



Farabaugh Engineering and Testing Inc.

Project No. T266-15

Report Date: September 28, 2015

No. Pages: 4 (inclusive)


AIR LEAKAGE TEST

6" GREENSEAM PLUS PIPE

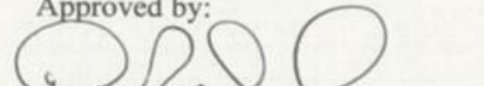
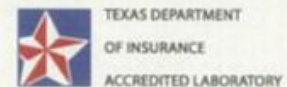
FOR

GREENSEAM INDUSTRIES
210 5TH STREET
CHARLEROI, PA 15022

Prepared by:


Paul G. Farabaugh

Approved by:


Daniel G. Farabaugh

AIR LEAKAGE TESTING

Purpose

The purpose of this test is to establish air leakage rates on 6" GreenSeam Plus Pipe.

Test Date

9/23/15

Test Specimen

Manufacturer: Greenseam Industries
210 5th Street
Charleroi, PA 15022

Test Specimens: 6" Diameter Greenseam Plus Circular Ducts 26 ga (with factory applied gasket and grease sealant). The ducts had factory applied foam-in-place gasket and red grease sealant located on the inside perimeter of the female joint. A factory applied foam-in-place gasket was also on the full length of the interlocking longitudinal joint. All ducts were 5' long (nominal) sections.

Test Apparatus

Extech Differential Pressure Manometer Model: HD 700 Range: 0-2 psi

Retrotec Digital Manometer Model: DM32 Range: -3 to +3 of WC

Meriam Laminar Air Flow Meter Model:50MC2-2 Range: 0-20 psig

Installation

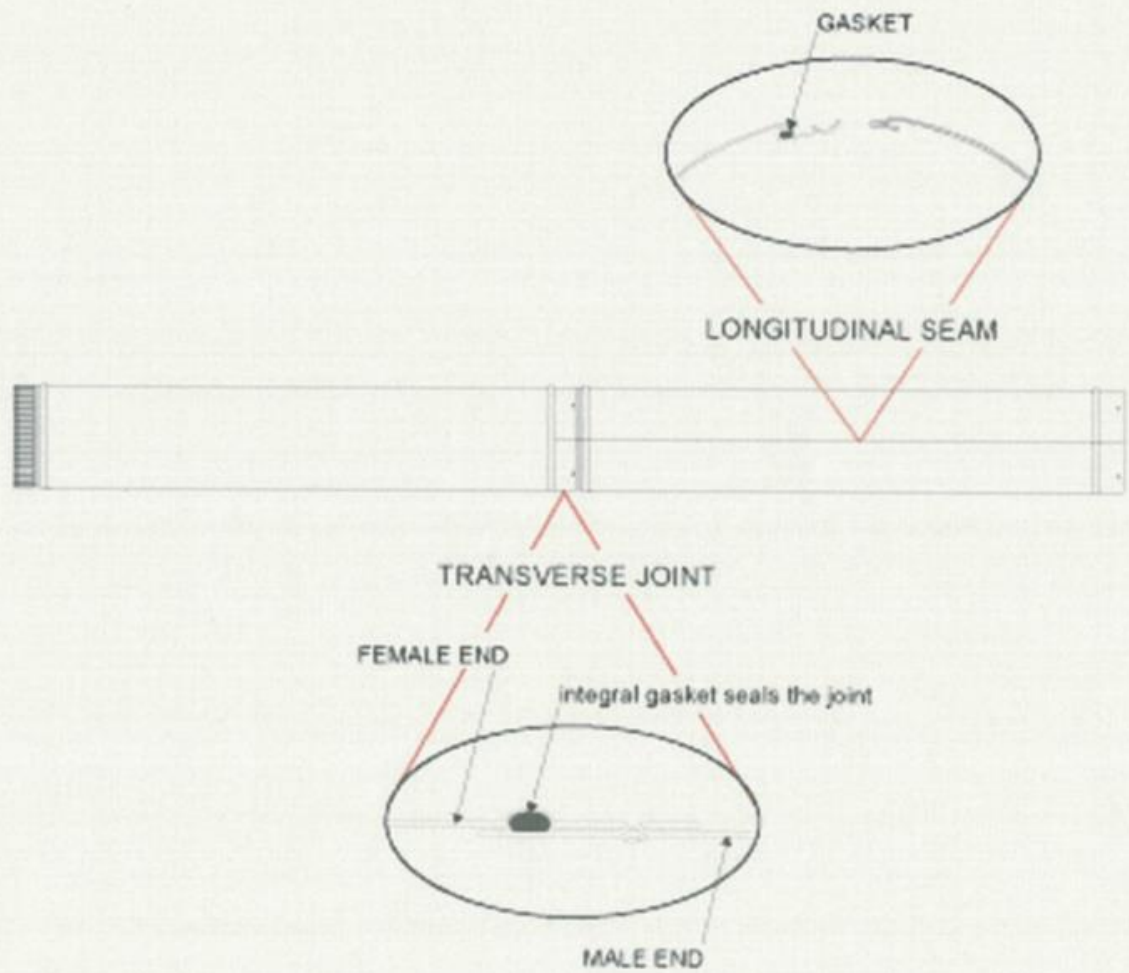
The circular duct sections were assembled with male / female end laps that pushed together with no fasteners. Each specimen consisted of four sections with each section being 5' long duct sections with three tested end-lap joints. There were (3) #10 - 16 x 3/4" long tek screws at each end lap joint, one screw on each side and one screw opposite the longitudinal seam. The first pipe was sealed with tape and the additional three other pipes were attached in series to the first pipe. The outer most end of the duct mock-up was capped and sealed. There was a 3/4" opening on the end cap to help with flow thru the piping. A positive blower was connected to one end and a pressure tap was added in the middle of each specimen. *Note - Only three longitudinal seam and three end lap joints of the four 5' sections of pipe were used to determine the flow thru the system. ALL other joints or seams were sealed.*

Procedure

The tests were conducted using a blower to induce a positive pressure inside the duct mock-up. A laminar flow element was used to measure the air flow at various pressures. The duct joints were taped off to determine the air leakage in the set-up apparatus. Additional air leakage readings were taken at the various pressures with the tape removed to determine the air leakage through the duct mock-up. The air leakage values reported here-in are the net air leakage values (Total Air Leakage minus Set-up Apparatus Leakage).

Test Data**Specimen: GreenSeam Plus Pipe, 6" dia. X 26 ga Circular Duct****6" GREENSEAM PLUS**

TEST PRESSURE (IN OF H2O)	TEST #1 (CFM)	TEST #2 (CFM)	TEST #3 (CFM)	TEST #4 (CFM)	TEST #5 (CFM)	TEST #6 (CFM)	AVG (CFM)	CLASS
0.5	0.251	0.347	0.269	0.285	0.368	0.381	0.317	2.11
1	0.705	0.643	0.391	0.336	0.336	0.594	0.501	2.13
2	0.855	0.696	0.653	0.26	0.433	0.525	0.570	1.54
4	1.233	1.28	1.279	0.303	0.85	0.957	0.984	1.70
8	2.012	1.875	1.456	0.603	1.014	1.552	1.419	1.56
10	1.891	1.75	1.576	0.803	1.083	1.557	1.443	1.37





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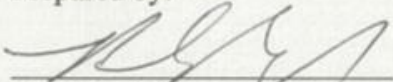
AIR LEAKAGE TEST

12" GREENSEAM PLUS PIPE

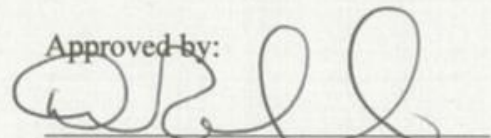
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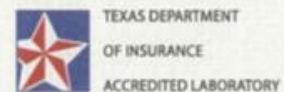
GREENSEAM INDUSTRIES
210 5TH STREET
CHARLEROI, PA 15022

Prepared by:


Paul G. Farabaugh

Approved by:


Daniel G. Farabaugh



AIR LEAKAGE TESTING

Purpose

The purpose of this test is to establish air leakage rates on 12" GreenSeam Plus Pipe.

Test Date

9/24/15

Test Specimen

Manufacturer: Greenseam Industries
210 5th Street
Charleroi, PA 15022

Test Specimens: 12" Diameter Greenseam Plus Circular Ducts 26 ga (with factory applied gasket and grease sealant). The ducts had factory applied foam-in-place gasket and red grease sealant located on the inside perimeter of the female joint. A factory applied foam-in-place gasket was also on the full length of the interlocking longitudinal joint. All ducts were 5' long (nominal) sections.

Test Apparatus

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Test Data

Specimen: GreenSeam Plus Pipe, 12" dia. X 26 ga Circular Duct

12" GREENSEAM PLUS

TEST PRESSURE (IN OF H2O)	TEST #1 (CFM)	TEST #2 (CFM)	TEST #3 (CFM)	TEST #4 (CFM)	TEST #5 (CFM)	AVG (CFM)	CLASS
0.5	0.594	0.536	0.633	0.337	0.229	0.466	1.55
1	0.904	0.602	0.776	0.599	0.721	0.720	1.53
2	1.321	1.018	1.442	0.92	1.202	1.181	1.60
4	1.435	1.632	1.838	1.498	1.033	1.487	1.28
8	2.516	2.157	2.996	2.115	1.99	2.355	1.29
10	3.155	1.668	2.503	2.548	2.383	2.451	1.16

