Many inspectors and contractors prefer to test with smoke rather than use time-consuming water or air pressure tests. Consequently, smoke tests before acceptance are specified in many state and local plumbing codes. Smoke tests will reveal:

1. Leaks that permit surface water inflow
2. Drains of all types, including roof, cellar and yard drains that are connected to house lines and discharging into collection systems.
3. Poorly soldered or fitted joints and leaky seals, which may allow water damage or noxious gases to leak indoors.
4. Rodent passages into line.

**Required Equipment**

1. 2-3 Superior Smoke No. 2B (one minute)
2. Superior Electric Blower Model 5-E/12-Volt D.C. battery powered or 110-Volt A.C.
3. Pneumatic sewer plug or rubber balloon for sealing off house connections from main lines (optional)
4. Vent cap with open center hole to restrict the flow of air and smoke (optional)

**Procedure**

It is not absolutely necessary to have the house line blocked off from the main, but doing so will increase test efficiency. In most cases there is a clean-out opening through which a plug or balloon can be inserted between the opening and main, and then inflated. A length of windshield hose or similar type tubing can be attached to the balloon to facilitate inflation. Vents can be partially blocked allowing the air/smoke mixture to flow throughout the plumbing system.

When you are sure the building is unoccupied, connect the blower to the line and start introducing the smoke through the intake side of the blower.

Check the interior of the house for smoke. Any smoke should be quickly ventilated by opening doors and windows. Notations should be made of leak locations. Next the yard should be checked for smoke and the location of any smoke marked for later correction of faults.

All buildings connected to the lines being tested should be checked for smoke. Points of entry for the smoke should be located. If entry to the buildings is not possible once smoke is discovered, it is advisable to return later to determine the point of entry.