PLAINTIFF'S EXHIBIT tabbies WV-012579

PLAINTIFF'S EXHIBIT tabbies 70112.00

To: H. Speelman Date: 3/64

Subject: Comparative testing of Griptex Block and Baldwin-E-Hill's Mono-Block

Note: For standard specifications see ASTM-C-398; All below tests are on 1" thick specimens

Tests	Griptex	Mono-Block
Density	1.8 #/brd ft; 21.6 #/cu ft.	1.14 #/brd ft; 13.7 #/cu ft.
Breaking load*	18.28 #/inch thick (Ave.)	24.06 #/inch thick (Ave.)
Flexural Strength*	46.2 psi (Ave.)	60.8 psi (Ave.)
Compressive Strength:	Air-Cure (Constant Wt.)	Air Cure (Constant Wt.)
At 2% deformation	1.7 psi; 244.8 p.s.f. (Ave.)	0.8 psi; 115.2 p.s.f. (Ave.
" 5% "	4.2 psi; 604.8 p.s.f. (Ave.)	1.7 psi; 244.8 p.s.f. (Ave.
" 10% "	8.3 psi; 1195.2 p.s.f. (Ave.)	3.3 psi; 475.2 p.s.f. (Ave.
Linear Shrinkage:	At 1500°F	At 1500°F
%loss by Weight	−1.4%	−1.2%
" " " Width	−2.6%	−2.6%
" " " Thickness	−3.9%	−3.1%
" " " Length	−0.9%	−3.3%
Linear Shrinkage:	At 1800°F	At 1800°F
%loss by Weight	−1.4%	−1.3%
" " " Width	−3.1%	−3.0%
" " " Thickness	−4.4%	−4.6%
" " " Length	−1.3%	−3.7%
Mechanical Stability:	%loss in Weight	%loss in Weight
After 1st 10	22.4%	22.4%
" 2nd "	56.6%	43.1%

* = 6" x 12" x 1" specimens used

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Visual Physical Characteristics:

1. Durability (Handlability)

(a) Griptex - Very rigid surfaces provide good handling strength, as well as a minimum of dust and breakage; edges of block hold shape very good.
(b) Monoblock - Good resistence to crushing thru the middle of sample block, but sides (edges) of block are easily crushed out of shape producing some flaking and dusting of the sample.

2. Linear Dimensions (ASTM $\pm\frac{1}{8}$" on all dimensions)

(a) Griptex - Edges of block are evenly & smoothly cut - providing for close fits to other block; all measurements meet the $\pm\frac{1}{8}$" ASTM tolarance.
(b) Monoblock - Edges of block are unevenly cut and can easily be damaged to produce an uneven fit between different pieces of block (i.e. facilitating a loss of heat thru cracks between pieces of block); all measurements of sized block are within the $\pm\frac{1}{8}$" ASTM tolarance - initially

Note: A better sample (a piece more indicative of average) of Griptex for ~~Compress~~ Flexural Strength & Breaking Load would give a similar, if not better, result comparable with Monoblock -

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PROJ. Utility (epoxy) — QUALITY CONTROL MONTHLY AVERAGES — MONTH FEB '94

VOL. SHKG.	W.F. COVERAGE	WATER RATIO	(Dried Sample) DENSITY	DRY ADH.	(Hircure) COMP. STR.	LIN. SHKG.	RUST INHIB.	FEEL WORK.	MECH. STAB.	WET ADH.		REMARKS
	38.8	1.37:1						Cohesion good Polymerized		15.0#		2/7/(2)
	36.6	1.33:1						Work ok Very Smooth		15.0#		2/11/(2)
2.1%	37.4	1.38:1	35.2#/cuft					Cohes ok Work ok		15.0#		2/11/(3)
	37.5	1.37:1						"		16.0#		2/12/(2)
	39.3	1.37:1						Excellent Work		16.0#		2/13/(2)
	36.9	1.36:1						Good Work Cohesion ok		15.0#		2/13/(3)
	37.5	1.38:1						"		16.0#		2/14/(2)
	36.2	1.33:1						Excellent Work, ok		15.5#		2/14/(3)
	38.2	1.38:1						Coh. ok Work ok		14.5#		2/17/(2)
	37.5	1.38:1						Coh. ok Work good		14.0#		2/17/(3)
	—	1.25:1						Cohe. ok Work ok		16.0#		2/18/(3)
	37.5	1.38:1		5%-381 psi 10%-494 psi				"		16.0#		2/24/(3)
	37.5	1.38:1						"		16.5#		2/26/(2)
	38.2	1.35:1						Cohes good Work Excellent		15.5#		2/26/(3) DOES NOT NEED 2/24
	37.5	1.38:1						Cohes ok Work ok		13.0#		2/26/(2)
	37.8	1.35:1						Cohes ok Work ok		15.5#		DRY Mix 2/26/(3)
	37.5	1.35:1				Loss loof		Very Smooth Polymerized		15.0#		2/27/(2)
2.2%	36.2	1.33:1	55.6#/cuft	5%-303.3 10%-536.6 psi		1.3% Width 0.9% Length		Cohesion ok Work ok		17.0#		02264802
	38.2	1.37:1						Very Smooth To Work		14.5#		02/27/(3)

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PRODUCT #711 QUALITY CONTROL MONTHLY AVERAGES MONTH FEB-64

VOL. SHKG.	Soft WET COVERAGE	WATER RATIO	Dried Sample DENSITY	DRY ADH.	COMP. STRG.	LIN. SHKG.	RUST INHIB.	FEEL WORK.	MECH. STAB.	WET ADH.		REMARKS
	57.8	2.125:1						Cohesion ok Work good		29.0#		2-3-(3)
~~25.7%~~	57.4	2.25:1	~~31.4#~~					Slow work Cohesion ok		22.0#		2-4-64 marked 3 [illegible] made 2ND shift
25.7%	54.2	2.00:1	31.4#					Work ok Cohes. good		26.0#		2-7-64 (3)
	54.1	2.00:1						Work ok Very Smooth		25.5#		2-9-(2)
	52.8	2.00:1						Cohes. ok Work cond	[illegible]	25.5#		2-19-(2)
	56.3	2.125:1						Cohesion good Work good		25.0#		2-20-(1)
	55.4	2.125:1						Cohesion good Work ok		24.0#		2-20-(2)
	56.3	2.125:1						" Work good		25.5#		2-20-(3)
	54.7	2.125:1						Cohesion good Work good		23.5#		2-21-(2)
	55.9	2.125:1						"		23.0#		2-21-(3)
	53.7	2.00:1						"		25.0#		2-22-(3)
	54.7	2.125:1						"		22.0#		2-23-(1)
	54.7	2.125:1						"		24.5#		2-23-(2)
	54.7	2.125:1						"		23.0#		2-23-(3)
17.0%	54.7	2.00:1	28.2#					"		21.0#		2/24/(2) big Wood Pellets
	57.8	2.125:1						Work Excel. Cohesion Excel Very Smooth		22.5#	Kaiser Plastic	Orvus Mix 2/27/(3)
	54.8	2.00:1						"		21.5#		2/28/(3)

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PRODUCT Pyroscat QUALITY CONTROL MONTHLY AVERAGES MONTH FEB '64

VOL. SHKG.	~~WET~~ #/Req COVERAGE	WATER RATIO	Dry Matl DENSITY	DRY ADH.	(Air Cure) COMP. STRG.	LIN. SHKG.	RUST INHIB.	FEEL WORK.	MECH. STAB.	WET ADH.		REMARKS
	46.2 #Req	0.65:1	301 GMS / 36.1 #/cuft					Damp Pack				2-7(2) .773 yield
	47.5 #Req	0.62:1	322 GMS / 37.8 #/cuft		1,005 psi	0.6% Air Cure 1.7% Fired 1500°F		Damp Pack			.7954 Cond use	2-12(2)[2] more H2O
	48.7 # Req	0.68:1	309 GMS / 36.3 #/cuft					" "			.7954	2-28(3)[5]

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PRODUCT Calcretes QUALITY CONTROL MONTHLY AVERAGES MONTH FEB '64

~~VOL. SHKG.~~	~~WET~~ HREQ COVERAGE	WATER RATIO	Dry Matl DENSITY	DRY ADH.	(Hircure) COMP. STRG.	LIN. SHKG.	RUST INHIB.	FEEL WORK.	MECH. STAB.	WET ADH.		REMARKS
Cal-50	51.85	0:51:1	38.16 MS 44.8 #/ft		1,155 psi	-0.4% -0.8%	Hircure Fixed -1500°F	Tricwel Good				2-24-(B) .864 yield

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LW#22 (159-7) #5322 SUPERSEDES 7/16/69 10% 7M } APPEAR SAME WHY ??
DATE " 10% 7M

(159-7 & 159-12) LUMNIFY DEVELOPE DATA 7-26-68

LW#22 (159-7) 7/24/68 SHIPPED to NATCO

LW#50 7/26/68 (159-12) 10% 7M Hi Early

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