REQUIRED PRIOR TO UPGRADING:

LEAKAGE SURVEY	PRESSURE	DATE	SIGNATURE
PRIOR TO UPGRADING			
AFTER UPGRADING			

cc District GM/NO File  
(Permanent File)  
Division Gas Superintendent

Compiled by \_\_\_\_\_

Date \_\_\_\_\_