AIR DISTRIBUTION ANALYSIS- SUMMARY

IGS Unit 2 11/27/91 Baseline Test

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OUTER ZONE (Shrouding Corrections)

Average Test Point Velocities (ft/min)

Pulverizer #	Burner # 1	2	3	4	5	6		AVERAGES Front by Row		Rear by Row	Total By Row
E (front- 4th)	3370	3036	2891	3134	3162	3155		3125			
A (front- 3rd)	3177	3187	3204	3274	3236	3240		3220			
F (front- 2nd)	3071	2790	2866	3013	3080	2979		2967			
B (front- 1st)	2988	2727	2919	2841	2917	2775		2861	3043		
D (rear- 4th)	2900	2900	2844	3177	3086	2962		2978		3051	
H (rear- 3rd)	3355	3221	3641	3736	3836	3530		3553		3386	
C (rear- 2nd)	3166	3143	3198	3161	3093	3271		3172		3069	
G (rear- 1st)	2886	3208	3312	3229	3276	3230		3190	3223	3026	
AVERAGES											
Front by Bnr	3152	2935	2970	3066	3099	3037	3043	3133	3133	3133	
Rear by Bnr	3077	3118	3249	3326	3323	3248	3223				
Total by Bnr	3114	3027	3109	3196	3211	3143	3133				

AIR DISTRIBUTION ANALYSIS-

IGS Unit 2 11/27/91 Baseline

OUTER ZONE (Shrouding Corrections)

Deviations on Average Test Point Velocities (ft/

Pulverizer #	Burner 1	2	3	4
E (front- 4th)	7.56	-3.10	-7.73	0.03
A (front- 3rd)	1.40	1.72	2.26	4.49
F (front- 2nd)	-1.98	-10.95	-8.53	-3.84
B (front- 1st)	-4.63	-12.96	-6.84	-9.33
D (rear- 4th)	-7.44	-7.44	-9.23	1.40
H (rear- 3rd)	7.08	2.80	16.21	19.24
C (rear- 2nd)	1.05	0.31	2.07	0.89
G (rear- 1st)	-7.89	2.39	5.71	3.06
AVERAGES				
Front by Bnr	0.58	-6.33	-5.21	-2.16
Rear by Bnr	-1.80	-0.48	3.69	6.15
Total by Bnr	-0.61	-3.41	-0.76	1.99

INNER ZONE (Backplate Corrections)

Average Test Point Velocities (ft/min)

Pulverizer #	Burner # 1	2	3	4	5	6		AVERAGES Front by Row		Rear by Row	Total By Row
E (front- 4th)	2594	2688	2618	3004	3080	2974		2826			
A (front- 3rd)	2623	2271	2614	3169	3209	2903		2798			
F (front- 2nd)	2498	2551	2720	2723	2973	2843		2718			
B (front- 1st)	2265	2196	2166	2807	2876	2649		2493	2709		
D (rear- 4th)	3184	3127	2884	3065	2688	2804		2959		2893	
H (rear- 3rd)	3139	3104	2832	3032	2731	2571		2902		2850	
C (rear- 2nd)	3241	3440	3205	3056	1566	3033		2924		2821	
G (rear- 1st)	3125	3084	3449	2634	2612	2460		2894	2919	2694	
AVERAGES											
Front by Bnr	2495	2427	2530	2926	3035	2842	2709	2814	2814	2814	
Rear by Bnr	3172	3189	3093	2947	2399	2717	2919				
Total by Bnr	2834	2808	2811	2936	2717	2780	2814				

INNER ZONE (Backplate Corrections)

Deviations on Average Test Point Velocities (ft/

Pulverizer #	Burner 1	2	3	4
E (front- 4th)	-7.82	-4.48	-6.97	6.75
A (front- 3rd)	-6.79	-19.30	-7.11	12.61
F (front- 2nd)	-11.23	-9.35	-3.35	-3.24
B (front- 1st)	-19.51	-21.97	-23.03	-0.25
D (rear- 4th)	13.14	11.12	2.48	8.91
H (rear- 3rd)	11.54	10.30	0.63	7.74
C (rear- 2nd)	15.17	22.24	13.89	8.59
G (rear- 1st)	11.05	9.59	22.56	-6.40
AVERAGES				
Front by Bnr	-11.34	-13.78	-10.12	3.97
Rear by Bnr	12.72	13.31	9.89	4.71
Total by Bnr	0.69	-0.23	-0.11	4.34

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UMMARY

est

AIR DISTRIBUTION ANALYSIS- SUMMARY

IGS Unit 2 11/27/91 Baseline Test

in)

5	6		AVERAGES Front by Row		
0.92	0.70		-0.27		
3.28	3.41		2.76		
-1.70	-4.92		-5.32		
-6.90	-11.43		-8.68	-2.88	
			Rear by Row		Total By Row
-1.51	-5.46		-4.95		-2.61
22.43	12.66		13.40		8.08
-1.28	4.40		1.24		-2.04
4.56	3.09		1.82	2.88	-3.43
-1.10	-3.06	-2.88	0.00	0.00	0.00
6.05	3.67	2.88			
2.48	0.31	0.00			

OUTER ZONE (Shrouding Corrections)

Starting Position (Width Open)							New Positioning				
	Shroud Opening (inches)						Shroud Opening and D				
Pulverizer #	1	2	3	4	5	6	1	Dev	2	Dev	3
E (front- 4th)	5.90	5.90	5.90	5.90	5.90	5.90	6.35	**-0.45**	5.72	**0.18**	5.44
A (front- 3rd)	5.90	5.90	5.90	5.90	5.90	5.90	5.98	**-0.08**	6.00	**-0.10**	6.03
F (front- 2nd)	5.90	5.90	5.90	5.90	5.90	5.90	5.78	**0.12**	5.25	**0.65**	5.40
B (front- 1st)	5.90	5.90	5.90	5.90	5.90	5.90	5.63	**0.27**	5.14	**0.76**	5.50
D (rear- 4th)	5.90	5.90	5.90	5.90	5.90	5.90	5.46	**0.44**	5.46	**0.44**	5.36
H (rear- 3rd)	5.90	5.90	5.90	5.90	5.90	5.90	6.32	**-0.42**	6.07	**-0.17**	6.86
C (rear- 2nd))	5.90	5.90	5.90	5.90	5.90	5.90	5.96	**-0.06**	5.92	**-0.02**	6.02
G (rear- 1st)	5.90	5.90	5.90	5.90	5.90	5.90	5.43	**0.47**	6.04	**-0.14**	6.24

in)

5	6		AVERAGES Front by Row		
9.45	5.68		0.43		
14.03	3.16		-0.57		
5.64	1.02		-3.42		
2.20	-5.87		-11.41	-3.74	
			Rear by Row		Total By Row
-4.48	-0.36		5.13		2.78
-2.96	-8.64		3.10		1.27
-44.35	7.78		3.89		0.23
-7.18	-12.59		2.84	3.74	-4.28
7.83	1.00	-3.74	0.00	0.00	0.00
-14.74	-3.45	3.74			
-3.46	-1.23	0.00			

INNER ZONE (Backplate Corrections)

Starting Position (Width Open)							New Positioning				
	Shroud Opening (inches)						Shroud Opening and D				
Pulverizer #	1	2	3	4	5	6	1	Dev	2	Dev	3
E (front- 4th)	5.00	5.00	5.00	5.00	5.00	5.00	4.61	**0.39**	4.78	**0.22**	4.65
A (front- 3rd)	5.00	5.00	5.00	5.00	5.00	5.00	4.66	**0.34**	4.03	**0.97**	4.64
F (front- 2nd)	5.00	5.00	5.00	5.00	5.00	5.00	4.44	**0.56**	4.53	**0.47**	4.83
B (front- 1st)	5.00	5.00	5.00	5.00	5.00	5.00	4.02	**0.98**	3.90	**1.10**	3.85
D (rear- 4th)	5.00	5.00	5.00	5.00	5.00	5.00	5.66	**-0.66**	5.56	**-0.56**	5.12
H (rear- 3rd)	5.00	5.00	5.00	5.00	5.00	5.00	5.58	**-0.58**	5.51	**-0.51**	5.03
C (rear- 2nd))	5.00	5.00	5.00	5.00	5.00	5.00	5.76	**-0.76**	6.11	**-1.11**	5.69
G (rear- 1st)	5.00	5.00	5.00	5.00	5.00	5.00	5.55	**-0.55**	5.48	**-0.48**	6.13

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evation from last Setting (Inches)

Dev	4	Dev	5	Dev	6	Dev
0.46	5.90	0.00	5.95	-0.05	5.94	-0.04
-0.13	6.17	-0.27	6.09	-0.19	6.10	-0.20
0.50	5.67	0.23	5.80	0.10	5.61	0.29
0.40	5.35	0.55	5.49	0.41	5.23	0.67
0.54	5.98	-0.08	5.81	0.09	5.58	0.32
-0.96	7.04	-1.14	7.22	-1.32	6.65	-0.75
-0.12	5.95	-0.05	5.82	0.08	6.16	-0.26
-0.34	6.08	-0.18	6.17	-0.27	6.08	-0.18

evation from last Setting (Inches)

Dev	4	Dev	5	Dev	6	Dev
0.35	5.34	-0.34	5.47	-0.47	5.28	-0.28
0.36	5.63	-0.63	5.70	-0.70	5.16	-0.16
0.17	4.84	0.16	5.28	-0.28	5.05	-0.05
1.15	4.99	0.01	5.11	-0.11	4.71	0.29
-0.12	5.45	-0.45	4.78	0.22	4.98	0.02
-0.03	5.39	-0.39	4.85	0.15	4.57	0.43
-0.69	5.43	-0.43	2.78	2.22	5.39	-0.39
-1.13	4.68	0.32	4.64	0.36	4.37	0.63

AIR DISTRIBUTION ANALYSIS- SUMMARY

IGS Unit 2 11/27/91 Baseline Test

OUTER ZONE (Shrouding Corrections)

Starting Position (Width Open) — Shroud Opening (inches)

New Positioning — Shroud Opening and Devation from last Setting (Inches)

Pulverizer #	1	2	3	4	5	6	1	Dev	2	Dev	3	Dev	4	Dev	5	Dev	6	Dev
E (front- 4th)	5.90	5.90	5.90	5.90	5.90	5.90	6.35	-0.45	5.72	0.18	5.44	0.46	5.90	0.00	5.95	-0.05	5.94	-0.04
A (front- 3rd)	5.90	5.90	5.90	5.90	5.90	5.90	5.98	-0.08	6.00	-0.10	6.03	-0.13	6.17	-0.27	6.09	-0.19	6.10	-0.20
F (front- 2nd)	5.90	5.90	5.90	5.90	5.90	5.90	5.78	0.12	5.25	0.65	5.40	0.50	5.67	0.23	5.80	0.10	5.61	0.29
B (front- 1st)	5.90	5.90	5.90	5.90	5.90	5.90	5.63	0.27	5.14	0.76	5.50	0.40	5.35	0.55	5.49	0.41	5.23	0.67
D (rear- 4th)	5.90	5.90	5.90	5.90	5.90	5.90	5.46	0.44	5.46	0.44	5.36	0.54	5.98	-0.08	5.81	0.09	5.58	0.32
H (rear- 3rd)	5.90	5.90	5.90	5.90	5.90	5.90	6.32	-0.42	6.07	-0.17	6.86	-0.96	7.04	-1.14	7.22	-1.32	6.65	-0.75
C (rear- 2nd))	5.90	5.90	5.90	5.90	5.90	5.90	5.96	-0.06	5.92	-0.02	6.02	-0.12	5.95	-0.05	5.82	0.08	6.16	-0.26
G (rear- 1st)	5.90	5.90	5.90	5.90	5.90	5.90	5.43	0.47	6.04	-0.14	6.24	-0.34	6.08	-0.18	6.17	-0.27	6.08	-0.18

INNER ZONE (Backplate Corrections)

Starting Position (Width Open) — Shroud Opening (inches)

New Positioning — Shroud Opening and Devation from last Setting (Inches)

Pulverizer #	1	2	3	4	5	6	1	Dev	2	Dev	3	Dev	4	Dev	5	Dev	6	Dev
E (front- 4th)	5.00	5.00	5.00	5.00	5.00	5.00	4.61	0.39	4.78	0.22	4.65	0.35	5.34	-0.34	5.47	-0.47	5.28	-0.28
A (front- 3rd)	5.00	5.00	5.00	5.00	5.00	5.00	4.66	0.34	4.03	0.97	4.64	0.36	5.63	-0.63	5.70	-0.70	5.16	-0.16
F (front- 2nd)	5.00	5.00	5.00	5.00	5.00	5.00	4.44	0.56	4.53	0.47	4.83	0.17	4.84	0.16	5.28	-0.28	5.05	-0.05
B (front- 1st)	5.00	5.00	5.00	5.00	5.00	5.00	4.02	0.98	3.90	1.10	3.85	1.15	4.99	0.01	5.11	-0.11	4.71	0.29
D (rear- 4th)	5.00	5.00	5.00	5.00	5.00	5.00	5.66	-0.66	5.56	-0.56	5.12	-0.12	5.45	-0.45	4.78	0.22	4.98	0.02
H (rear- 3rd)	5.00	5.00	5.00	5.00	5.00	5.00	5.58	-0.58	5.51	-0.51	5.03	-0.03	5.39	-0.39	4.85	0.15	4.57	0.43
C (rear- 2nd))	5.00	5.00	5.00	5.00	5.00	5.00	5.76	-0.76	6.11	-1.11	5.69	-0.69	5.43	-0.43	2.78	2.22	5.39	-0.39
G (rear- 1st)	5.00	5.00	5.00	5.00	5.00	5.00	5.55	-0.55	5.48	-0.48	6.13	-1.13	4.68	0.32	4.64	0.36	4.37	0.63

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AIR DISTRIBUTION ANALYSIS- SUMMARY

IGS Unit 2 11/27/91 Baseline Test

OUTER ZONE (Shrouding Corrections)

Starting Position (Width Open) — Shroud Opening (inches)

New Positioning — Shroud Opening and Devation from last Setting (Inches)

Pulverizer #	1	2	3	4	5	6	1	Dev	2	Dev	3	Dev	4	Dev	5	Dev	6	Dev
E (front- 4th)	5.90	5.90	5.90	5.90	5.90	5.90	6.35	-0.45	5.72	0.18	5.44	0.46	5.90	0.00	5.95	-0.05	5.94	-0.04
A (front- 3rd)	5.90	5.90	5.90	5.90	5.90	5.90	5.98	-0.08	6.00	-0.10	6.03	-0.13	6.17	-0.27	6.09	-0.19	6.10	-0.20
F (front- 2nd)	5.90	5.90	5.90	5.90	5.90	5.90	5.78	0.12	5.25	0.65	5.40	0.50	5.67	0.23	5.80	0.10	5.61	0.29
B (front- 1st)	5.90	5.90	5.90	5.90	5.90	5.90	5.63	0.27	5.14	0.76	5.50	0.40	5.35	0.55	5.49	0.41	5.23	0.67
D (rear- 4th)	5.90	5.90	5.90	5.90	5.90	5.90	5.46	0.44	5.46	0.44	5.36	0.54	5.98	-0.08	5.81	0.09	5.58	0.32
H (rear- 3rd)	5.90	5.90	5.90	5.90	5.90	5.90	6.32	-0.42	6.07	-0.17	6.86	-0.96	7.04	-1.14	7.22	-1.32	6.65	-0.75
C (rear- 2nd))	5.90	5.90	5.90	5.90	5.90	5.90	5.96	-0.06	5.92	-0.02	6.02	-0.12	5.95	-0.05	5.82	0.08	6.16	-0.26
G (rear- 1st)	5.90	5.90	5.90	5.90	5.90	5.90	5.43	0.47	6.04	-0.14	6.24	-0.34	6.08	-0.18	6.17	-0.27	6.08	-0.18

INNER ZONE (Backplate Corrections)

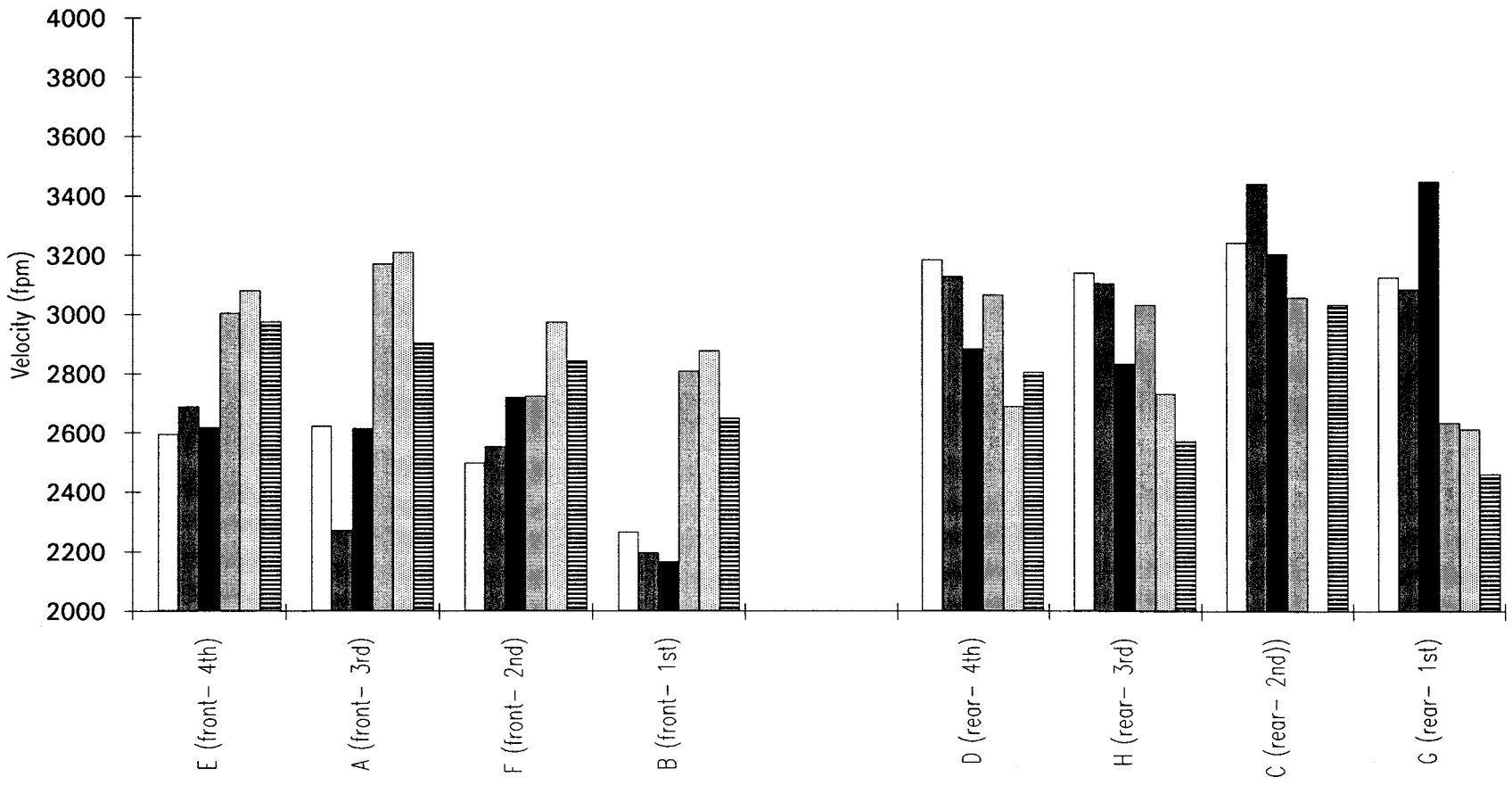
Starting Position (Width Open) — Shroud Opening (inches)

New Positioning — Shroud Opening and Devation from last Setting (Inches)

Pulverizer #	1	2	3	4	5	6	1	Dev	2	Dev	3	Dev	4	Dev	5	Dev	6	Dev
E (front- 4th)	5.00	5.00	5.00	5.00	5.00	5.00	4.61	0.39	4.78	0.22	4.65	0.35	5.34	-0.34	5.47	-0.47	5.28	-0.28
A (front- 3rd)	5.00	5.00	5.00	5.00	5.00	5.00	4.66	0.34	4.03	0.97	4.64	0.36	5.63	-0.63	5.70	-0.70	5.16	-0.16
F (front- 2nd)	5.00	5.00	5.00	5.00	5.00	5.00	4.44	0.56	4.53	0.47	4.83	0.17	4.84	0.16	5.28	-0.28	5.05	-0.05
B (front- 1st)	5.00	5.00	5.00	5.00	5.00	5.00	4.02	0.98	3.90	1.10	3.85	1.15	4.99	0.01	5.11	-0.11	4.71	0.29
D (rear- 4th)	5.00	5.00	5.00	5.00	5.00	5.00	5.66	-0.66	5.56	-0.56	5.12	-0.12	5.45	-0.45	4.78	0.22	4.98	0.02
H (rear- 3rd)	5.00	5.00	5.00	5.00	5.00	5.00	5.58	-0.58	5.51	-0.51	5.03	-0.03	5.39	-0.39	4.85	0.15	4.57	0.43
C (rear- 2nd))	5.00	5.00	5.00	5.00	5.00	5.00	5.76	-0.76	6.11	-1.11	5.69	-0.69	5.43	-0.43	2.78	2.22	5.39	-0.39
G (rear- 1st)	5.00	5.00	5.00	5.00	5.00	5.00	5.55	-0.55	5.48	-0.48	6.13	-1.13	4.68	0.32	4.64	0.36	4.37	0.63

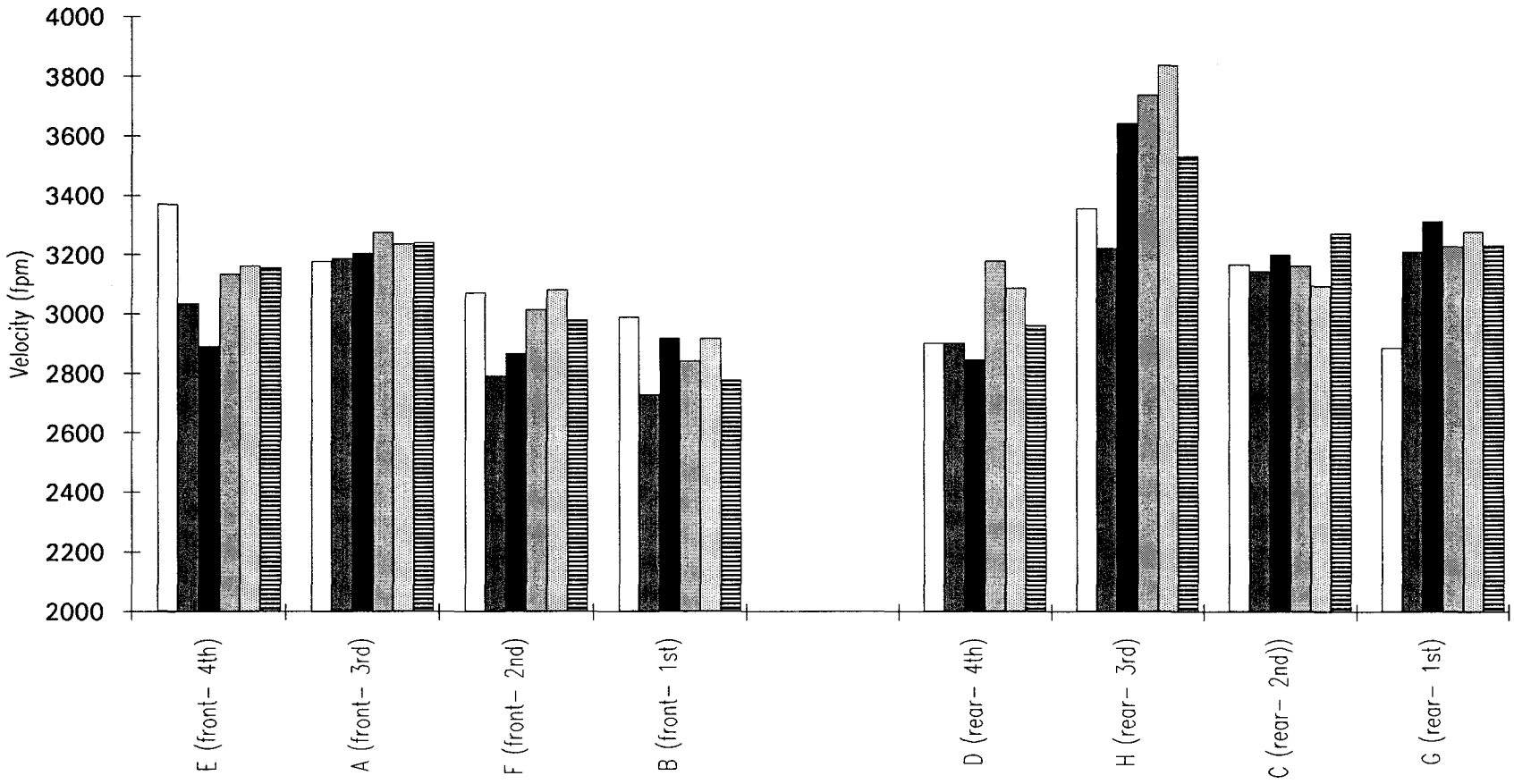
IP7_002375

Air Flow Balancing- Inner Air By Backplates BASELINE



IP7_002376

Air Flow Balancing- Outer Air by Shrouding BASELINE



AIR DISTRIBUTION ANALYSIS

INNER ZONE AIR DISTRIBUTION ANALYSIS

IGS Unit 2 11/27/91

Baseline Test

Table 1

Summary

Average Velocity All Burners = 2814.14 fpm

Maximum High Flow Deviation = 22.57 %

Minimum Low Flow Deviation = -44.34 %

Total Flow Deviation = 66.90 %

AIR DISTRIBUTION ANALYSIS

INNER ZONE AIR DISTRIBUTION ANALYSIS

PULVERIZER E

Test Point (	0	15	30	45	60	75	90