

Manville Service Corporation
Research & Development Center
Ken-Caryl Ranch
Denver, Colorado 80217
303 978-2000

PLAINTIFF'S
EXHIBIT

AL-650

Manville

August 23, 1984

Mr. M. Caprio
Aluminum Co. of America
Pittsburgh, PA.

*Sam letter sent to
Bill Vance
W. Lansdale
Ed Gredley*

REF: AMOSITE FIBER CRUDY CONTENT

Dear Mr. Caprio:

With reference to my letter of June 6, 1984, on the subject matter, we have now completed the initial comparative testing of Amosite fiber crudy content between Mine Laboratory and Manville R&D. Also, observations made by Plant and Alcoa, Warrick (W. Lansdale's letter, dated July 2, 1984) on the product quality with different grades of Amosite have been received.

As mentioned in my previous letter, the purpose of this exercise was two fold:

1. iron out differences in test results between the two locations,
2. establish a specification limit for the maximum allowable crudy content in the fiber supplies.

The table in the Appendix shows the comparative test results on the crudy content of three samples of each of the grades S-11-65 and S-33-85. These samples were randomly selected from Billerica plant and tested at the two locations. Manville tests were conducted with corrected waterflow in the Elutriator to correspond to that of Mine's test apparatus. The Manville equipment was still found to give 3 to 7 % (avg 5 %) lower reading. We will continue to investigate this through more testing on counterpart samples at both the locations.

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PURCHASING

Mr. M. Caprio

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An analysis of Mine's results on the different samples showed that the crudy content level of Amosite grade S-33-85 is similar to that of S-11-65 grade supplied back in 1976. Observations made by W. Lansdale and Billerica plant also confirmed great improvement in the finished product quality of Molten Metal Marinite made with S-33-85 fiber, although further improvement is desirable.

Considering the above situation, my recommendation is to set a tentative specification limit at 20% maximum crudy content in all the Amosite fiber supplies according to the Mines test. And, until we solve the 5 % difference in the Manville Elutriator test, our guideline will be 15% maximum.

In continuation of this joint program to improve Amosite fiber quality the following steps will be taken:

1. Mines will continue working to further reduce the crudy content.
2. Billerica Plant will sample fiber from every incoming shipment for testing at the Mines Lab and Manville R&D.
3. Alcoa and Billerica plant will continue monitoring finished product quality with any changes in the crudy content of fiber.

The cooperation of everyone concerned will be highly appreciated.

Yours truly,



Asit Chaudhuri

ELUTRIATOR CRUDY CONTENT, %

<u>Amosite Fiber</u>	<u>Mine Lab</u>	<u>Manville R&D</u>
S-11-65 (1976)*	19*	--
S-11-65 (3/82)	26	--
S-11-65 (7/83)	30	--
S-11-65 (9/83)	35	--
S-11-65 (3/84)	28	--
<u>Comparative Tests</u>		
S-11-65 (061.4) - 1	29	24
S-11-65 (061.4) - 2	34	29
S-11-65 (066.4) - 3	25	19
S-33-85 (060.4) - 1	19*	12*
S-33-85 (054.4) - 2	17*	14*
S-33-85 (053.4) - 3	18*	14*
S-11-65 (Spl., 82-4)	--	17
S-11-65 (Spl., 93-4)	--	12

*Proposed spec - 20% Max (Mine Test)
15% Max (Manville Test)

FROM L. L. GRUBB
Quality Assurance
Alcoa Forging Division-Cleveland

TO MR. THOMAS B. BONNEY
Pittsburgh Office

Confidential

1978 September 26 SEP 26 1978

RE: SURVEY OF ASBESTOS MATERIALS

Attached is the asbestos material survey listing for the Cleveland Works, including our Permanent Mold Division. As you know, we have just had a concentrated drive to replace every item containing asbestos. Our listing is therefore short and within the next month we expect to virtually eliminate asbestos gloves, mittens and pads based on tests that are underway. No substitutes are now in view for the special gaskets listed but we are certain that some will be located.

Ceramic fiber and aramid cloth have proven capable of satisfying almost all of our requirements for high temperature insulating applications.

L. L. Grubb

L. L. GRUBB

LLG:RK

Att.

cc: C. R. Gillespie/J. M. Fox - Cleveland
R. L. Garrett - "
T. F. Arnold - "
R. H. Heller/F. P. Haluska/W. P. Wilson - "
George Crook - "
G. R. Farneth/W. E. King - "



Cleveland Works

Date 1978 September 26

ASBESTOS SURVEY

Item	Product Description ¹	Specific Application	Dept.	Dust Generated? ²	
				yes	no
1	Hot Pads	Pouring and handling castings	PM		X
2	" "	Handling hot forgings and dies	Forge		X
3	Gaskets - Copper clad	Vacuum casting machines	PM		X
4	Gaskets - Resin bonded	" "	PM		X
5	" "	Forging hammer repairs	Forge		X
6	Gloves and Mittens	Metal handling and pouring	PM		X
7	" "	Handling hot dies and forgings	Forge		X
8					
9					
10					
11					
12					
13					
14					
15					

Note 1. List should include specifications for all asbestos products currently being purchased and used. It should not include previously installed asbestos materials that are still in place but for which non-asbestos replacements are currently being used.

Note 2. Should be answered in light of currently available information. A product will be considered capable of generating significant airborne concentrations of asbestos fibers if the measured or estimated fiber concentrations are in excess of 0.1 fiber per cc (eight-hour time-weighted average). In responding to this question, it will be necessary to consider the possibility of dust being generated not only during installation, but also during use and, where applicable, dismantling.