

ROBERT L. NELSON & ASSOCIATES, INC.

CONSTRUCTION MATERIALS LABORATORY

1220 Riverfront Plaza

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847/682-1146

February 5, 2002

Deslauriers, Inc.
P. O. Box 189
Bellwood, IL 60104

Attn: Mr. Mark B. Scanlon
Director of Sales

REPORT OF TESTS

SUBJECT: Comparative Study of Compressive Strengths of Masonry Grout Specimens Cast Utilizing Concrete Masonry Unit Pin-Wheels (ASTM C 1019) and Specimens Made Using Grout Sample Boxes

**SPECIFICATIONS: ASTM C 476, "Specification for Grout for Masonry"
ASTM C 1019, "Test Method for Sampling and Testing Grout"**

TEST PROTOCOL

One hundred twenty (120) grout prisms were cast and tested in accordance with ASTM C 1019. Sixty (60) of the prisms were cast using an 8" x 8" x 16" concrete masonry unit (CMU) pin-wheel form and the other sixty (60) prisms were cast using the Deslauriers "Grout Sample Box" (GSB). Also, thirty (30) 3" x 6" cylinders were cast along with the other specimens. The grout was batched in a mortar mixer using a pre-blended 2000 psi fine grout purchased in the Chicago market. The specimens were cured for the appropriate time and then capped with a high-strength Hydrocal prior to testing.

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TEST RESULTS

Compressive Strength - PSI

	<u>Concrete Masonry Unit Pin-wheel</u>		<u>Grout Sample Box</u>	
	Batch No. 1			
Age:	7 days	28 days	7 days	28 days
	2945	3462	2637	3543
	2984	3592	2847	3269
	2738	3608	2310	3582
	2618	3214	2447	3610
	3014	3543	2388	3298
	2781	3210	2415	3341
	2613	3449	2643	3542
	2810	3562	2792	3010
	2662	3546	2445	3496
	2738	3718	2643	3482
	2943	3642	2542	3362
	2543	3342	2643	3315
	2848	3456	2782	3182
	3062	3296	2743	3641
	2864	3382	2682	3518
Avg.	2810	3468	2437	3192

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TEST RESULTS

Compressive Strength - PSI

3" x 6" Cylinders

Batch No. 1A

Age:	<u>7 days</u>	<u>28 days</u>
	1851	2392
	1902	2562
	2006	2384
	1824	2510
	1743	2444
	2096	2313
	1952	2562
	1876	2543
	1749	2014
	1822	2462
	1764	2319
	1563	2301
	1822	2542
	1703	2460
	1681	<u>2223</u>
Avg.	1826	2402

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TEST RESULTS

Compressive Strength - PSI

	Concrete Masonry <u>Unit Pin-wheel</u>		Grout Sample Box	
	<u>Batch No. 2</u>			
Age:	<u>7 days</u>	<u>28 days</u>	<u>7 days</u>	<u>28 days</u>
	2346	3018	2456	3152
	2719	3163	2018	3043
	2620	3451	2615	3496
	2586	3493	2619	3742
	2792	3362	2433	3183
	2014	3742	2742	3610
	2618	3682	2681	3542
	2935	3719	2633	3681
	2643	3580	2318	3256
	2852	3601	2520	3613
	2413	3145	2743	3701
	2651	3381	2517	3515
	2743	3246	2793	3486
	2810	3791	2843	3019
	<u>2840</u>	<u>3800</u>	<u>2263</u>	<u>3612</u>
Avg.	2318	3472	2546	3443

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TEST SUMMARY

Batch No. 1 and 1A

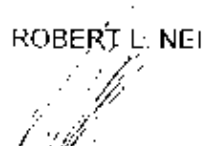
Sample Type:	CMU	GSB	3"x6" cylinders
Compressive Strength (PSI)			
7 days	2810	2437	1826
28 days	3468	3192	2402
Percent Change from CMU to GSB @ 28 days		7.95%	

Batch No. 2

Sample Type:	CMU	GSB
Compressive Strength (PSI)		
7 days	2318	2546
28 days	3472	3443
Percent Change from CMU to GSB @ 28 days		1.12%

Respectfully submitted,

ROBERT L. NELSON & ASSOCIATES, INC.


Robert L. Nelson
President