FILE NAME: Asbestos Sacks and Bags (ASB)

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LONDON SHIPOWNERS DOCK LABOUR COMMITTEE

Telegrams—"TRAFFIC, 'PHONE, LONDON."
Telephone—ROYal 8131

Shipping Federation House,
146-150, Minories,
LONDON, E.C.3.

STRICTLY CONFIDENTIAL

Reference : 15B/15C/1313/65

5th August, 1965.

Dear Sir,

ASBESTOS IN BAGS - DISCHARGING

In view of the continuing difficulties being experienced in connection with the discharge of Asbestos in bags, it has been considered advisable to convene a further meeting of Employers, which will be held in a Committee Room, Shipping Federation House, Second Floor, 146/150, Minories, London, E.C.3. on Monday, 9th August, 1965, at 2.45 pm.

In addition to reflecting upon the circumstances prevailing, an opportunity will be afforded to consider the preliminary report made by Dr. Reginald F. Milton, a copy of which is attached, and to decide what further steps are necessary.

As Dr. Milton is not as yet in a position to state any firm opinions, this preliminary report, which was obtained by me on behalf of the Ocean Shipowners' Group Joint Committee, has not been made available to the Trade Unions, as I have not had the opportunity to fully digest its implications, bearing in mind a final conclusion is not reached.

In these circumstances it is essential that no indication should be given to any other person that a preliminary report has been received from Dr. Reginald Milton by myself, since if this is done, I shall be placed in a very invidious position as the Joint Secretary of the Industrial Committee.

I feel, however, that as the Secretary of the Joint Committee and on whose behalf the Report is being obtained, I should circulate it to the Trade Union Officials on Monday night.

Yours faithfully,

D. L. BENNETT.

Secretary

Enclosure :

COPY

Dr. Reginald Milton,
11 Park Square West,
Regent's Park,
London, N.W.1.

REPORT.

The Ocean Shipowners' Group Joint Committee,
Shipping Federation House,
146-150 Minories,
London, E.C.3.

3rd August, 1965.

Attention Mr. Bennett.

THE DISCHARGE OF ASBESTOS IN BAGS
IN THE LONDON DOCKS

At your request I visited the "Emezk" on 19.7.65 at Brunswick Yard, Surrey and Commercial Docks, to investigate the discharge of asbestos in bags from the holds of this vessel.

It is understood that the stevedores have been given medical advice that the dust from asbestos is harmful, and request was made by the General Committee of Employers and Trade Unions to investigate the situation.

I understand from the information given in your letter of the 22nd July that some 2,000 tons of Russian Asbestos are imported into the Surrey Docks per annum; 4,000 tons of asbestos on Cunard ships into the same docks; 8,000 tons into West India Docks; and 2,000 tons into the Royal Docks; but in addition some 20,000 tons are brought in on Canadian Pacific vessels.

The situation on the "Emezk" when I paid my visit was abnormal, since no discharging was taking place. Consequently it was impossible to obtain any idea of the conditions under which the dockers operated.

They had been supplied with Siebe Gorman masks, which rely on a particulate filter only.

On this occasion I took samples of the asbestos which was in jute bags closely woven (double jute), and a sample mask for examination.

The following day my colleague, Mr. K. J. Jarrett, paid a second visit to the vessel after it had been arranged for the dockers to work at about 25 slings per hour, so as to create the type of dusty atmosphere which might be encountered during the discharge of this type of asbestos.

Discharge was occurring from No. 1 Hold (see diagram appended). Gangs were operating three slings at positions A, B and C, and during the 14-minute period when tests were being taken six slings were discharged.

Particulate samples were taken at various places in the hold, and also two in the barge into which the sacks were being discharged. In addition, air samples were taken at points where men were actually manhandling the sacks onto the slings, i.e., positions where most dust would be likely to arise, the sampling being taken in an equivalent position to that of the two men actually loading the slings. The results of these findings are appended.

On 21.7.65 Mr. K. J. Jarrett visited the s.s. "Moose Jaw" in the Royal Docks.

Discharging was taking place from three holds, namely Nos. 1, 2 and 3. Gangs were not wearing masks, and were working normally.

It was noted that the type of pack differed from that used in the "Emezk" and that the packages were of compressed asbestos, whereas those on the "Emezk" were loose fill. Various types of package were being unloaded simultaneously. These were made from either paper-hessian laminates or plain hessian bags.

The possibility of taking air samples was considered, but was discounted for the following reasons. Work in No. 1 Hold was still at hatch level, and hence any dust occurring would be dissipated rapidly.

Work in No. 2 Hold was in the lower hold, but there was little room at the time in question between the samples and the tween deck ceiling, which meant that any attempt to carry out an examination would have severely restricted the work in progress, and hence reduced the value of the test itself. A subjective examination of working conditions in No. 2 Hold indicated that the dust produced there was very considerably less than that observed previously on the "Emezk".

The asbestos was being discharged from the tween deck of No. 3 Hold at the same time as bags of china clay, which were creating considerable dust in the atmosphere.

Because this cargo of asbestos appeared to be much less dusty than that on the "Emezk", it was considered that an investigation of the material being unloaded and the type of package in which it was filled should be undertaken at this laboratory, and hence samples of all types of packages being unloaded from the "Moose Jaw" together with others shipped from Canada were examined and reported on subsequently. We have also examined a package of the Russian asbestos received from the "Emezk" by the same techniques. These results are appended.

ASBESTOS DUST AS A HAZARD

The Asbestos Industry Regulations are contained in Statutory Rules and Orders 1931, No. 1140, and are in pursuance of Section 79 of the Factory and Workshop Act, 1901.

These Rules refer to factories or workshops where asbestos is used or is prepared for use in industrial processes.

The regulations apply to a limited extent when asbestos is used in sawing, grinding, turning, abrading and polishing, as long as the work is carried out occasionally only, and no person is employed for more than eight hours in any week.

Otherwise adequate exhaust and inlet ventilation must be provided so as to prevent the escape of asbestos dust into any room in which persons work. In addition breathing apparatus must be provided for every person employed.

There are many other provisions in this Act where there are specific applications for the use of asbestos, and then special provision must be made for suitable overalls and head coverings.

We are quite aware of the fact that the holds of ships per se can be interpreted as not coming under the definition of Factory and Workshop - and from the information which you have given, the work of discharging asbestos is only carried out occasionally in the Docks - but I think it is possible that there

are occasions when individuals are employed for more than eight hours in any one week.

I think that the above facts must be considered when deciding whether or not it is encumbent upon the employer to provide breathing apparatus and ventilation systems in the holds.

Our preliminary investigations have indicated that it is generally considered that asbestos dust is not a hazard unless there is prolonged exposure over a number of years. There are instances, however, of definite asbestosis where exposure to the dust has been less than six months.

With regard to the harmful concentration, various figures have been given for this, but we have taken the lowest safe limit figure quoted (U.S. Public Health Bulletin 241, 1938) which is given as five million particles per cubic foot.

The literature states that the harmful fraction of asbestos is contained in particles from 10 u. up to 50 u. On this basis a reasonable figure for five million particles per cubic foot would be approximately 2.5 mg. per cubic foot by weight.

The preliminary tests that we carried out in the hold of the "Emezk" show very much less than these levels, i.e., particles per cubic foot, and weight of asbestos per cubic foot.

In the light of this preliminary investigation, therefore, it would seem that the hazard to the workers discharging the "Emezk" was quite low. Compared with this the risk to workers discharging the Canadian material on the "Moose Jaw" was even less, as although no counts were made the visible dust in the hold was very much less.

It must be pointed out that the above comments are entirely provisional, and before stating any firm opinions it will be necessary to experience the conditions which apply to the discharging of a number of other vessels.

R. F. MILTON, B.Sc., Ph.D., F.R.I.C., M.I.Biol.

APPENDIX

(1)

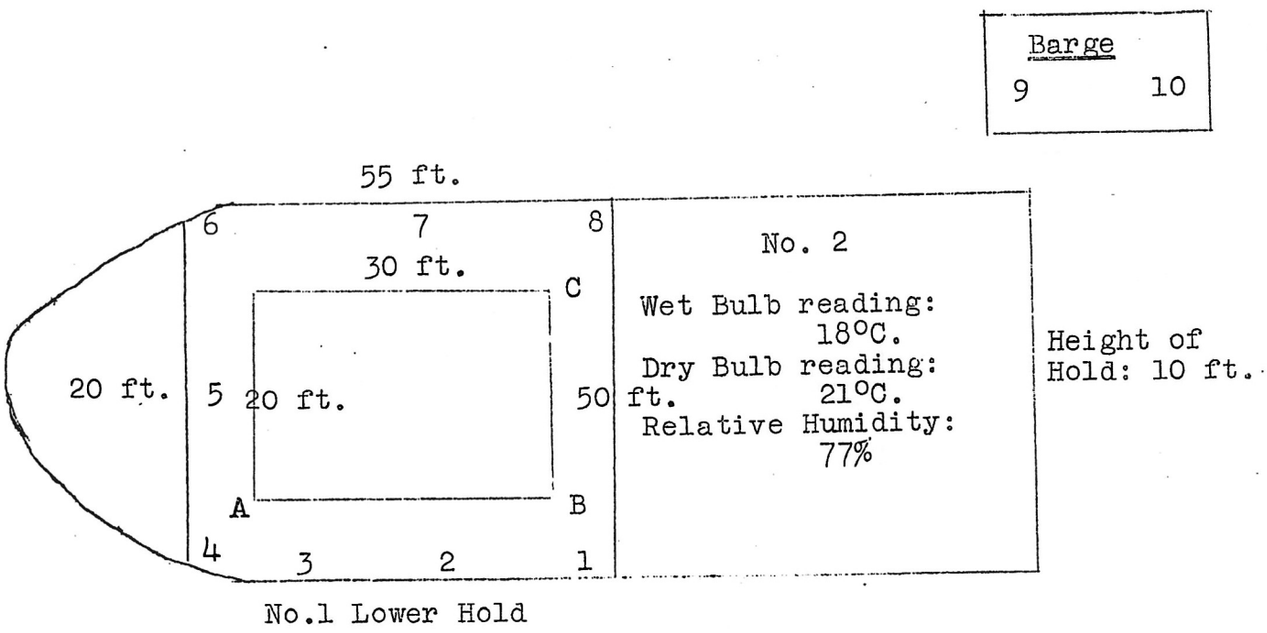
ASBESTOS INVESTIGATION

s.s. "EMEZK" - ASBESTOS IN BAGS

Investigation carried out on s.s. "Emezk" in Surrey and Commercial Docks, 21.7.65.

ATMOSPHERE SAMPLING

Samples were taken in No. 1 Hold whilst three gangs were working. The position of the samplings were as per diagram.



Samples for Particulate Distribution were taken at eight places in the Hold and two places in the barges.

RESULTS:

1. CONCENTRATION OF ASBESTOS IN ATMOSPHERE (Particles less than 50 u. size)

Position A:	1.4 mg/cu. ft.
Position B:	1.3 mg/cu. ft.
Position C:	1.5 mg/cu. ft.

2. PARTICLE SIZE DISTRIBUTION (10 u. to 50 u.)

	10-20 u.	20-30 u.	30-40 u.	40-50 u.
Position A:	78%	20%	2%	Nil
Position B:	75%	18%	5%	2%
Position C:	84%	10%	6%	Nil

On the basis of the majority of particles being approximately 20 u. size (0.1 u. cubed in cross section) the number of particles per cubic foot is calculated thus:

Position A:	2.8 million/cubic foot.		
Position B:	2.6	"	"
Position C:	3.0	"	"

NOTE

The safe limit as given in the literature is 5 million particles per cubic foot.

3. ASBESTOS FALLING TO THE DECK.

	Amount falling per hour	
Position 1:	32 mg/sq. ft.	
2:	18 "	
3:	3 "	
4:	10 "	
5:	18 "	
6:	10 "	
7:	4 "	
8:	18 "	
9:	6 "	on barge
10:	34 "	on barge

EXPERIMENTS WITH BAGGED ASBESTOS

Details of Sample Bags

Sample No. 1

Sample from the "Emezk":-

Loose fill jute bag stitched at each end.

Declared contents 50 Kg.

It was heavily externally contaminated with asbestos particles.

Sample No. 2

Johns Manville.

Glue laminated paper hessian gusseted bag containing 100 lbs. of compressed asbestos.

The bag was externally clean, despite two holes caused by hooks. Code: 4T.

Sample No. 3.

Carey Canadian Mines Ltd.

Five-ply gusseted paper bag containing 100 lbs. block of compressed asbestos.

The bag was completely clean externally.

Code: 7M5.

Sample No. 4.

Flintkote.

Hessian paper bitumen laminate containing 100 lbs.? of loose fill asbestos.

Clean externally apart from a few large pieces of asbestos adhering to the outside. There was no evidence of dust on the surface. Code 5R103.

Sample No. 5.

Carey Canadian Mines Ltd.

Five-ply gusseted valved paper sack, containing loose fill 100 lbs. asbestos.

There was a six-inch split along one crease line of the gusset, and a certain amount of asbestos had spilled out. There was some dust on the surface.

Code: 7D1.

Sample No. 6.

Asbestos Corporation Ltd.

This was a plain jute bag filled with compressed asbestos.

Although the asbestos was seen through the pores of the jute, the bag was not nearly as dusty as Sample 1.

Code: BC4T.

Sample No. 7.

Asbestos Corporation Ltd.

Five-ply valved paper sack, filled with 100 lbs. fibrous mineral filler, which was packed inside a jute bag.

The paper sack was punctured and the surface was covered with dust. The outer jute sack did not exhibit dust, suggesting that the damage to the inner sack must have been recent in origin.

The various samples of asbestos in bags as imported were made to produce a dusty atmosphere.

These atmospheres were then sampled for size distribution in the 10-50 u. range.

	10-20 u.	20-30 u.	30-40 u.	40-50 u.
Sample No. 1:	86%	12%	2%	Nil
Sample No. 2:	51%	28%	13%	2%
Sample No. 3:	77%	19%	4%	Nil
Sample No. 4:	53%	41%	6%	Nil
Sample No. 5:	72%	25%	1%	2%
Sample No. 6:	62%	28%	7%	3%
Sample No. 7:	32%	24%	26%	18%

COMMENT

All the packs gave dust samples of particle size within the so-called harmful range.