

**INTERNATIONAL ASSOCIATION OF PLUMBING
AND MECHANICAL OFFICIALS**

IAPMO GUIDE CRITERIA

FOR

**GREASE TRAPS WITH
OUTER RETENTION**

IGC 246-2007

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for grease traps with an outer retention. Its purpose is to serve as a guide for manufacturers, distributors, architects, engineers, contractors, inspectors, and installers; to promote understanding regarding materials, manufacture, and support materials used in conjunction with installation; and to provide for identifying grease traps that conform with the standard.
- 1.2** The provision of this standard are not intended to prevent the use of any alternate material or method of construction, provided any such alternate meets the intent and requirements of this document and changes are amended to this standard.

2. SCOPE

- 2.1** The test is based on the use of a variable capacity double compartment sink installed on a floor level which is ten (10) feet above the bottom of the grease trap with the outer retention. The sink is connected to the grease trap with the outer retention by means of two (2) inch waste piping. A vented flow control or equal device is installed at the top of the waste riser between the sink and the grease trap with the outer retention. The effluent from the grease trap with the outer retention discharges into a skimming tank, the top of which is located below the outlet of the grease trap. Complete details on the design of the testing equipment and its installation, and the test procedure are outlined hereinafter.

3. GENERAL REQUIREMENTS

- 3.1 TEST SINK.** The sink used in the tests shall have the following inside dimensions: eight (8) feet in length; two (2) feet in width; twelve and one-half (12-1/2) inches in depth. The sink shall be constructed of galvanized sheet metal and shall have two (2) compartments, each four (4) feet in length. The sink shall have steel angle rim, reinforcement, and legs. The legs shall be of proper length so that the rim of the sink will

be three (3) feet above the floor. The sink legs shall be braced with steel angles or flat bars.

- 3.2 SINK WASTE CONNECTIONS.** Each sink compartment is to be fitted with a one and one-half (1.50) inch standard sink waste connection with flange, crossbars, threaded or slip joint tail piece, and locknut. The waste connections are to be located on opposite sides of the center partition in the corner formed by the side of the sink and the center partition.
- 3.3 WATER LEVEL GAUGES.** Each compartment shall be equipped with a gauge connection and a water level gauge with gauge glass. Each gauge connection shall be fitted into the bottom of a sink compartment and in close proximity to the waste outlet. Each gauge shall be mounted on the outside of the sink, adjacent to its respective gauge connection, and shall extend diagonally upward from the bottom center to the top outside corners. These gauges shall be calibrated to read directly the number of inches of water in the sink compartments above the sink waste flange.
- 3.4 MOVABLE SINK PARTITIONS.** Each compartment of the sink shall be fitted with a movable partition, making it possible to regulate the size of the compartment to any desired capacity. Underside of load pad shall have stabilization ribs as well as a stabilization flange.
- 3.5 LARD INJECTOR FUNNEL.** The injector for introducing the test vehicle into the sink shall be constructed of a funnel, coupling, orifice, quick opening valve, nipples, and clamping bracket.
- 3.6 SKIMMING TANK.** The skimming tank is to be rectangular in shape, open at the top and equipped with a stationary baffle located approximately three (3) feet from the end of the tank receiving the discharge from the grease trap. This baffle shall extend the width of the tank and to within four (4) inches of the bottom of the tank. The purpose of this baffle is to limit the heavy spread of grease to one end of the tank and to control to a degree the turbulent water currents created by the overflow from the grease trap.
- 3.7 INSTALLATION OF TESTING EQUIPMENT**
- 3.8 SINK LOCATION.** The sink is to be located on an upper floor with the sink rim three (3) feet above that floor level.
- 3.9 GREASE TRAP LOCATION.** The grease trap shall be so located that its bottom is ten (10) feet below the floor level upon which the sink is located. The grease trap shall be equipped with a water-tight and air-tight cover.
- 3.10 SKIMMING TANK LOCATION.** The skimming tank shall be located low enough, with respect to the grease trap, for the discharge piping from the grease trap to clear the tank rim by not less than three (3) inches.
- 3.11 INSTALLATION OF WASTE PIPING**

- 3.12 SINK CONNECTIONS.** The sink outlet waste connection from each sink compartment is to be one and one-half (1-1/2) inches in size and each connection shall be fitted with a quick opening gate valve. (Crane No. 442 or equal).
- 3.13 COMBINED HORIZONTAL WASTE PIPING.** The combined horizontal waste piping into which the sink outlets connect shall be two (2) inches in size, installed with the center line eleven (11) inches below the bottom of the sink and properly hung and braced from the sink reinforcement and supports. This waste pipe shall be fitted to the inlet of a vented flow control or equal device.
- 3.14 FLOW CONTROL OR EQUAL DEVICE.** The flow control or equal device is to be adequate in size for the grease trap to be tested and shall be equipped with the proper size orifice and/or other details to provide the proposed flow rate of the subject grease trap, based on the simultaneous drainage of both sink compartments as detailed hereinafter.
- 3.14.1** The waste piping on either side of the flow control or equal device shall be fitted with unions to permit removal of the device. If the flow control orifice required exceeds two (2) inches in diameter, thereby requiring a flow control device larger than two (2) inches, reducing couplings shall be fitted into the inlet and outlet of the larger device to permit connection of the two (2) inch waste piping.
- 3.15 VERTICAL WASTE RISER.** The two (2) inch vertical waste riser shall be connected to the outlet of the flow control or equal device and shall extend downward to connect to the grease trap inlet by means of a two (2) inch elbow and a short horizontal nipple.
- 3.16 GREASE TRAP DISCHARGE.** The discharge pipe from the grease trap outlet to the skimming tank shall be two (2) inches in size with a minimum pitch of one-eighth (1/8) inch per foot and shall be provided with a two (2) inch vent properly located to prevent siphoning of the grease trap.
- 3.17 GREASE TRAP CONNECTIONS.** If the inlet and/or outlet openings of the grease trap with the outer retention to be tested exceed two (2) inches in size, use reducing couplings to permit connections of the two (2) inch inlet and discharge pipes.
- 3.18 LARD INJECTOR.** The injector is to be located at the center of the partition separating the sink compartments, or as close to that position as possible. The end of the injector pipe shall terminate one and one-half (1-1/2) inches above the level of the sink outlet flange. The injector orifice is to be sized to establish a flow rate of the test vehicle to accord with the simultaneous drainage period of the test compartments as detailed hereinafter. The flow of test vehicle from the injector is controlled by means of a quick opening gate valve located below the injector orifice.

4. TESTING REQUIREMENTS

- 4.1 MEDIA ANALYSIS.** Before conducting certification tests on any grease trap, simple analysis of the test media are to be made to determine the following characteristics:

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