



Farabaugh Engineering and Testing Inc.

Project No. T237-12

Report Date: 7/7/12

No. Pages: 14

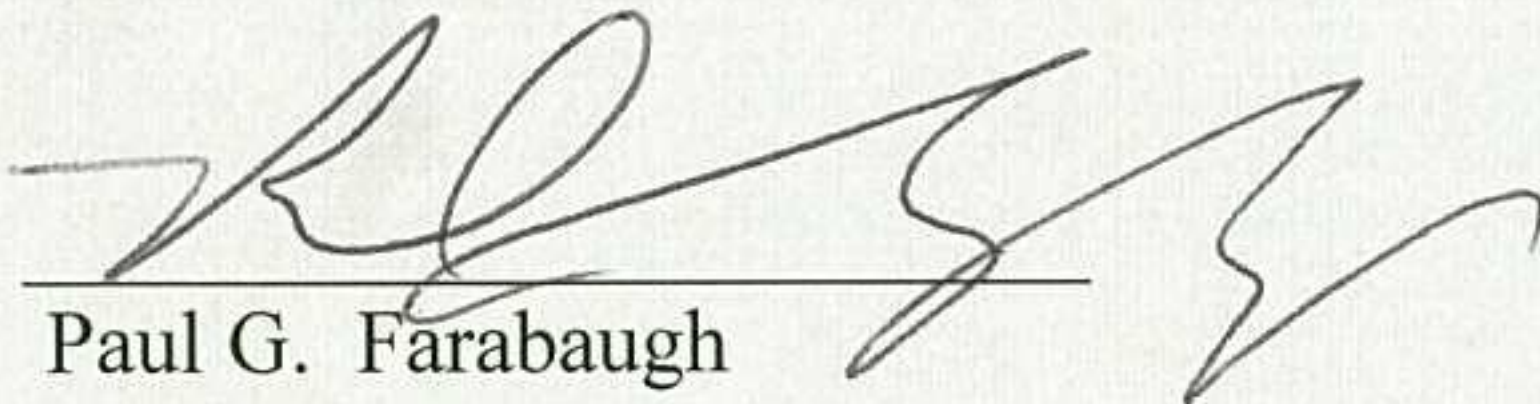
TAS 100-95
TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN
RESISTANCE OF DISCONTINUOUS ROOF SYSTEMS
PERFORMANCE TEST REPORT

150 ULTIMATE PIPE FLASHING

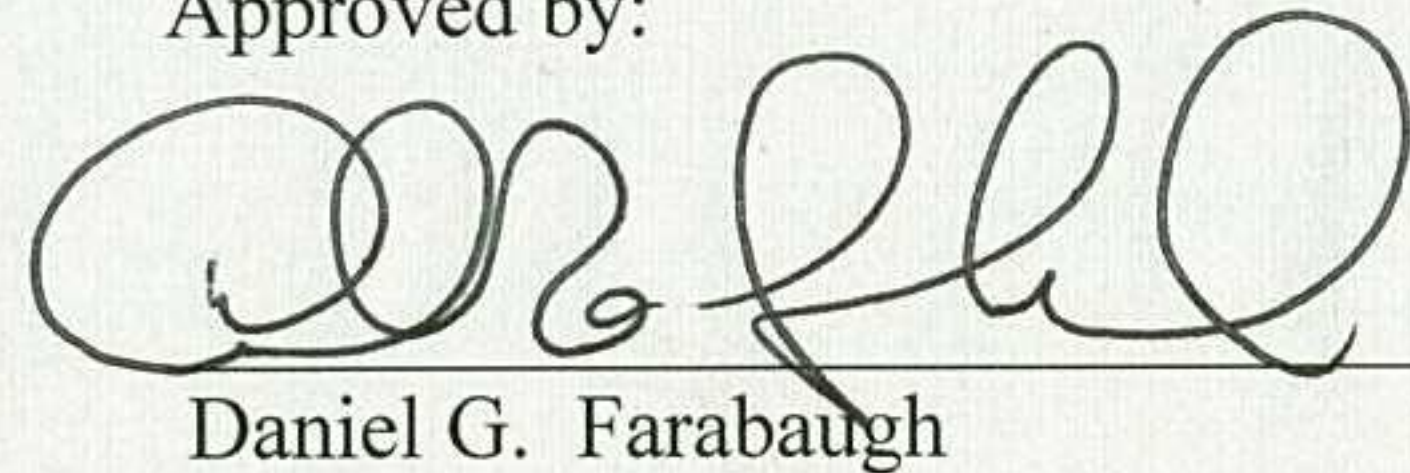
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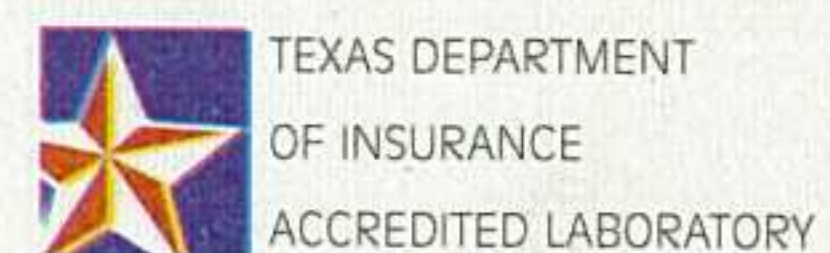
LIFETIME TOOL & BUILDING PRODUCTS LLC
250 AIRPORT ROAD
WINCHESTER, VA 22602

Report Prepared by:


Paul G. Farabaugh

Approved by:


Daniel G. Farabaugh



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TAS 100-95
TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN
RESISTANCE OF DISCONTINUOUS ROOF SYSTEMS

Scope:

This test procedure provides a means for establishing the resistance of the discontinuous roof system, consisting of underlayment and a prepared roof covering. The testing was performed as per Florida Testing Application Standard (TAS) 100-95 and as provided.

Test Specimen

Manufacturer: Lifetime Tool & Building Products LLC
250 Airport Road
Winchester, VA. 22602

Specimen: 150 Ultimate Pipe Flashing

Pipe Flashing Fastener: (4) 1-1/2" long Ring shank roofing nails

Deck

The test deck consisted of a 10' long x 8' wide base structure constructed from 2 x 10 perimeter supports and 2 x 10 intermediate supports 24" on center. The wood decking was 19/32" thick plywood that was fastened to the supports. The valley conditions (2 on 12 slope) was constructed at the front edge of the test deck.

Installation

A double layer application (50 % overlap) of ASTM D226 Type I underlayment covered the top of the plywood. The underlayment was fastened down to the wood decking with corrosion resistant tin-caps and 12 ga. x 1-1/4" long annular ring-shank nails spaced at 6" o.c at all laps and two staggered rows 12" o.c. in the field of the roll. A 9" wide self adhesive flashing was along the top perimeter of the mock-up underlayment and at both sides of the valley flashing. The slate tiles were then installed on top of the underlayment using (2) 12 ga. x 1-1/2" long smooth shank nails. There was a 1/4" joint seam between each tile and the joints were staggered. The Ultimate Pipe Flashing was installed in the middle of the specimen during the installation of the slate tiles using (4) 1-1/2" long ring shank roofing nails. A 6" wide strip of self adhesive flashing was around the base perimeter of the Ultimate Pipe Flashing. Metal flashing was located at the eaves and rakes of the roof system and attached with #9 x 1-1/2" long fasteners spaced at 12" o.c. along the sides of the mock up. (See attached drawings for all installation details)

Calibrations

Calibrations of the Windstream, Flow Meter and Water Distribution was performed per TAS 100-95

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Test Procedure

- The test assembly was positioned at a 2 on 12 slope and also with the 8 ft. eave facing the wind generator.
- The test assembly was subjected to wind speed and water spray intervals as follows.

Test Witness

Daniel G. Farabaugh, P.E. (Florida PE #0048349)
255 Saunders Station Road
Trafford, PA. 15085

Test Data

Test Date: 6-28-12

INTERVALS	WIND SPEED (MPH)	WATER SPRAY RATE (IN/HR)	WATER SPRAY	TIME (MIN)	OBSERVATIONS
1	35	8.8	ON	15	NO LEAKAGE
2	0	-	OFF	10	NO LEAKAGE
3	70	8.8	ON	15	NO LEAKAGE
4	0	-	OFF	10	NO LEAKAGE
5	90	8.8	ON	15	NO LEAKAGE
6	0	-	OFF	10	NO LEAKAGE
7	110	8.8	ON	5	NO LEAKAGE
8	0	-	OFF	10	NO LEAKAGE

Summary of Observations

Upon completion of the test intervals, visual observation indicated that there was no damage to the roof system and no water infiltration on the underside of the sheathing.

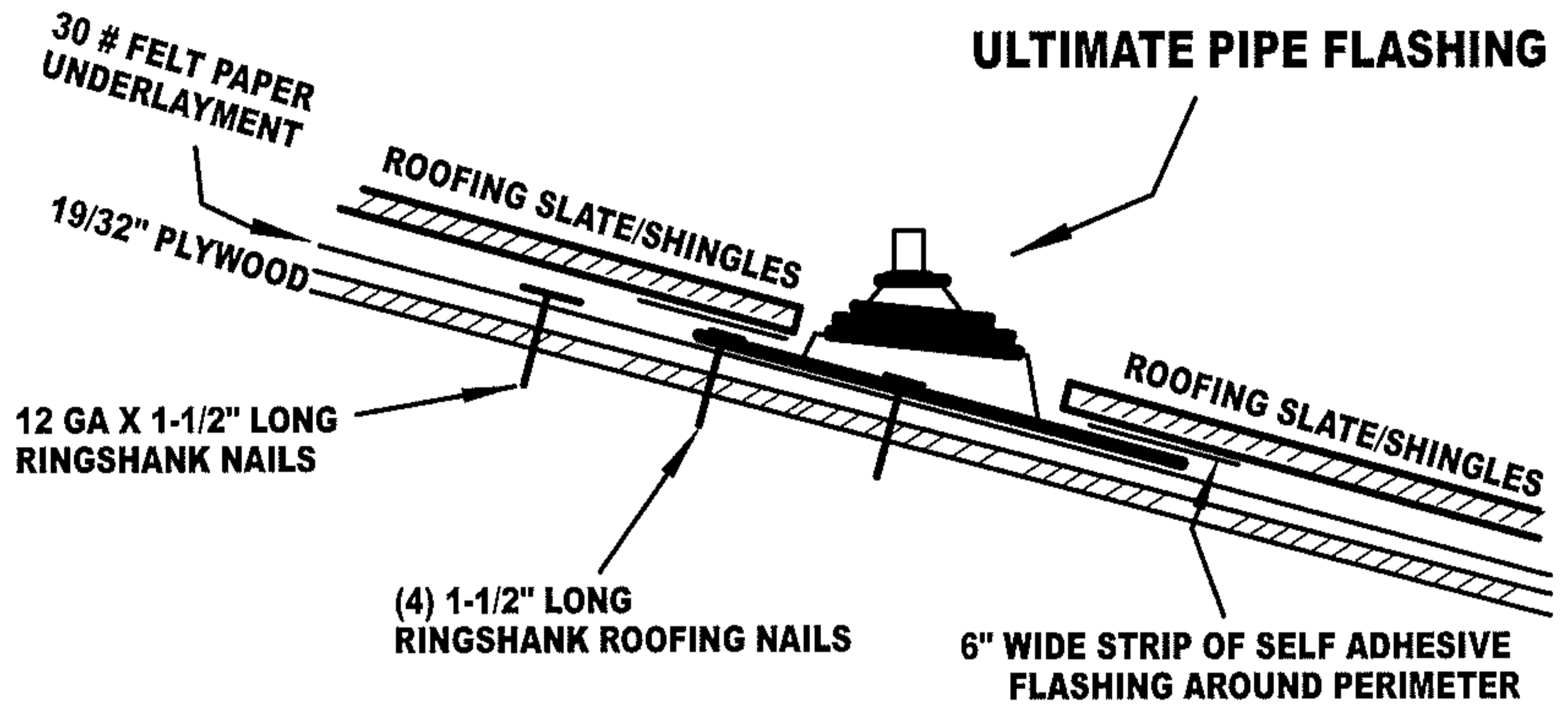
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TOPSIDE OF ASSEMBLY AFTER TESTING



UNDERSIDE OF ASSEMBLY AFTER TESTING



SECT. "A - A" TYPICAL DETAIL