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INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

IAPMO GUIDE CRITERIA FOR

WASTEWATER INTERCEPTOR SYSTEM (WIS) FOR AN INTERACTIVE MECHANICAL WASTEWATER INTERCEPTOR

IGC 245-2007a

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for a mechanical Wastewater Interceptor System (WIS). Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users to promote understanding regarding the design intention, mechanical functions, controls and installation.
- 1.2** The provisions of this standard are not intended to prevent the use of any alternate system or method of grease removal and settled solids management control provided any such alternate meets the intent and requirements and changes are amended to this standard.

2. SCOPE

- 2.1** This standard covers general requirements, testing requirements, installation instructions, and markings and identification.
- 2.2** A WIS is intended for retrofit into the main building sewer that connects to the POTW sewer lateral and in a manner that avoids building operational disruption. Although WIS units are intended for existing or retrofit construction only they may also be considered for new installation where controlled solids removal is warranted to avoid overburdening a grease interceptor.

3. REFERENCED STANDARDS

- 3.1** All standards referenced herein shall be the current edition of that standard as published
- | | |
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| CSA C22.2 No.108 | Liquid Pumps |
| IAPMO/ANSI Z1001 | Prefabricated Grease Interceptors |
| NEMA 250 | Enclosures for Electrical Equipment (1000 Volts Maximum) |
| Third Edition | Wastewater Engineering, Treatment, Disposal and Reuse, Metcalf and Eddy, Inc., McGraw-Hill, Inc |
| UL 778 | Motor-Operated Water Pumps |
| UPC | Uniform Plumbing Code |

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4. DEFINITIONS

- 4.1 FOG.** Nonpetroleum fats, oils and grease.
- 4.2 Grinder Pump.** A non-clogging, submersible type, commercial grade grinder pump designed to accept an inlet mixture of solids and liquids sewage effluent.
- 4.3 POTW.** Publicly owned treatment works.
- 4.4 Sewage Pump.** A non-clogging, submersible type, commercial grade, pump designed to accept sewage effluent in the secondary chamber for spraying waste water back over the primary chamber.
- 4.5 TSS.** Total suspended solids.
- 4.6 Wastewater.** "Special Waste" as defined in § 221.0 of the Uniform Plumbing Code (UPC), "Waste" as defined in UPC §225, "Sewage" as defined in UPC §221, or any combination of the foregoing.
- 4.7 Wastewater Interceptor System.** WIS is an interactive wastewater interception system for separating waste materials collected from wastewater (e.g., waste and/or sewage from toilets, urinals and kitchen plumbing fixtures and drains), including FOG and solids, in a common line in a controlled manner. The WIS shall be designed to remove FOG and control solids from multiple waste streams of combined wastewater from both the kitchen waste stream containing FOG and the human sewage waste stream simultaneously.

5. GENERAL REQUIREMENTS

- 5.1 Wastewater Interceptor System.**
- 5.1.1 Material.** The WIS tank shall comply with the material requirements for grease interceptors specified in IAPMO/ANSI Z1001.
- 5.1.2 Sizing.** The WIS tank size shall be design in the accordance with the following:

$$V (\text{min}) = F \times R \times S$$

Where: $V (\text{min})$ = Minimum WIS Operating Volume in gallons
Flow Rate (F) (maximum) = in gallons per minute (gpm)
Retention Time = 30 minutes
Storage Factor = 25 percent

Thus:
$$V (\text{min}) = F \times 30 \times 1.25$$

Note: The volume of the WIS shall take into consideration the slopped floor, grinder pumps in the primary chamber and sewage pumps in the secondary chamber and the volume of the common dividing wall.

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