REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 100441674 Date: November 28, 2011

REPORT NO. 100441674CRT-002

AIR EROSION TEST ON
1 INCH THICK K-FONIK 240 FOAM DUCT LINER
IN AN ELBOW DUCT ASSEMBLY

RENDERED TO

K-FLEX USA LLC
100 NOMACO DRIVE
YOUNGSVILLE, NC 27596

INTRODUCTION

This report gives the results of an Air Erosion Test, which was performed on an L-shaped sheet metal duct lined with 1 inch thick K-FONIK 240 foam duct liner. The test specimen was selected and supplied by the client and was received at the laboratories on August 18, 2011. The sample appeared to be in new, unused condition upon arrival.

AUTHORIZATION

Signed Intertek Quotation No. 500311662

GENERAL

The test was conducted in accordance with ASTM C1071-05 Standard, "Specification For Fibrous Glass Duct Lining Insulation (Thermal And Sound Absorbing Material)," Section 12.7, "Erosion Test".

DESCRIPTION OF TEST SPECIMEN

The test specimen consisted of one 6 foot length of ductwork upstream, a 90° elbow and a 6 foot length of ductwork downstream. All the sheet metal ductwork measured 12 inches square, with an L shaped protective metal nose on the leading edge. For the test the entire duct system was lined with the K-FONIK 240 foam and adhered with duct liner adhesive. The duct liner was manufactured by K-Flex USA LLC.

TEST METHOD

The air was supplied by a 12,000 cfm Buffalo Forge Blower which was driven by a 40 HP variable speed drive for the purpose of varying the velocity. The fan outlet was covered with a double layer of cheesecloth (14 to 15 square yards per pound and known to the trade as count of 32 by 24 inches).

For the collecting screen a double layer of cheesecloth (the same type as mentioned above) was stretched taut on a frame sized to provide an area greater than five times the inside cross-sectional area of the test specimen. Prior to the installation of the collection screen, air was passed through the test section at a velocity of 10,000 fpm for a one-hour period. The collecting screen was then installed at a distance of one foot from the outlet of the test section.

After the collecting screen was set in place and the velocity set at 10,000 fpm, the test continued for four hours. The collecting screen was examined for macroscopic particles at the end of each hour by taping the screen with the adhesive side of transparent tape in order to remove any eroded particles. At the end of the four hour period, the test was stopped and the final examination was made.

TEST REQUIREMENT

At the end of the test period, there should be no evidence of continued erosion, and the interior surfaces of the sample are not to show evidence of cracking, flaking, peeling or delamination.

TEST RESULTS - Test Velocity 10,000 fpm (2.5 times the 4,000 fpm rating). At the end of each test period, there was no evidence of continued erosion, and the interior surfaces of the K-FONIK 240 sample did not show any evidence of cracking, flaking, peeling or delamination.

REMARKS

Date of Test: November 23, 2011

Dry Bulb: 70°F
Relative Humidity: 42%

Report Approved by:

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Report Reviewed By:

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