ITS Intertek Testing Services

TEST REPORT NO. J20039047-231

Prepared for
AMERICAN METAL PRODUCTS
8601 Hacks Cross Road
Olive Branch, MS 38654

Prepared by
INTERTEK TESTING SERVICES, NA
8431 Murphy Drive
Middleton, Wisconsin 53562

INTRODUCTION

Intertek Testing Services NA Inc. (ITS) of Middleton, Wisconsin, examined and tested the Ameri Vent Direct vent/intake system, manufactured and furnished by American Metal Products, a MASCO Company, of Olive Branch, MS. Tests were conducted during the week of January 22, 2001, at the American Metal Products test facility. The systems were evaluated as alternate components of WHI-certified Kozy Heat vented gas fireplaces manufactured by Hussong Manufacturing of Lakefield, MN. Applicable existing and proposed portions of ANSI and CSA Standards were used as guidelines for the test project. The results in this report are limited to the items submitted.

EXPLANATORY NOTES

Generic (separate from the appliances) testing was previously conducted at the AMP facility and results are included in WHI Report #J20017829. Specific tests' results described in this report were used as a comparison with the original components.

TEST EQUIPMENT

Test equipment used to measure and record data was examined and found to be acceptable for the certification project. Calibration records are on file at the American Metal Products facility in Olive Branch, TN.

CLEARANCES TO COMBUSTIBLES

Clearances were established during appliance certification testing.

APPLIANCES TESTED

Kozy Heat Model 942 with AmeriVent Direct 5" x 8" system.

Kozy Heat Model 936 with AmeriVent Direct 4" x 7" system.

TESTS DESCRIPTION

Combustion Tests

The Model 942 was installed in a test structure as described in the ANSI Z21.88 Standard, Section 2.1.6, and connected to the 5" x 8" AmeriVent Direct system in the configuration deemed by the testing agency to impose the most severe operation conditions.

The Model 936 was installed in a test structure as described in the ANSI Z21.88 Standard, Section 2.1.6, and connected to the 4" x 7" AmeriVent Direct system in the configuration deemed by the testing agency to impose the most severe operation conditions.

Results

When tested as described by Test Condition A and Test Condition B of the Standard neither appliance produced a concentration of carbon monoxide in excess of 0.04%.

Wind Tests

The Model 942 was installed in a test structure as described in the ANSI Z21.88 Standard, Section 2.1.6, and connected to the 5" x 8" AmeriVent Direct system. Tests were conducted with the various configurations specified in the manufacturer's installation instructions (See 1.34.1-b18) to provide for:

a. The least resistance to the egress of combustion products; and
b. The highest resistance to egress of combustion products.

The Model 936 was installed in a test structure as described in the ANSI Z21.88 Standard, Section 2.1.6, and connected to the 4" x 7" AmeriVent Direct system. Tests were conducted with the various configurations specified in the manufacturer's installation instructions (See 1.34.1-b18) to provide for:

c. The least resistance to the egress of combustion products; and
d. The highest resistance to egress of combustion products.

During each test the wind was directed against the termination at the various wind speeds and directions as described in the Standard.

Results

1. The gas at the pilot and main burner was capable of being ignited at the specified wind nominal velocity of 5 and 10 miles per hour (2,24 m/s and 4.47 m/s).

2. The main burner and pilot did not become extinguished and the gas at the main burner ignited from the pilot without excessive delay when the vent/air intake terminal was exposed to a wind having a nominal velocity of 5, 10, 20 and 40 miles per hour (2.24 m/s, 4.47 m/s, 8.94 m/s and 17.88 m/s).

Delayed Ignition Tests

1. With the appliance and vent/intake system installed according to the manufacturer's instructions in the various configurations described in the Standard ignition trials were attempted at the calculated upper explosive level.

2. With the appliance installed according to the manufacturer's instructions, with the maximum vent/intake length blocked as described in the Standard, ignition trials were attempted between the calculated lower and upper explosive levels.

Results

1. No explosions resulted from any of the trials. No damage to the appliance was observed.

2. Explosions resulted from several of the trials and no damage to the appliance was observed.

Conclusions

Intertek Testing Services NA has examined and tested the AmeriVent Direct vent/intake system and judged the design, as detailed in the certification report, to be acceptable as an alternate system for these and other similar designs of Kozy Heat Vented Gas Fireplace Heaters.

Tested and Reported by:

Dan Shoman
ITS Dallas

Reviewed by:

Edwin Hodgson
Project Manager