

Caption: 10

File No.

Case - 6004

Report No.

June 21, 1949

Date

Asbestos

REPORT TO THE DIRECTOR OF RESEARCH FROM

TITLE:

On the Job Application of Spraying Seal for Asbestos Treatment.

EXPERIMENT BY:

F. L. Marsh

WHAT IS KNOWN:

A description of the application as well as of spraying seal on the job.

MY VALUES:

To determine the possibilities of using these materials for sprayed asbestos treatment.

RESULTS:

1. Mix containing Asbestos fibers sprayed very well onto a rib tank ceiling. No particles dropped off, nor did any blisters form.
2. Mix containing asbestos fibers ~~W.L.G.~~ did not spray as satisfactorily. Some particles dropped off.
3. Water usage for the Asbestos mix averaged 1/2 lb. per lb. of material. The mix containing ~~W.L.G.~~ fibers required an excess of water.
4. The sprayed material resulted in a rough finished surface.
5. Asbestos flake covered the texture slightly, but contributed to durability.
6. Coverage at 5/8" thick required 2700 sq. ft. per ton. This is equivalent to 2700 sq. ft. per ton at 3/8" thick.
7. Perfection Paste Powder shipped from Chicago did not perform as well as paste powder shipped from Danville, N. J.

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Introduction

Four different formulas of covering wax were applied to the rib both ending in the midrib of the New Junior High School on Sawyer Road in Portage, Ohio, by our mechanical applicator Myron Corbin & Co. of Dayton, Ohio.

Formulation

Number	1-2	1-2	2	4-3
	(percentage)			
Paraffin Paste	5	5	-	5
Paraffin				
Asbestos				
Asbestos	10	10		
Asbestos (70%)	5	5	15	15
Mineral Wax				
Type I	77		72	
Type A		77		72

The waxes were formulated at the Alexandria Plant using the current mill.

Application

The materials contained, kerosene fibers suspended in paraffin, with no sections dropping off, nor blisters forming. The covering rate, at 50° which averaged 2 1/2 lbs. per minute, which is comparable to the latest application rate. When tested, a rough surface resulted. The application of a fine finish coat, did help smooth the surface, but not as smooth as Linnet.

The water usage for the Asbestos mix averaged 0.5 lbs. per lb. of material. This was considerably less than used for the starch. Wax mix previously applied.

Type I wax mix appeared to use slightly more water than did Type A wax mix, but this was only visual, since work could not be stopped to check the actual water usage.

The wax when dried adhered very well to the metal in ...

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The application of the mix using the shorter asbestos fibers 40-45, did not perform satisfactorily. An excessive amount of water had to be used resulting in a wet mass. The initial bond was poor, and more material dropped off the ceiling. When dried, the material appeared to be as satisfactory as the sprayed asbestos mix.

All of the sprayed wall was covered with a thin coat of Kroyel. The Kroyel adhered very well to the wall, and helped to a smooth finish.

The binder used was Perfection Paste Powder 40: 40 from Chicago. Its bonding action though satisfactory, did not perform as well as paste powder previously used from Smallman, N. J.

The coverage for both types of material averaged 70 sq. ft. per 50 lb. bag at 1/8" thick. This is equivalent to 2100 sq. ft. per ton at 1/8" thick.

Generally the wall application was smoother than the application of Kroyel. This smoothness was attributed to the use of asbestos floccs. The floccs did improve the texture slightly.

Recommendations

1. The floccs should be removed from the formula, since the increase in dust, and the possibility of Asbestosis outweigh the slight increase in surface smoothness.
2. With the possibility of purchasing the asbestos fibers at a lower cost, the asbestos content of the formula should be increased 25%. This would help compensate for the removal of the floccs.
3. The new formula should be

Type I Mineral wool
Asbestos fibers
Perfection Paste Powder
(Smallman, N. J.)

The new formula would be advantageous in wall starting since wall is normally coated to 1/8" to a bag, and no adjustments of weights would be required when mixing 100 lb. batches.

7/24/48
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Approval for Distribution