

UNITED STATES ASBESTOS DIVISION**of Raybestos-Manhattan, Inc.****Manheim, Penna.**

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A survey was made of this plant on March 14, 15, 16, 17, 20, 21 and 22, 1939. This report supplements reports made on similar surveys conducted in 1930, 1935, and 1938.

The manufacturing operations at the time of this survey were the same as in the previous surveys. A few changes have since been made in the relocation of machines and in the application of exhaust systems for the collection and removal of generated dusts. Such changes are noted in the remarks column in the following tables of results.

The same sequence of sample numbers has been followed as in the previous reports.

MAX GLAUBACH, C.S.R.
CERTIFIED IN
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APR 1 1939
P. Pearson
MANHEIM, PENN.

Exhibit L

R-44 261-5-12-77

B. S. ASBESTOS DIVISION OF RAYBROS-MANHATTAN, INC.

Manhaim, Penna.

Sample No.	Location of Sample	Date	Cu. Ft. Air Sampled	Total Count of Millions of Particles per cubic foot of air sampled		Type of Dust	Remarks
1	Preparing or opening room area of vertical opener and shaker screens; machines #19 and 39	3/15/39	38.0	8.0	41	Asbestos	The exhaust of window under has been lower to 4 feet from floor and its capacity increased. Approximately the batch air is done outside hood.
2	At operator's position on locom #36	3/16/39	46.0	5.2	31	Asbestos and cotton	This position near the chas which are not enclosed and exhausted.
4	Between #1 and 2 chasers; machines #2 and 3	3/16/39	56.0	4.0	24	Asbestos	These chasers being provided exhaust hood
6	At loading end of tandem vertical opener; machine #15	3/15/39	56.0	5.2	31	Asbestos and cotton	
3	At discharge end of tandem vertical opener; machine #46	3/15/39	45.0	2.5	15	"	The exhaust has been order to cover the conveyor and truck into which the material drops
5	General air sample taken at center of the opening room	3/15/39	44.0	2.6	10	"	The additional lower placed in this department were not in operation when this sample was taken
7	At Williams crusher	3/15/39	38.0	2.6	16	"	No waste material on the floor at the time this sample was taken
9A	At Giant cutter	3/15/39	36.0	3.0	18	"	Sample #9 was at the picker which has since been eliminated. No exhaust air to this machine. The material discharges on the floor.

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1c	Location of Sample	Date	Cu. Ft. Air Sampled	Total Count of Millions of Particles Per cu. ft. air sampled		Type of Dust	Remarks
	and frame - 2nd floor, Dept. 3	3/21/39	42.0	1.5	4	Asbestos and cotton	The exhaust system on the cards is the same as in 1938.
	At operator's position, cards 1, 2, 7 & 8						
	Condensing machine #360	"	44.6	2.5	15	"	No bagging of material at time this sample was taken. Exhaust hood applied over loading trucks.
Dept. 2							
	Between cards 1 and 7, machines #232 and 242, at take-off side.	3/20/39	42.0	1.7	8	"	
	Between cards 7 and 13, machines #232 and 242, saddle side.	"	44.0	2.6	16	"	
	Between cards 3 and 9, machines #255 and 261, at take-off side	"	42.0	3.0	18	"	
	Between cards 9 and 15, machines #234 and 248, saddle side	"	43.5	1.7	8	"	
	Between cards 5 and 12, machines #257 and 263, take-off side.	"	43.5	2.3	12	"	
	Between cards 12 and 18, machine #264, saddle side	3/21/39	43.5	1.8	10	"	
	Between cards 16 and 22, machines #266 and 270, take-off side.	3/20/39	35.6	1.8	10	"	
	Between cards 13 and 20, machines #258 and 267, take- off side.	"	36.0	2.2	14	"	
	Between cards 17 and 23, machines #271 and 276, take-off side.	3/21/39	51.5	1.1	7	"	
				11	50		
1c Spinning Dept.							
	Between rules 1 and 2	3/17/39	29.0	2.7	16	"	
	Between rules 5 and 6	"	34.0	2.7	16	"	
	At Whitin spoolers, machine #418	"	34.0	3.2	20	"	Both Whitin spoolers now enclosed and exhausted.
				314.4	5.9		

Sample No. Location of Sample Date Cu. Ft. Air Sampled Total Count of Millions of Particles per cu. ft. air sampled Type of Count Remarks

Resolving, Isolating and Sampling Lat Flare

26	Between boilers, machines #657 and 658	3/16/79	34.0	2.6		
27	Between boilers, machines #651 and 652	"	44.0	2.6		
28	At operators, machines #603 and 613	"	42.0	3.6		
29	At Universal welders	"	36.0	1.0		
30	At looms 4 and 21 machines #1026 and 1021, operator's position	3/17/79	43.3	3.4		
31	At looms 11 and 10, machines #1031 and 1028	"	34.0	1.4		Looms #10 not operating.
32	At looms 6, 7, 8 and 9, machines #1013, 1032, 1020 and 1021	3/16/79	43.5	3.3		Looms #9 not operating; water sprays shut off; dry weaving.

7/18/79
3.5

Sample No.	Location of Sample	Date	Cu. Ft. Air Sampled	Total Count of Millions of Particles per cu. ft. air sampled	Type of Particles	Remarks
Brake lead steam test.						
32	At lower #7 and 19	3/17/79	20.0	4.9		Very fine leaded with oxidation.
33	At lower #2, machine #322	"	46.5	2.5		Not very moving.
34	Between #33 and 19 lower machines #339 and 323.	3/14/79	44.0	1.1		Loose #19 - very fine leaded with oxidation loose #33 not settling.
35	Between #14, 26, 7 and 12 lower	3/17/79	63.0	4.7		July #12 loose settling with very peeling through water.
36	At inspection table	3/14/79	42.0	2.3		Increasing regular brake lead lining, grit-out over brush.
Lead settling						
Sample No.	Location of Sample	Date	Cu. Ft. Air Sampled	Milligrams of Lead per Cu. Meter	Lead Inside per 10-hr. air	Remarks
35a	At inspection table	3/17/79	42.0	0.149	1.49	
36a	At lower #24	3/14/79	44.0	0.126	1.26	

Lab 461103

Sample No.	Location of Sample	Date	Cu. Ft. Air Sampled	Millions of Particles per Cu. Ft.	Milligrams of Lead per Cu. Meter	Lead Intake per 10-hr. day	Remarks
Broken lining finishing dept.							
42	At sandblasting machine	3/21/39	33.6	1.7	0.095	0.95	
44	At sandblasting machine	"	34.6	2.4	0.102	1.02	
47	At drill press	3/22/39	37.4	2.3	0.076	0.76	
43	Machine shop - general air	3/21/39	43.5	1.5	0.07	0.7	
37	Isolation mixing dept.	3/21/39	17.0	2.4	0.041172		

LEAD ANALYSES						
No.	Location of Sample	Date	Cu. Ft. Air Sampled	Millions of Particles per Cu. Ft.	Milligrams of Lead per Cu. Meter	Lead Intake per 10-hr. day
1	Asiac Inst.					
2	At Campbell cutter, machine #2321	3/22/39	34.0	4.3	None	
3	At Campbell clutch facing segment cutter, machine #1156	"	35.6	2.5	0.06	0.6 Exhaust appl: to this oper- tion.
4	Hand sanding tables	"	27.0	5.0	0.261	2.61 9 valves now working as compared with 5 in 1938.
5	Lept. B59 - center of mandrels	"	31.0	2.2	0.07	0.7
6	Prett and Whitney surface grinder, machine #2340	"	34.2	5.6	0.124	1.24 This machine exhausted.
7	At Gardner grinder #14, machine #1566	"	29.6	8.8	0.07	0.7 This machine exhausted; a times pieces being ground are too large for head and the operator then raises head, defeat the purpose.
8	At Blanchard grinders machines #1579 and 1675	"	27.3	9.3	0.459	4.59
9	Between Gardner grinder #7; and #2 drill, machine #1593	"	42.0	3.1	0.233	2.33 The dust collector is located out- side the department.
10	Drilling machine #2346 and 1634	"	44.0	1.8	0.089	0.89 This machine exhausted.
11	Segment grinding, machine #2257	"	42.0	2.8	0.304	3.04 This machine has been re- coated and exhausted a 1938 survey formerly sample #49.
12	Latex sander, machine #783	"	40.8	2.9	0.198	1.98 This machine exhausted.