SUPERIOR® SMOKE FOR TESTING SANITARY SEWERS

Smoke testing of sanitary sewer collection systems was initiated in 1961 at McPherson, Kansas. Excessive infiltration was a problem, and the most practical method developed was a visual test utilizing smoke that would meet the following criteria: relatively harmless; free from oily or colored stains; allow sewer personnel to operate without the danger of fire or explosion. Superior Smoke satisfies these requirements and has proven itself by over 30 years of successful field experience.

Smoke testing of sanitary sewer collection systems is endorsed by EPA in all regions, and included as an integral part of contracted inflow/infiltration studies. Zinc chloride type smoke, preferred by the Environmental Protection Agency, is manufactured by the Superior Signal Company, and has been the choice of sewer service contractors and municipalities for over 30 years.

Superior® Smoke has the exclusive properties of leaving no visible residue and containing no explosive materials. Approximately 50% of the visible portion is atmospheric moisture. Small amounts of smoke mixed with large volumes of air, utilized in the Smoke Testing Technique for sanitary sewer collection systems, can enter dwellings through the same faults in house plumbing systems that provide egress of lethal and/or explosive sewer gases. The tests are performed under infinite volume conditions due to the characteristics of the sewer system. The concentration of smoke at a specific point would be influenced by the infinite volume of the system, size of fault, velocity of air flow, duration of test, and position of the blower in relation to the fault. Considering the amount of air/smoke mixture induced into the test segment, size of faults, duration of tests (minutes), infinite volume of the system due to roof vents, probably less than 1% of the smoke would be found at any one leak.

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Superior® Smoke is not a true smoke, but contains a large percentage of atmospheric moisture that provides high visual obscurity at low concentrations. The mist formation is seeded by zinc chloride and some other products of combustion such as free carbon. The toxicity of the materials must be represented relative to the application and, in this case, brief exposure time.

Notices sent out within 24 hours of smoke tests should advise the nature of the tests and request individuals to notify the administrators of the program concerning anticipated personal problems. While giving advance notices, discrete neighborhood inquiries can identify persons suffering from lung ailments such as emphysema, who should never be exposed to any smoke. The necessary arrangements to cooperate in any manner as not to jeopardize their condition can be completed at this time.

Authorities in the Occupational and Environmental Health Departments of several universities, including Dr. James Sterner, Professor of Occupational Health, College of Medicine, University of California, and Dr. Jack E. Peterson, Associate Professor of Civil Engineering of Marquette, Professor of Occupational and Environmental Medicine, University of Illinois, Ph.D. Industrial Health, Certified Industrial Hygienist, have extended opinions in support of Superior Smoke. Based on the reported data and theory, these people believe Superior™ type smoke to be the best available source of smoke.

Superior® Smoke satisfies your smoke test requirements; economical, convenient, effective. With a T.O.P. of 2100, it is ten times more efficient than crude oil. Millions of feet of sewer line have been smoke tested, and less than 1% of the houses tested have had smoke enter them. Through this type of testing program, overloading of residential sewer lines causing backups of sewerage into homes and discharges of improperly treated sewage from overloaded treatment plants can be minimized.

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