

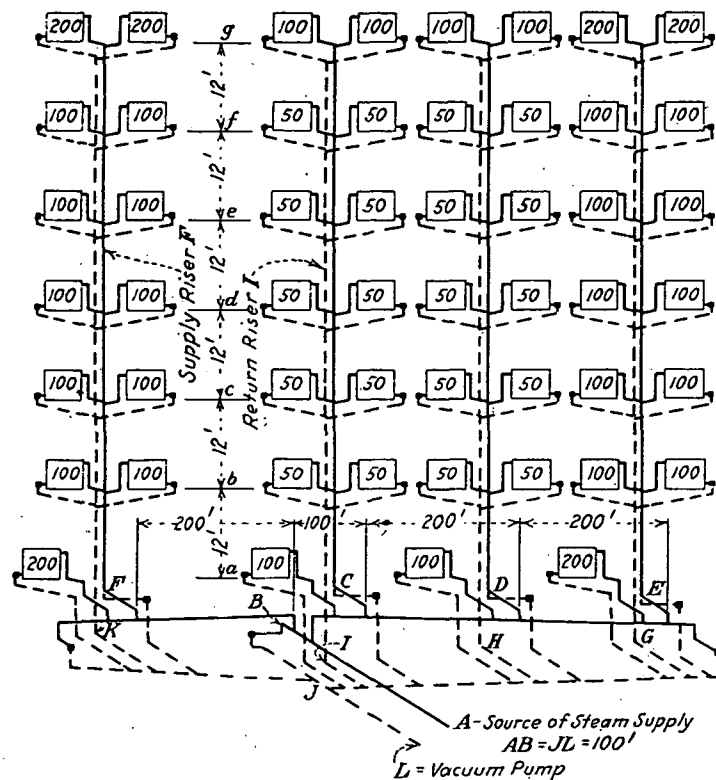


FIG. 8 LAYOUT OF VACUUM PUMP SYSTEM

## TYPICAL EXAMPLE

Example in the use of the tables for determining the size of pipe necessary in various parts of the vacuum pump system are shown in the accompanying diagram (Fig. 8):

The equivalent length of run from the source of steam supply A to the farthest radiator supplied by any supply main (or the radiator on floor g riser E) is between 600 and 800 ft.—therefore size the entire run according to Column H, Table 18, observing Note 4 as regards maximum capacity of up-feed supply risers given in Column K.

| PART OF SYSTEM | SECTION OF PIPE | RADIATION SUPPLIED, SQ. FT. | PIPE SIZE, INCHES |
|----------------|-----------------|-----------------------------|-------------------|
| Riser E        | f to g          | 400                         | 2½                |
| "              | e to f          | 600                         | 2½                |
| "              | d to e          | 800                         | 3                 |
| "              | c to d          | 1000                        | 3                 |
| "              | b to c          | 1200                        | 3½                |
| "              | a to b          | 1400                        | 3½                |
| Branch         | to Riser E      | 1400                        | 3½                |
| Supply Main    | D to E          | 1600                        | 3½                |
| "              | C to D          | 2400                        | 4                 |
| "              | B to C          | 3200                        | 5                 |
| "              | A to B          | 4800                        | 6                 |

## CHAPTER III—STEAM HEATING SYSTEMS AND PIPING

The equivalent length of run from the source of steam supply A to the farthest radiator supplied by riser D is between 500 and 600 ft.—therefore size riser D and its branch according to Column G observing Note 4 as regards maximum capacity of up-feed risers given in Column K. Note that the maximum allowable capacity of the riser as given in Column K and not Column G, determines the size of some sections of the riser.

| PART OF SYSTEM | SECTION OF PIPE | RADIATION SUPPLIED, SQ. FT. | PIPE SIZE, INCHES |
|----------------|-----------------|-----------------------------|-------------------|
| Riser D        | f to g          | 200                         | 2                 |
| "              | e to f          | 300                         | 2                 |
| "              | d to e          | 400                         | 2½                |
| "              | c to d          | 500                         | 2½                |
| "              | b to c          | 600                         | 2½                |
| "              | a to b          | 700                         | 3                 |
| Branch         | to Riser D      | 700                         | 3                 |

Size riser C in manner similar to that used for riser D.

The equivalent length of run from the source of steam supply A to the farthest radiator supplied by main BF (or the radiator on floor g riser F) is between 400 and 500 ft.—therefore size the entire run from B to top of riser F, according to Column F, Table 18, observing Note 4 as regards maximum capacity of up-feed supply risers given in Column K.

| PART OF SYSTEM | SECTION OF PIPE | RADIATION SUPPLIED, SQ. FT. | PIPE SIZE, INCHES |
|----------------|-----------------|-----------------------------|-------------------|
| Riser F        | f to g          | 400                         | 2½                |
| "              | e to f          | 600                         | 2½                |
| "              | d to e          | 800                         | 3                 |
| "              | c to d          | 1000                        | 3                 |
| "              | b to c          | 1200                        | 3½                |
| "              | a to b          | 1400                        | 3½                |
| Branch         | to Riser F      | 1400                        | 3½                |
| Main           | B to F          | 1600                        | 3½                |

The equivalent length of run from the farthest radiator served by any return main (or that on floor g return riser G) to the vacuum pump is between 600 and 800 ft.—therefore size entire run according to Column U.

| PART OF SYSTEM | SECTION OF PIPE   | RADIATION SERVED, SQ. FT. | PIPE SIZE, INCHES |
|----------------|-------------------|---------------------------|-------------------|
| Return Riser G | g to f            | 400                       | ¾                 |
| "              | f to e            | 600                       | ¾                 |
| "              | e to d            | 800                       | 1                 |
| "              | d to c            | 1000                      | 1                 |
| "              | c to b            | 1200                      | 1                 |
| "              | b to a            | 1400                      | 1½                |
| Branch         | to Return Riser G | 1400                      | 1½                |
| Return Main    | G to H            | 1600                      | 1½                |
| "              | H to I            | 2400                      | 2                 |
| "              | I to J            | 3200                      | 2                 |
| "              | J to L            | 4800                      | 2½                |

The equivalent length of run from the farthest radiator served by return riser H to the vacuum pump L is between 500 and 600 ft.—therefore size return riser H according to Column T.

| PART OF SYSTEM | SECTION OF PIPE   | RADIATION SERVED, SQ. FT. | PIPE SIZE, INCHES |
|----------------|-------------------|---------------------------|-------------------|
| Return Riser H | g to f            | 200                       | ¾                 |
| "              | f to e            | 300                       | ¾                 |
| "              | e to d            | 400                       | ¾                 |
| "              | d to c            | 500                       | ¾                 |
| "              | c to b            | 600                       | ¾                 |
| "              | b to a            | 700                       | ¾                 |
| Branch         | to Return Riser H | 700                       | 1                 |