

CLIENT: Froet Industries
1741 Industrial Drive
Sterling, IL 61081

Attention: Craig Froeter

Test Report No: 2179236	Date: November 23, 2010
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SUBJECT: Evaluation of a Roof Drain Assembly for flow rate capacity.

REFERENCE: Letter

SAMPLE ID: One (1) roof drain assembly identified by the client as "100C8" was received in good condition on 7/16/2010. One (1) roof drain assembly identified by client as "100C8-LP" was received in good condition on 9/10/2010. These roof drain assemblies were selected by the client and shipped to SGS US Testing at 1325 North 108th East Avenue, Tulsa, OK 74116.

PROCEDURE: The units were tested for flow rate using a client specified procedure that is detailed on page 2 of this report. No revisions to this report will be allowed after 90 days of the report date.

RESULTS: Test results and data are given on the following pages.

TEST DATE: 9/8/2010 and 9/29/2010

CERTIFICATION: The tests reported here were conducted under the continuous direct supervision of SGS U.S. Testing Company Inc., Tulsa, OK.

**SIGNED FOR AND ON BEHALF OF
SGS U.S. TESTING COMPANY INC.**



Joe Cavett
Materials Department Engineer



S. Scott Parkhurst
Tulsa Technical Manager

Test Procedure and Results

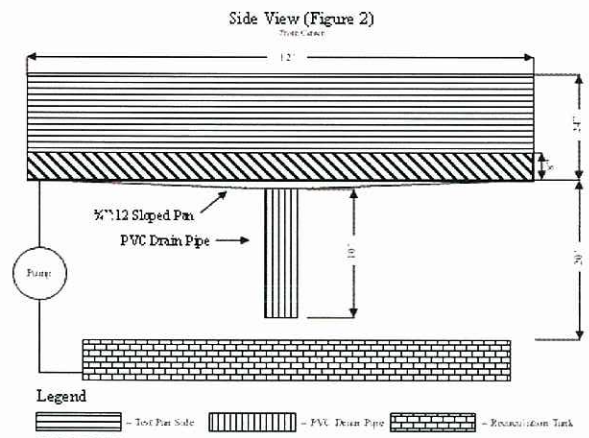
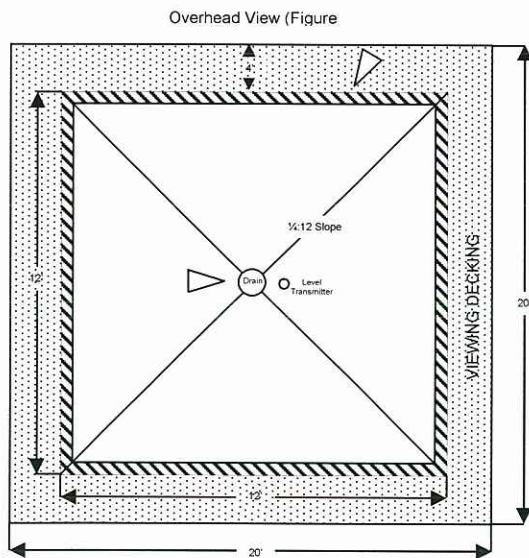
Sample Conditioning:

The samples were received and immediately placed in a conditioned environment of 73°F and 50% relative humidity. The samples remained in this environment for a minimum of 48 hours before being withdrawn for testing purposes.

Testing Apparatus:

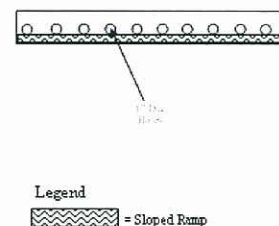
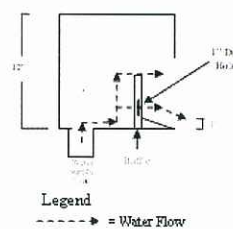
The apparatus used for this testing was designed to allow a high flow rate with minimal turbulence around the opening of the drain. The fixture comprised of a 12' X 12' wooden tank open to the atmosphere and coated with sheet membrane to eliminate the absorption of water into the wood material. An inlet baffle box was attached to the perimeter of box that measured approximately 12' wide X 2' height, 12" in depth and contain baffle rails with 1" diameter circles cut from the rails to reduce the speed of the inlet water. A centrifugal pump with a 8" outlet was connected to a manifold that had four outlet ports that were connected to four 4" PVC inlet pipes. The PVC pipes were then connected to 3" fire hoses to provide flow into the testing apparatus. Four paddle wheel flow meters were attached inline with the 4" PVC pipes and a 3" quick acting valve were attached to each port of the manifold to monitor and control the inlet flow.

An 8" diameter PVC pipe was attached to each of the test samples during testing. The pipe extended 10' from the outlet coupling of the drain samples.



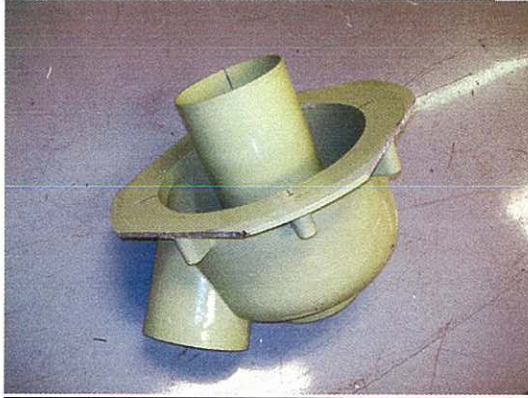
Baffle System Cutout Figure 3

Baffle Front View Figure 4



Pictures of Test Samples

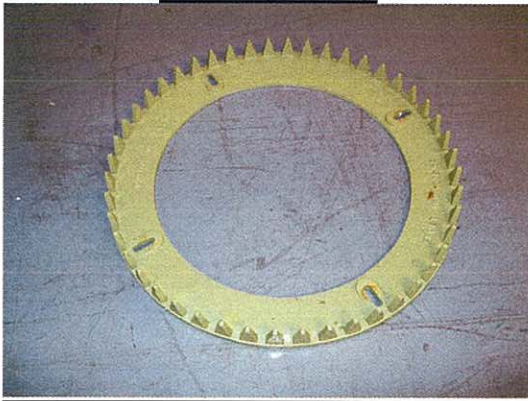
Drain Body with Over Flow Tube



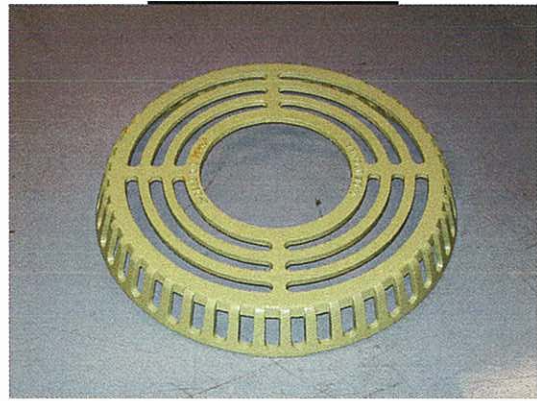
Drain Body (Side View)



Flashing Clamp



100C8-LP Strainer



100C8 Stainer



Sample Description:

100C8 and 100C8-LP – Roof drain consisting of a cast iron dome, cast iron flashing clamp and gravel stop, and a aluminum drain body. Specific dimensions are listed below:

100C8 Drain Assembly	
Description	Actual Dimension (in.)
Flashing Clamp, O.D.	22-15/16"
Flashing Clamp, I.D.	16-15/16"
Flashing Clamp Thickness	3/8"
Strainer Height	5-1/16"
Strainer Bottom O.D.	21-7/8"
Strainer Bottom I.D.	21-7/16"
Strainer Side Hole Spacing (Bottom)	2-1/2"
Strainer Side Hole Spacing (Top)	2-3/16"
Strainer Side Opening Dimension	3/4" X 3-3/4"
Strainer Top Center Hole Dia.	8-7/8"
Strainer Top Outer Hole (Outer)	2"
Strainer Top Outer Hole (Inner)	2"
Bowl (Body) Rim O.D.	25-1/16"
Bowl (Body) Rim I.D.	19-1/16"
Bowl (Body) Bottom O.D.	8-9/16"
Bowl (Body) Bottom I.D.	8-1/16"
Sump Depth	11-1/8"
Over Flow Outlet O.D.	8-1/8"
Over Flow Outlet I.D.	8-1/16"
Bowl (Primary) Outlet O.D.	8-9/16"
Bowl (Primary) Outlet I.D.	8-5/16"
Overflow Tube Height	15-13/16"
Overflow Tube O.D.	8-9/16"
Overflow Tube I.D.	8-7/16"

100C8-LP Drain Assembly	
Description	Actual Dimension (in.)
Flashing Clamp, O.D.	22-15/16"
Flashing Clamp, I.D.	16-15/16"
Flashing Clamp Thickness	3/8"
Strainer Height	3-1/16"
Strainer Bottom O.D.	21-15/16"
Strainer Bottom I.D.	21-1/2"
Strainer Side Hole Spacing (Bottom)	2"
Strainer Side Hole Spacing (Top)	1-7/8"
Strainer Side Opening Dimension	3/4" X 1-7/8"
Strainer Top Center Hole Dia.	8-7/8"
Strainer Top Outer Hole (Outer)	2"
Strainer Top Outer Hole (Inner)	2"
Bowl (Body) Rim O.D.	25-1/16"
Bowl (Body) Rim I.D.	19-1/16"
Bowl (Body) Bottom O.D.	8-9/16"
Bowl (Body) Bottom I.D.	8-1/16"
Sump Depth	11-1/8"
Over Flow Outlet O.D.	8-1/8"
Over Flow Outlet I.D.	8-1/16"
Bowl (Primary) Outlet O.D.	8-9/16"
Bowl (Primary) Outlet I.D.	8-5/16"
Overflow Tube Height	15-13/16"
Overflow Tube O.D.	8-9/16"
Overflow Tube I.D.	8-7/16"

Operating Procedure:

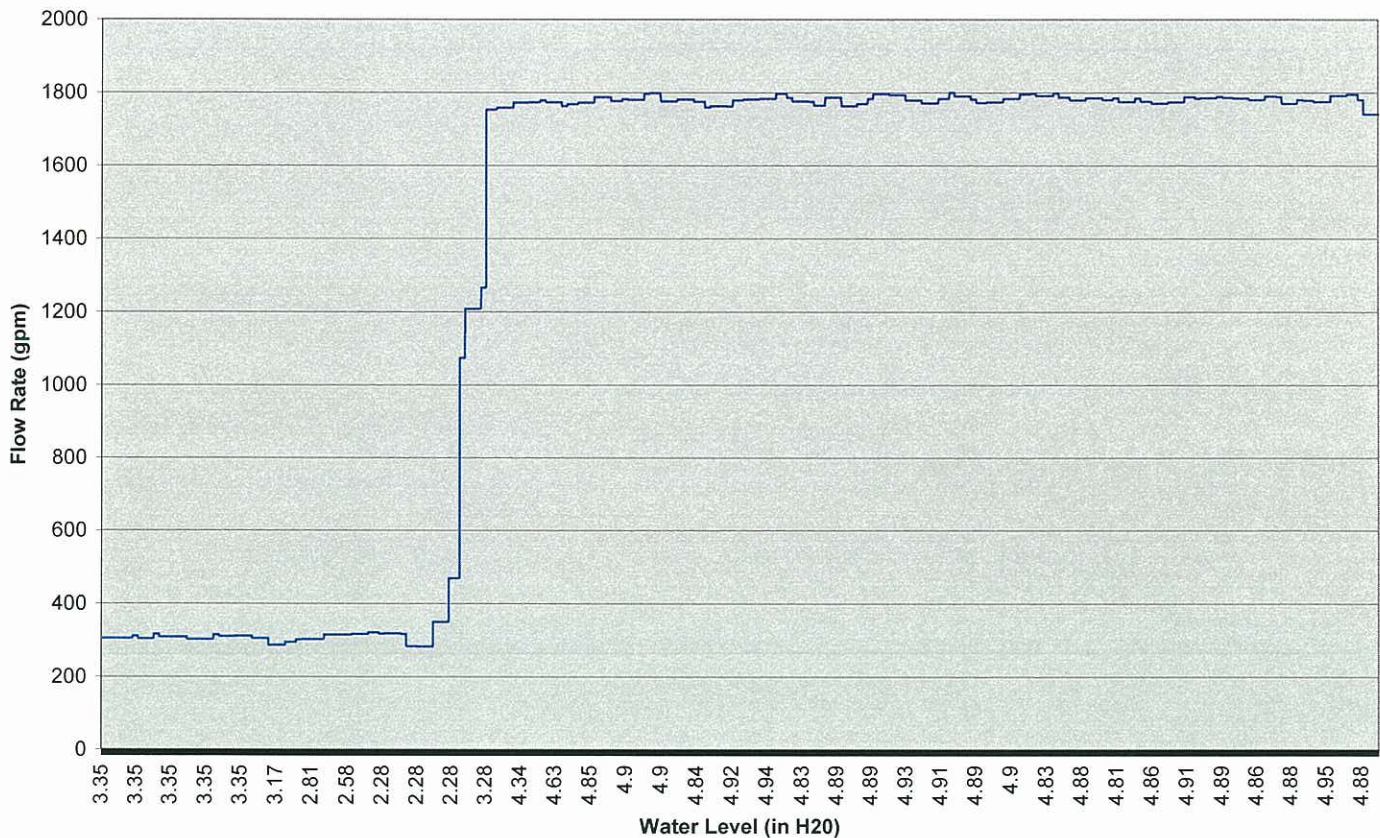
The samples were installed into the testing apparatus per manufacturer's instructions. The inlet flow was adjusted by the quick acting valves to meet the client's requirements for amount of head pressure on the inlet of the drain sample. The head pressure was measured using a measuring device from the top of the flashing to the water level. The pressure was maintained for a 5 minute period and the pressure and flow results were recorded. Additional information about the procedure is available at each data set below.

Test Procedure and Results:

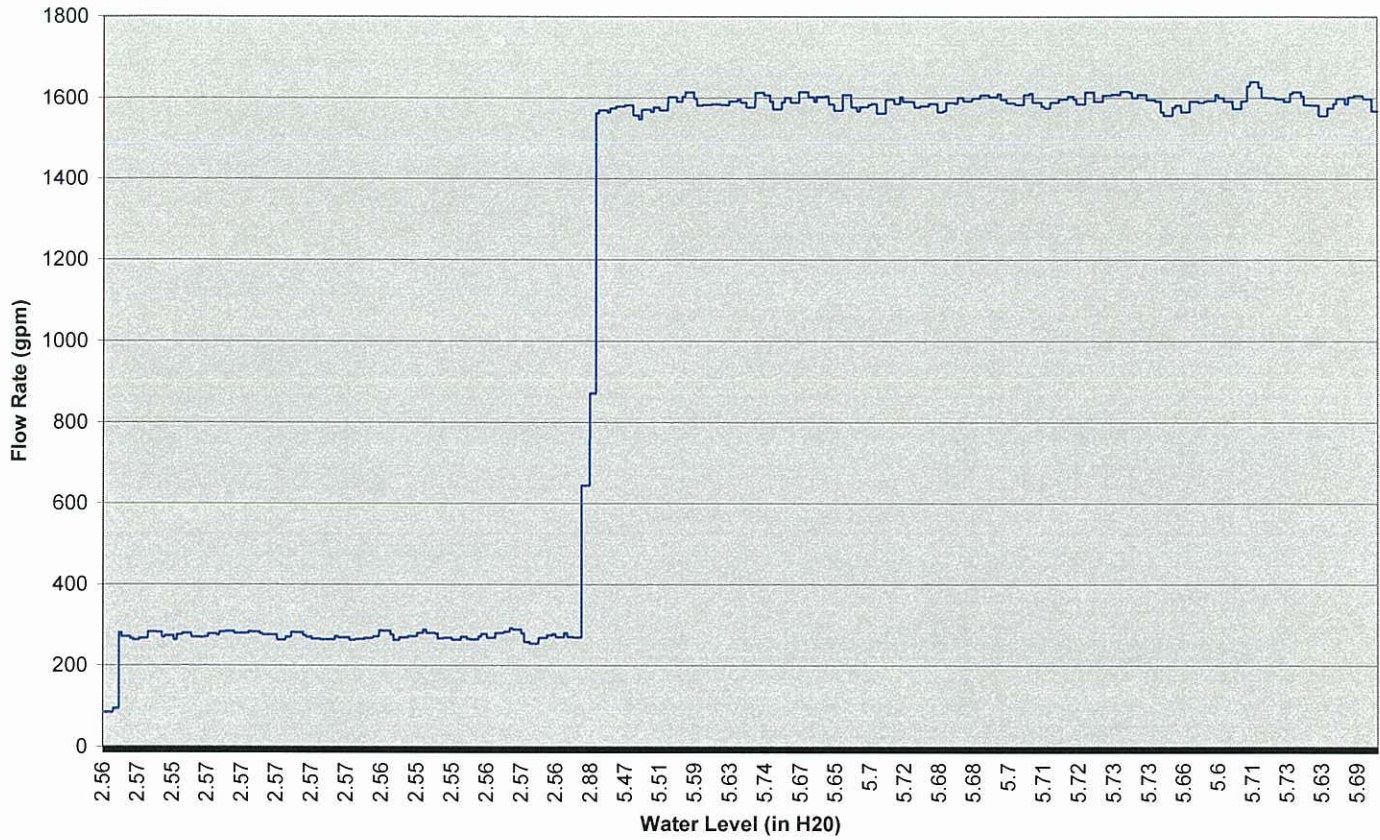
Results:

Sample ID	Maximum Flow	Maximum Water Level @ Maximum Flow
100C8	1798.89	4.98"
100C8-LP	1639.99	5.80"

100C8



100C8-LP



End of Report