

**American Society of Sanitary Engineering
Seal (Certification) Program**

**Laboratory Evaluation Report for:
Water Hammer Arresters**

**Tested under ASSE Standard 1010 • Revised: February, 2004
Laboratory File Number _____**

Manufacturer _____ **Model No.** _____

Address _____

Other Identification Markings _____ **Serial No.** _____

Size _____ **Connections (screwed, flanged, etc.)** _____

Size of Orifice in Arrester _____ inches (_____ mm)

Type and Size of Connector Attached to Arrester:

- Compression - Size of Orifice in connector** _____ inches (_____ mm)
- PEX- Size of Orifice in connector** _____ inches (_____ mm)
- CPVC - Size of Orifice in connector** _____ inches (_____ mm)
- Sweat - Size of Orifice in connector** _____ inches (_____ mm)
- Other - Size of Orifice in connector** _____ inches (_____ mm)

When testing a water hammer arrester with more than one type of connector, provided the orifice of each connector is of equal or larger size than the orifice of the water hammer arrester, only one connector need be tested. All connectors with an orifice size smaller than the orifice of the water hammer arrester must be tested for full compliance to the standard.

General information and instructions for the testing engineer:

Within the text there may be items which are only advisory to conditions which experience indicates could be troublesome. It is not for evaluation related to acceptance of the product.

There may be other items for which the judgment of the test engineer will be involved. Should there be a question of compliance with that provision of the standard, a conference with the manufacturer should be arranged to enable a satisfactory solution of the question.

Should disagreement persist and compliance remain in question by the test agency, the agency shall, if the product is in compliance with all other requirements of the standard, file a complete report on the questionable items together with the test report, for evaluation by the ASSE Seal Control Board. The Seal Control Board will then review and rule on the question of compliance with the intent of the standard item involved.

Documentation of material compliance must be furnished by the manufacturer. He shall furnish to the testing agency, a bill of material which clearly identifies the material of each part included in the product construction. This identification must include any standards which relate thereto.

Product Name _____
Model Number _____ Size(s) _____
Date Submitted for Review _____ Date Review Complete _____
Were the test units production models? <input type="checkbox"/> Yes <input type="checkbox"/> No
or prototypes? <input type="checkbox"/> Yes <input type="checkbox"/> No

Section I**1.0 General****1.1 Application**

Does this device, as stated by the manufacturer, comply with this section?

- Yes
 No
 Questionable

If questionable, explain: _____

Description. Does the device conform to the product classified as a water hammer arrester?

- Yes
 No
 Questionable

If questionable, explain: _____

1.2.2 Size: _____

1.2.3 Pressures. What is the maximum design pressure as noted by the manufacturer?
 _____psi (_____kPa)

What is the operating (working) pressure as noted by the manufacturer _____psi
 (_____kPa)

In compliance?

- Yes
 No
 Questionable

If questionable, explain: _____

1.2.4 Temperature Range: _____°F or from _____°F to _____°F
 (_____°C or from _____°C to _____°C)

In compliance?

- Yes
 No
 Questionable

If questionable, explain: _____

Section II**2.0 Test Specimens****2.1 Samples Submitted for Test**

Was the proper production unit size and model furnished for the testing Yes

- No
 Questionable

If questionable, explain: _____

How many assemblies of each size and model were submitted? _____

2.2 Samples Submitted for Test

How many units were utilized during the laboratory evaluation? _____

2.3 Drawings

Were assembly drawings and other data necessary to determine compliance provided and were these reviewed by the testing agency?

- Yes
 No
 Questionable

If questionable, explain: _____

Section III

3.0 Performance Requirements and Compliance Testing

3.1 Shock Absorbing Capacity Test

Was the test rig so designed and arranged that the device under test was subjected to the full energy imposed by the abrupt stoppage of a 50 foot (15.2 m) column of water flowing at a prescribed pressure and velocity in a standard schedule 40 steel pipe as shown in Figure 1?

- Yes
 No
 Questionable

If questionable, explain: _____

(a) What was the valve closure speed? _____ milliseconds

(b) What was the flowing pressure? _____ psi (_____ kPa.)

In compliance?

- Yes
 No
 Questionable

If questionable, explain: _____

3.2 Endurance Test

(a) What was the water temperature during the first 5000 cycles of the test?

_____ °F (_____ °C)

(b) What was the surge pressure (average of five (5) readings) at the beginning of the first 5000 cycles? _____ psi (_____ kPa)

(c) What was the maximum total pressure recorded at the 5000th cycle
 _____ psi (_____ kPa)

(d) What was the water temperature during the last 5000 cycles of the test?
 _____ °F (_____ °C)

(e) What was the surge pressure (average of five (5) readings) at the end of the first 5000 cycles?
 _____ psi (_____ kPa)

(f) What was the maximum total pressure recorded at the 10,000th cycle
 _____ psi (_____ kPa)

(g) What was the average of the two maximum total pressure readings?
 _____ psi (_____ kPa)

In compliance?

- Yes
 No
 Questionable

If questionable, explain: _____

Section IV**4.0 Detailed Requirements****4.1 Materials**

Does the device comply with the material requirements of this standard? Yes
 No
 Questionable

If questionable, explain: _____

4.2 Threads**4.2.1 Bolts, Screws and Nuts**

In compliance? Yes
 No
 Questionable

If questionable, explain: _____

4.2.2 Pipe Threads

In compliance? Yes
 No
 Questionable

If questionable, explain: _____

4.2.3 Installation Instructions

Were instructions furnished with the device that included installations, operations and maintenance? Yes
 No
 Questionable

If questionable, explain: _____

4.3 Markings

List the following information as shown on the device:

- (a) Name of manufacturer or trademark: _____
 (b) Type and model of the device: _____
 (c) Size symbols (see Table 1): _____
 (d) Connection pipe size: _____

Would these markings be visible in the installed position? Yes
 No
 Questionable

If questionable, explain: _____

4.3.1 Marking Methods

How were the markings shown on the device? _____

TESTING AGENCY _____

ADDRESS _____

PHONE: _____ FAX: _____

TEST ENGINEER(S) _____

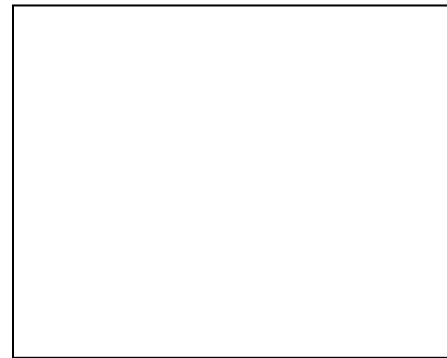
We certify that the evaluations are based on our best judgments and that the test data recorded is an accurate record of the performance of the device on test.

Signature of the official of the agency: _____

Title of the official: _____ Date: _____

Signature and seal of the Registered Professional Engineer
supervising the laboratory evaluation:

Signature



Seal