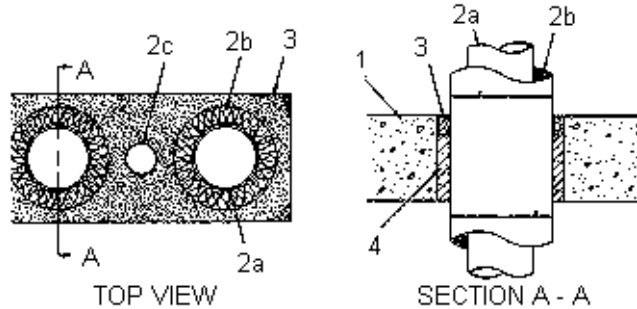


**DESIGN NO. TRC/PH 180-02**  
**HORIZONTAL (FLOOR), F RATING - 3 HRS, T RATING - 1 HR ON 2A PENETRATIONS,**  
**T RATING - 0 ON 2C PENETRATIONS;**  
**ANNULAR SPACING - 1/2" TO 1-5/8"**  
**TEST PRESSURE DIFFERENTIAL - 2.5 Pa (0.01" OF WATER) MINIMUM**



Manufacturer's Designation: 950 CF-19.

1. Floor: Nominal 4-1/2" lightweight or normal weight concrete with a maximum area of opening 96 sq. in. with a maximum dimension of 16".
2. Penetrations: Type M (2) Nominal 3" and 1-1/2" Copper Tubing.
  - a) Two - Nominal 3" Type M (or heavier) Copper Tubing with insulation.
  - b) Nominal 1" thick hollow cylindrical heavy density (nominal 12 pcf mineral density) unfaced fiber pipe covering material with a resin binder.
  - c) One - Nominal 1-1/2" Type M (or heavier) Copper Tubing.
3. Caulking Compound or Filler Material: Minimum thickness 1/2" Metalines, Inc. Metacaulk\* 950.
4. Insulation: Minimum 2" thickness of minimum 4 pcf density mineral-wool batt material tightly-packed.

\*Component bearing the Warnock Hersey Certification Mark