

REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 104335028

Date: June 3, 2020

REPORT NO. 104335028CRT-001

**AIR EROSION TEST ON 25 mm THICK
SILSONIC DUCT LINER
IN AN ELBOW ASSEMBLY**

RENDERED TO

**MAPPY ITALIA SPA
VIA TERVERE, 3
20020 CESATE (MI) ITALY**

INTRODUCTION

This report gives the results of an Air Erosion Test, which was performed on 25 mm thick duct liner in an elbow configuration. The test specimen was selected and supplied by the client and was received at the laboratories on May 28, 2020. The sample appeared to be in new unused condition upon arrival.

AUTHORIZATION

Signed Intertek SWA dated Jan 8, 2020 and PO Number 2020-0024

GENERAL

The test was conducted in accordance with ASTM C1071-16 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° mitered 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. The entire duct system was lined with Silsonic thermo bonded polyester fiber 25 mm thick duct liner. The sample had a density of 40 Kg/m³. The sample was installed with Simson ISR 70-03 adhesive and pins.

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 28").

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 10,500 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 10,500 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 10,500 fpm (2.5 times the 4,200 fpm rating). At the end of each test period, there was no evidence of continued erosion, and the interior surfaces of the sample did not show any evidence of cracking, flaking, peeling or delamination.

REMARKS

Date of Test: June 3, 2020

Dry Bulb: 72°F

Relative Humidity: 35%

Report Approved by:



Brian Cyr
Engineer
Acoustical Testing

Report Reviewed By:



James R. Kline
Engineer/Quality Supervisor
Acoustical Testing