To: SM

1st March, 1967.

58/694

PLAINTIFF'S EXHIBIT

CEL-1273

Asbestos Textiles for I.C.I.

In view of the certainty now of I.C.I. seeking alternative materials for asbestos used in insulation work and also similar action by C.E.G.B., I think it would be as well to keep the Branches informed on these two subjects and I suggest that you write suitably to the Regional Managers. There is a report in my files from Mr. Wilkinson, if you have not seen it, and also the one from Newalls about I.C.I. at Slough.

I suggest that you send draft copies to Mr. Edmonds first as he is very much concerned with discussions at both these companies' head offices.

A. C. Mann.

RECEIVED
14 MAR 1967

TURNER BROTHERS ASBESTOS COMPANY LTD.

Origin	To
	A. C. Mann, Esq.
London	Rochdale 62/690-1

EAE/FM
ACM

Your Ref:-

13th March, 1967.

Witty & Wyatt Ltd.

I.C.I. Ltd.

Reference your letter March 10th, the fact that a competitive quality of glass cloth is being specified by Wilton is worrying indeed. I hope our meeting with Mr. Deykin will take place very soon, so that our future line of action can be clearly defined. Meanwhile, I propose discussing glass cloth with the C.E.G.B. to find out what is happening there.

E. A. Edmonds

Rochdale

Mr. E. A. Edmo
London Office.

ACM/DC

To: EAE

10th March 19(

Witty & Wyatt Ltd.

I.C.I. Ltd.

In reply to your letter of March 2nd, I entirely approve of the action that you have taken and will be interested to hear eventually what successes Mr. Deykin has had.

You may be interested to hear that Newalls have just received a tender from Wilton which specifies glass cloth, unfortunately a Fothergill & Harvey quality, and naturally we are trying to introduce our material.

A. C. Mann.

68/720-1

Rochdale

Mr. A.C. Mann

A.2/MAR
All Branch Offices
ACM/3 file

15th March 1967

I.C.I. Ltd. and C.E.G.B.

We have received reports that certain officials at both the above are concerned about the health hazards of using asbestos and are set on finding suitable alternatives wherever possible. With I.C.I., this seems to be confined at the moment to their Paints Division but naturally might spread to other Divisions. Mr. Wilkinson of Newcastle Office has seen a Mr. Elmes at Billingham who told him that their medical advisers had come to the conclusion that where it is technically or economically feasible insulation materials which do not contain asbestos should be used. Mr. Elmes confirmed that there was no actual ban on the use of asbestos and of course Paints Division are not great users of cloth for insulation purposes.

With regard to C.E.G.B. we have received a copy from them of their Stores Standard and Specification with a request that we should let them know which asbestos items could be replaced by glass fibre materials. This for the moment has been dealt with by suggesting that Mr. Morant visits them to discuss the situation.

The point seems to be that the anti-asbestos attitude at present is more prevalent with certain officials and should not involve to any large extent T.B.A. materials.

The emphasis appears to be on asbestos materials used for insulation purposes and so far the qualities with which we supply I.C.I. on contract through Witty & Wyatt do not seem to be affected.

This is a rather abbreviated setting out of the situation and we would like you to know something of

continued.....

Rochdale

what is going on and we know that if you com any evidence in your territory of the same s with I.C.I. or C.E.G.B. or anyone else for t you will let us know at once.

S. Howarth.

RECEIVED

20 MAR 1967

TURNER BROTHERS ASBESTOS COMPANY LTD.

Office of Origin	To
London	A. C. Mann, Esq. Rochdale

Ref:- BAB/FM
ACM
Copies: A.1/

Your Ref:-

17th March, 1967.

I.C.I. Limited

I had a meeting with Mr. Goodbody of I.C.I. in an endeavour to clarify the position regarding Asbestos/Glass Cloth.

There was not a great deal more that he could tell me, but he was sure that Mr. Elms, who Mr. Wilkinson saw recently, is also the gentleman who would be concerned with the approval of Glass Cloth specifications for insulation work. It would seem that we should lose no time in seeing Mr. Elms to get approval of our cloths.

Insofar as textiles on the General Asbestos Contract are concerned, Mr. Goodbody had received no notification that he should alter his buying procedure nor had he been told to substitute asbestos for glass in any instances. On the other hand, it was Mr. Goodbody's personal opinion that the situation could alter quickly, and I have left it that he will contact me immediately if things start moving.

Meanwhile, of course, Mr. Deykin is visiting various I.C.I. Factories next week, and it will be interesting to see what he finds out regarding the ultimate use of the cloths on contract.

I think rope lagging and webbing will be suspect.

E. A. Edmonds

Mr. Mann, I am enclosing an additional copy in case you would like to pass one to Mr. Dixon

68/733-4

Rochdale

Mr. R. H. Wil
N.I. & C. Co.
Washington.

ACM/DC

16th March 1

Imperial Chemical Industries Ltd.

Agricultural Division

I am sorry not to have acknowledg
before now receipt of your letter and enclo
of March 9th. These, I need hardly say, w
very interesting indeed and I hope that you
successful in obtaining the contracts.

You will by now have received det
of our alternative to the Fothergill & Harv
cloth. I notice that the specification und
1(h) quotes a T.B.A. glass cloth ECK.705, d
of which are already in your possession.

A. C. Mann

TURNER BROTHERS ASBESTOS COMPANY LTD.

e of Origin	To
	A. C. M[illegible], Esq.
London	Rochdale

RECEIVED
9 FEB 1967

EAE/PM
M.2
Copies: EBG/SH/ACM

Your Ref:-

8th February, 1967.

Rowan & Boden Ltd., Paisley.

You will recall the exchange of letters in November about the refusal of the Admiralty to use flooring compounds incorporating asbestos fibre.

I know that Mr. Honey of Bath is concerned with this flooring matter and, as I have mentioned, the problem is that in the polishing process there is a grinding effect which releases, presumably, some asbestos fibre.

We have so many more pressing problems than this that I have not spoken to Mr. Honey about it, as he would refer me back to Dr. Harries and the Committee who presumably made the decision. I would think it fair to say that in those cases where asbestos can be satisfactorily replaced without loss of technical properties, the Admiralty will try to make a change. Flooring might well be one of these.

Is our stake in this very high?

E. A. Edmonds

Rochdale

Mr. E. A. E
London Offi

ACM/DC
To: EAE
Copy: KHD/A.1

EAE/PM

21st March

I.C.I. Limited

Thank you for your letter of March
Newcastle Office are in contact with Bil
and Wilton, and Mr. Wilkinson has had a
with Mr. Elmes. Newalls have received a
for an insulation contract at Wilton whi
specifies glass cloth and we are quoting
this. There can be no doubt now that I.
interest in glass cloth is very real and
take this trade direct.

A. C. [illegible]

Mr. A.C. Mann

Mr. John Waddell

WB/ANM/JPMcC
EPG/MFH/RHK/SPM/ERP/GRP

Copies: JW/PC
RMB/GSS/CCG
WPII
(DWH/ACM/RHP/RAW/BEW/NVP/HSTT)

3rd April, 1967

Asbestos and Health - I.C.I. Ltd.

The various Divisions of I.C.I. are tending to look for substitutes for asbestos in the products they make themselves and also in insulation work on their plants (though not yet in building materials or other products which they purchase); the Companies directly concerned are working through normal sales channels to combat this tendency. The policy does not come from a central directive and so it does not appear appropriate, at this stage, to tackle it centrally.

[redacted]

The foregoing is for your general information. The purpose of this memorandum is to say that at least one of I.C.I.'s products has been advertised as "Asbestos free"; this has been the subject of a protest and we have been assured that it would not be in accordance with I.C.I.'s normal policy to "knock" asbestos. I should be grateful, therefore, if you would alert your Purchase Departments or others concerned with I.C.I. advertising matter and if you would arrange for a sample to be sent to Mr. Howard of any literature which offends in this respect.

John Waddell.

ACM/DC

To: JW

28th Mar

Asbestos and Health - C.E.G.B.

With reference to your note of Ma
the value of our direct trade with the C.E.
been quite small. In 1964/5 it was £706 an
1965/6 £1,833. Most of this trade has been
P.T.F.E., asbestos curtains, plaited packin
webbing.

We know that in 1965/6 Cape held
asbestos textile contract for all C.E.G.B.
stations. Their sales in 1965 were recorde
£14,655 - mainly cloth, rope, webbing and m

Beldam Asbestos have the current
contract.

[redacted]

Whilst the usage is sizeable, we
mixed feelings about the trade as it involv
small despatches to individual power statio

A. C. Mann.

Dr. S. Holmes

NEWALLS INSULATION & CHEMICAL CO. LTD.

FROM	TO PRIVATE & CONFIDENTIAL.
Mr. K.M. Collier, Northern Area.	Mr. R.H. Wilson, Washington.

YOUR REF. OUR REF. KMC/RA 20th October, 1966

I.C.I. - ASBESTOSIS PRECAUTIONS

I would advise you that during a meeting of the Site Liaison Committee which took place in I.C.I. Construction Department's office at Wilton yesterday, the various Contractors' Representatives were subjected to a lengthy address from Dr. Jenkin-Evans, I.C.I. Senior Medical Officer.

This gentleman has recently returned from attending a symposium on the subject of Asbestosis apparently held in the United States and the contents of his talk covered aspects of the desease in general and steps which were being taken, both at home and in the States to combat the desease.

Summarizing the lecture I would say we learned nothing about which we were not already aware, and indeed he indicated as did you your goodself in your recent paper on the subject that the main contribution is being made by British Medical Personnel.

No reference was made to I.C.I's recent policy decisions on the matter regarding the use of non-asbestos content materials, except that he did admit that any steps in this direction might quite readily reveal unknown allergies to substitute fibres.

On being asked whether he considered that the present Code of Practice now recommended by the Asbestos Research Council together with the steps which were being taken to try and introduce legislation and record regular medical inspections, were satisfactory and in his opinion adequate, he answered positively and said that he felt everything that could be done was being done.

Whether this represents a change of thinking I would not like to say, but it certainly suggests that he is now tempering his ideas on the subject.

C/tnd...

3/5-6

--2--

The Doctor also mentioned that he hoped future to have the opportunity of visiting t Research Council and it may be therefore, th present on such an occasion he will be more down-to-earth arguments than he has been in

Trusting this will be of assistance.

K.M. COLLI

Rochdale

Mr. E. A. Edmonds,
London Office.

68/102

ACM/DC
To: EAE
Copy: SM

CONFIDENTIAL

15th February 1967.

I.C.I. Paints Division, Slough

We have been able to get hold of a copy, very confidentially, of a directive issued by I.C.I. Paints Division, Slough, which indicates that the usage in this Division of asbestos-containing material will be discontinued forthwith.

A write-up accompanying the directive concentrates on the lagging systems so that it is not quite clear whether all their purchases of asbestos materials, including, say, packings, jointings, gloves, etc. will be prohibited. If it is only lagging materials, then it is of no great consequence as far as this Division is concerned because Newalls tell me that they are very rarely called upon to supply rope and cloth to this particular Division.

For the moment, it seems as though this directive is confined to the Paints Division, but I should think that there is no doubt that it will be repeated elsewhere in the I.C.I. Organisation and, if so, some of our business at least is in peril. Frankly, I am not sure at the moment whether it would be wise to make probings at other I.C.I. Divisions, and will you have a word with me by telephone as soon as you can as I would like to have your views.

A. C. Many.

68/700-1

TURNER BROTHERS ASBESTOS COMPANY LTD.

ce of Origin	To
[illegible]	[illegible]

[illegible] / [illegible]

Your Ref:- [illegible]

[illegible]

16th February, 1967.

Thank you for your memo of the 26th January. I have now seen Mr. [illegible] Elmes at I.C.I. Billingham. His official position is Head of the Non-Metallic Materials Section of the I.C.I. Tees-side Materials Group, whose function is to test and evaluate, approve and recommend all non-metallic materials which are used in any of the I.C.I. plants on Tees-side.

He advised that they had conducted an investigation into the use of asbestos insulation materials at the instigation of their medical advisors and the conclusions which they had now reached were that where it is technically or economically feasible, insulation materials which do not contain asbestos should be used. Mr. Elmes stressed that there was no ban on the use of asbestos and they will continue to use it wherever circumstances demand but as you suggest in your letter they will also continue to search for alternatives, particularly for use on new plant and in new buildings where they will endeavour to achieve asbestos-free areas. One of the main reasons for this is that whilst their medical advisors consider the present precautions which they take when handling asbestos materials (i.e. the wearing of masks and theissue of free overalls, which are laundered by the Company) to be satisfactory, these apply only to lagging personnel and whilst a job is in progress there are almost invariably other tradesmen or process workers in the vicinity who do not have this protection and to provide it in respect of the whole of the staff of the plant would not be feasible.

Mr. Elmes confirmed the information given by Darlington Insulation Co. that the usage of asbestos cloth on insulation work at any of the I.C.I. plants is small, consisting mainly of expansion joints in the hard setting and mattresses. As regards the latter, I.C.I., in pursuance of their policy, endeavour to use, where possible, the wired type of mattress with mineral wool or glass fibre filling with possibly glass cloth on the outer surface. Where the temperature does not permit this they use aluminised asbestos cloth.

Copies EAE/SM/DISH

112

TURNER BROTHERS ASBESTOS CO. LTD. CONTINUATION DATE

It is apparent that a fair portion of the asbestos purchased by I.C.I. is used for purposes other than ins Mr. Elmes' section have not yet investigated these. Th however, very interested in the work which we are doing cloths which will have a considerably reduced dust emis soon as we have any information in this respect they w be shown it.

To summarise I.C.I's attitude towards the use of a materials therefore I would say that they are not unrea prejudiced in that they appreciate that where proper pr are taken the risk can be virtually eliminated. These however can prove both expensive and cumbersome so that is a viable alternative which eliminates the need for t the same time removes any suspicion of danger - then t it.

I take it that Witty & Wyatt are aware of the pote aluminised asbestos cloth, would you wish them to pursu of glass cloth with I.C.I. or is this a product which s handled direct?

J. [illegible] Wilkinson.

130C

NEWALLS INSULATION & CHEMICAL CO. LTD.

FROM	TO
WASHINGTON	Mr. John Waddell, Turner Brothers Asbestos Co.Ltd, Rochdale

OUR REF. JW/JHC OUR REF. RHW/GRR 17th February 1967

c. AHM/ACM/SH
KN/GRP

Private & Confidential

I.C.I. SLOUGH - ASBESTOS CONTAINING MATERIAL

Thank you for your memorandum of 14th February. There are one or two points which I thought you would like me to comment upon.

I.C.I. Slough is the Paints Division of I.C.I. and the directive which they have issued on the question of non-asbestos materials is their own interpretation based on their Medical Officer's views. We are finding that other sections of I.C.I. are forming their own opinions based on their Medical Officer's interpretation of the situation, for example, at Billingham we are being asked to carry out contract work with aluminium or sheet metal finishes in place of BD 2 cement. My remarks with regard to C.E.G.B. attitude to BD 2 similarly applies to I.C.I. They will tend to specify any armouring cement which is non-asbestos or alternatively they will switch to a metal type finish in preference to using standard BD 2 material.

I agree with the point which you make about the possible lower percentage of asbestos in calcium silicate as comped with 85% magnesia, however, this would not influence the matter, although you will appreciate that a number of firms manufacture calcium silicate and I would say that the percentage of fibre contained in competitive products might vary from 10% to possibly 17½%.

Continued/.....

28/839-40

In considering alternatives to asbestos our R&D Depar certainly gone into the question of chopped glass rovings have or are taking place with T.B.A.

My previous reference to the fact that I did not thin used much asbestos cloth is strictly related to insulation have carried out over the past year or two, some hundreds- £'s worth of insulation work for I.C.I. and the quantity o cloth required on those projects has been insignificant. that the different I.C.I. Divisions buy asbestos cloth for than thermal insulation work.

ROBE

NEWALLS INSULATION & CHEMICAL CO. LTD.

FROM	TO
WASHINGTON	Mr. John Waddell, Turner Brothers Asbestos Co.Ltd, Rochdale

OUR REF. JW/JHC OUR REF. RHW/CMR 17th February 1967

c. AHM/ACM/SH
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Private & Confidential

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ROBE

68/617-8

ACM/DC

To: JW

CONFIDENTIAL

21st February 1967.

I.C.I. Ltd.

There seems no doubt at all that I.C.I. have decided that wherever it is technically or economically feasible, insulation materials which do not contain asbestos must be used on I.C.I. plants. The amount of asbestos cloth which is being used in insulation work proper is now quite small, mainly in connection with expansion joints and mattresses, and their other miscellaneous usages for cloth in curtaining, protective clothing, etc. have not yet come under their ban. They are, however, showing interest in glass cloth and aluminised asbestos cloth, and both these prospects are being followed up.

A. C. Mahr.

Rochdale

Mr. E. A. Edmonds,
London Office.

ACM/DC
To: EAE

CONFIDENTIAL

21st February 1967.

I.C.I. Ltd.

I am attaching hereto a copy of a letter received from Mr. Wilkinson at Newcastle following hi discussion with Mr. Elmes at Billingham. From this you will see that there seems no doubt now that for insulation work proper I.C.I. is trying to find alternative materials to asbestos. This probably mea that the bulk of our asbestos trade with I.C.I., dire and through Witty & Wyatt, is not, for the moment at any rate, at risk. Although both Darlington, Newall and I.C.I. themselves have said that their usage of asbestos cloth is quite small, there is a sizeable amount of cloth business which could be under someth of a cloud and I think that you should advise Witty Wyatt of this and ask them to watch out for any atte by the I.C.I. people to substitute other materials f any asbestos textiles. Presumably there is a useful trade in rope lagging which might be at risk?

You will see that Mr. Wilkinson refers to I.C.I.'s interest in glass cloth and aluminised asbe cloth. Could you advise me whether Witty & Wyatt ar interested in selling either to I.C.I. Frankly, I would like to sell both direct, particularly the for

A. C. Mahr.

42/699-702

Rochdale

Mr. J. M. Wilkinson,
Newcastle Office.

ACM/DC
To: JMW
Copy: SM/SHs

JMW/MA

CONFIDENTIAL

21st February 1967.

Asbestos Insulation Cloth

I.C.I. Ltd.

Many thanks for your report of February 16th, which largely confirms information which we have had from other parts of the I.C.I. Organisation.

It would seem, at any rate for the moment, as if most of T.B.A.'s business with I.C.I. in asbestos materials, direct and through Witty & Wyatt, is not at risk as most of it is not used directly for insulation work. I will see that Mr. Edmonds and Witty & Wyatt are advised of this.

We have also noted that I.C.I. could be interested in treated cloths which we have produced on an experimental basis.

As far as glass cloth is concerned, I have certainly no wish to see Witty & Wyatt handling this, nor for that matter aluminised cloth, but do not take any action until you hear further from us as I want to find out what Mr. Edmonds has discussed with Witty & Wyatt.

A. C. Mann.

TURNER BROTHERS ASBESTOS COMPANY LTD.

Office of Origin	To
NEWCASTLE	Mr. A. C. MANN ROCHDALE.

Ref:- JMW/MA.

Your Ref:- AC / DC.

CONFIDENTIAL

16th February, 1967.

Thank you for your memo of the 26th January. I have now se
Mr. A. W. Elmes at I.C.I. Billingham. His official position is
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does not permit this they use aluminised asbestos cloth.

Copies EAE/SM/SH

RECEIVED
24 FEB 1967

TURNER BROTHERS ASBESTOS COMPANY LTD.

Office of Origin	To
London	A. C. Mann, Esq. Rochdale 58/695-6

Ref:- EAE/PM
ACM

Your Ref:-

Confidential

23rd February, 1967.

I.C.I. Ltd.

Thank you for your letter February 21st and, whilst the news is not greatly different from what I expected to hear, it is disappointing.

With the possibility that Mr. Lowndes might behave stupidly, I am sure Mr. Deykin will be keeping a closer contact than usual with the main I.C.I. factories, and I feel I should impress on him the seriousness of the situation. Until recently he had obtained only a modest amount of rope lagging business, but since Cape retired from the field there has been a tendency for this to increase. I think we would be well advised not to send any Amosite-based rope to Witty & Wyatt for I.C.I., and I will vet enquiries to ensure that this is arranged.

I can envisage that Mr. Deykin will be hesitant to agree to our selling aluminised asbestos cloth direct to I.C.I., unless there is some quid pro quo giving him an interest in what we achieve.

I would be ready to talk to him on these lines, and I imagine you would have an allowance of 2½% in mind; on the other hand you may feel it untidy to have two discounts operating and decide to let him have the full 5%. I would appreciate your comments before I see Mr. Deykin and, indeed, we could perhaps discuss this when we meet on Monday next.

.....

The position regarding glass cloth may be a l easier, but from past experience I know that Mr. De is always on the alert for what he terms the "thin of the wedge".

E. A. Edmonds

130C

RECEIVED
3 MAR 1967

TURNER BROTHERS ASBESTOS COMPANY LTD.

Office of Origin	To
London	A. C. Mann, Esq. Rochdale 68/642

Ref:- EAE/PM
ACM

Your Ref:-

CONFIDENTIAL

2nd March, 1967.

Witty & Wyatt Ltd.
I.C.I. Ltd.

With further reference to my letter February 23rd, I had a talk with Mr. Deykin yesterday on the lines we agreed when we met on Monday.

In the first place Mr. Deykin is now personally contacting all the I.C.I. factories at approximately two monthly intervals, and is very happy with the progress he is making.

He estimates that Billingham purchase a good deal more than 50% of the overall I.C.I. cloth requirements, and last yeat he made noticeable progress in obtaining this business at the expense of B.B. & A. He has heard nothing of any instruction which would affect his cloth sales to I.C.I., but he will be visiting Billingham in about two week's time to see Mr. Laidlaw who purchases the cloth, and also Mr. Everington who is concerned with insulation. His association with Mr. Everington is simply one of old friends.

I explained to Mr. Deykin why we felt it necessary to ensure that I.C.I. were well aware of the existence of aluminised cloths and the attraction of this type of material, and he has asked me to send him further samples and details. Mr. Deykin was not lacking in understanding of the reasons why we may want to sell aluminised cloth direct to I.C.I., but he suggests we have another talk about this after he has been to Billingham and Wilton.

.....

Mr SM for discussion please ACM

Copy taken. 9/3

TURNER BROTHERS ASBESTOS CO. LTD. CONTINUATION DATE

- 2 -

I have already told him that if we supply glass for any purpose for which asbestos is no longer acc we would have to go direct and that we did not envi making him any allowance as this would be economica out of the question.

This seems to me to be as far as we can go at t moment.

E. A. Edmonds

Mr Mann.

Would you like an extra copy for

130C

RECEIVED
6 MAR 1967

TURNER BROTHERS ASBESTOS COMPANY LTD.

Origin	To
London	A. C. Mann, Esq. Rochdale

AE/PM
CM
opy: SM

Your Ref:-

CONFIDENTIAL

3rd March, 1967.

I.C.I. Paints Division, Slough

On circ. to SM/DOSS

With reference to your letter February 15th, as far as I can trace the Paints Division are not big purchasers of asbestos. Obviously they use small quantities of packing and jointing, but very little in the way of textiles.

Mr. Deykin supplies them with Syndanyo and asbestos wood, which he thinks are used to test the effect and finish of various paints.

I would share Newalls opinion that the insulation requirements would be small indeed.

PPE. A. Edmonds

68/674-5

LM

Mr. A.C.

GLASGOW

Mr. S. Marks, 'A'
ROCHDALE.

To: TJL/CD
A.1

1st Marc

Asbestos and Health.

I attach hereto a cutting from "The Sc
today, which may be of interest to you. T
no doubt that cases of "the jitters" are be
increasingly common in this part of the wor

No doubt you will show the attached cl
to any other parties who may be interested.

T. J. Lenton.

68/713-14 112 x122

ACM/DC

To: SM/AAB

8th March 1967.

It is important that we should try to identify any loss of business which may result from the adverse publicity about asbestos, so would you please let me have appropriate comments when you do your stop-press notes for each Board Meeting.

A. C. M[illegible]

Reminder

Mr. A. C

JW/BW
To: ACM(2)/RHW

Copy of letter received by Mr. J. Waddell from Mr. W. P. Howar Turner & Newall Limited, Manchester, dated 16th March, 1967

Asbestos and Health — ICI

As arranged, I had a long discussion with Mr. Gordon Lo Heads the Public Relations Department at I.C.I. Head Office.

Apparently, the basic element in I.C.I. policy on health q is their extreme sensitivity to any risk of public criticism. For e as a result of only one worker contracting bladder cancer at their Naphthylamine plant, the plant was closed down immediately althou to that time it had been thought to be the safest of its kind in the wo I.C.I. also stopped manufacturing toxic seed dressings as a result of public agitation against their effects on bird and animal life.

It is, therefore, in line with their normal policy that in th present circumstances they should be actively seeking substitutes f asbestos both in the products they make and in their plant installati since their medical staff, led by Dr. Lloyd Potter, feel that there sufficient doubt surrounding the safety of men who work with asbest warrant their abandoning it wherever they can. This attitude as b reinforced by the dealth of a contractor's man at Wilton.

Mr. Long was, however, quite concerned that any of I.C.I Divisions should appear to be knocking asbestos in publicity materi and I am, therefore, sending him a photocopy of the advertisement we take exception so that he can look into the question of the advisal of such copy being withdrawn, and also of course of preventing othe divisions following the same line.

I hope that in the course of our conversation I succeeded in Mr. Long's own attitude on the subject into a sounder perspective. was certainly not aware of the distinction between various types of asbestos.

One conclusion to be drawn from this encounter would cert be that I.C.I. if they were to be in our position would probably aban use of "blue" fibre in their own plants.

(signed) W. P. Howard.

Mr. J. W. Could I have a copy of this please AAW
Mr. ACM
Beneath
JW

68/737-8 41

RECEIVED
10 MAR 1967

WASHINGTON

MR. A. N. MARSHALL - JWR
MR. A. C. MANN - TBA

RHW/CMR 9th March 1967

c. JW
KH/GRP
LSH/GJ

IMPERIAL CHEMICAL INDUSTRIES LTD
AGRICULTURAL DIVISION

We have at the present time about three contract enquiries against projects which are sponsored by H.O.C. and Plastics Divisions of I.C.I. and the specifications define fairly clearly the use of asbestos-free insulation and mention is also made of compositions and the substitution of glass cloth for asbestos cloth. The current projects may be worth some £800/700,000, involving perhaps about £200,000 of insulation.

M.I. & C.Co.Ltd will not, at the present time, be able to offer an alternative asbestos-free calcium silicate and this seems to be the position as far as J.W.k. are concerned. therefore, it would appear that the Chemical & Insulation Company Ltd, Darlington, stands every chance of securing this business.

Naturally, we are interested in the alternatives which T.B.A. can offer against Fothergill & Harvey's glass cloth and we will certainly co-operate to the full in putting forward an asbestos-free BD 2, as and when this is available.

Enclosed is a copy of a specification, which has been extracted from a contract enquiry received by M.I. & C.Co.Ltd.

ROBERT H. WILSON

Encl.

D R A F T

IMPERIAL CHEMICAL INDUSTRIES LIMITED
AGRICULTURAL DIVISION

TEMPORARY SPECIFICATION FOR PROJECT H829 (L.P. STEAM MAINS, STAGE
THE APPLICATION OF MINERAL WOOL INSULATION AND ITS PROTECTION
WITH METAL CLADDING - PIPES ONLY

1. MATERIALS

All materials covered by this Specification shall be new and conform with the details given below.

During delivery, off-loading and storage on site, all materi be adequately protected from the weather and mechanical damage, to the of the Company.

1.1 Insulating Materials

The insulating materials shall be mineral wool (Stillag Therl Eldorite) of density between 14 and 18 lb./cu.ft. in the form of p slabs, lags or pipe sections. It shall be chemically inert, rot a proof. It shall contain not more than 2½% by weight of organic bi total sulphur compounds shall not exceed 1% measured as sulphur.

1.2 Fixing and Protecting Materials

(a) Sheet Metal Protection

The metal sheeting shall be aluminium of commercial quality t 1470 : Grade NS4-½H (Kynal M35/1 - ICI Metals Division). The sheeti be pretreated at works by 'Alocrom' process. On pipes up to 12" ou diameter (including the insulation) the sheet shall be not less tha For pipes over 12" diameter and up to 24" the sheeting shall be not 22 swg and for larger diameter pipes not less than 20 swg shall be removable covers and where mechanical damage is likely to occur 16 shall be used.

Galvanised mild steel sheeting shall not be used except when on the Company's order. When so called for the sheeting shall be of quality hot dipped or electro-galvanised. The weight of zinc shall than 0.6 oz./ft.² per side. Galvanised sheeting shall be not less t for pipes up to 12" outer diameter (including the insulation) and 22 pipes between 12" and 24" outer diameter. For larger diameter pipes than 20 swg shall be used. For removable covers and where mechanica is likely to occur 18 swg sheet shall be used.

(b) Metal Bands

For use with Aluminium Cladding, bands shall be in aluminium a B.S. 1470 Grade NS4-½H and not less than 22 swg. For securing miner sections to the pipe the bands shall be 1/2" wide. For securing alu sheets in position bands shall be 1/2" wide for pipes up to 12" outer diameter (including the insulation) and 3/4" wide for larger diameter

For use with galvanised mild steel sheets bands shall be galva steel strip not less than 24 swg, 1/2" wide.

Stainless steel bands if specified shall be not less than 24 sw wide.

(c) Screws

For use with aluminium sheet self-tapping screws shall be aluminium to B.S. 1476 Grade HE 10 in the fully heat treated condition. When galvanised mild steel sheet is specified stainless steel self-tapping screws shall be used.

(d) Rivets

Rivets for aluminium sheet shall be aluminium to B.S. 1473 Grade NR5-O. Galvanised rivets shall be used with galvanised steel sheet.

(e) Quick Release Fastenings

For use with aluminium sheet these shall be aluminium alloy to B.S. 1470 Grade NS-½H.

For use with galvanised mild steel fastenings shall be of mild steel and subsequently electrogalvanised.

(f) Sealing Materials

The sealing material for use in lap joints shall be Prestik Sealing Strip No. 5643 made by Bostik Ltd. applied as a flat strip 1/8" thick and 1/2" wide minimum. Where resistance to solvents is required Prestik No. 5806 may be used. Alternative materials must be approved by the Company.

(g) Weatherproofing

The weatherproofing mastic for bends shall be Sealfas Mastic 31/57 made by Atlas Preservative Co. Ltd.

(h) Glass Cloth

Shall be glass scrim cloth ECK 705 made by Turner Brothers or Glass Cloth No. 10 made by Atlas Preservative Co. Ltd. or equivalent.

(i) Self-Adhesive Tape

Self-Adhesive tape shall be cloth tape A 61 made by Rotunda Limited or equivalent.

2 APPLICATION

2:1

The insulation slabs, lags or sections shall be held in close contact with the pipe to be insulated by means of bands. Each piece of insulation shall be held by at least two ties except at bends where small mitred pieces may require only one tie. For small pieces galvanised soft iron wire 18 swg ties may be used. Where more than one layer of insulation is applied the joints for any one layer shall not coincide with the joints of any other layer. The insulation shall be butted up tightly against neighbouring pieces and no large gaps shall be permitted. Small gaps shall be filled with loose mineral wool.

Insulation shall be stopped short of flanges of sufficient distance to permit withdrawal of bolts.

On vertical lines 12' and greater in length insulation s be provided. These shall consist of metal rings and part ring not greater than 12'. The supports shall be welded or clamped directed by the Company. The supports shall penetrate the ins distance of 1/2" from the outer surface.

2.2 Straight Pipe Runs

The pipes shall be covered with metal to the specified g longitudinal and circumferential overlaps shall be a minimum o joints shall be made so as to shed water and longitudinal laps slightly offset on adjacent pieces.

The cladding shall be fastened in place with aluminium s seals at 9" centres. On vertical lines a minimum of 4 alumini tightening screws shall be fitted at circumferential joints. shall either pass through a band or be positioned immediately Where expansion joints are required screws will be omitted and with 'Z' clips.

Vertical longitudinal joints and all circumferential joi sealed with a continuous strip of Prestik. At circumferential bends, the Prestik shall be fitted on the coating of the bend a the open end of the joint. This is to ensure that water cannot the gap between the jacketing and the cover at the bend.

2.3 Bends

Self-adhesive cloth tape shall be spirally wrapped over t on bends with a minimum of 1/2" overlap at joints. The cloth s a trowel coat of weather proofing mastic and a layer of glass s shall be embedded in the wet material. When the first coat is brush coat of mastic shall be applied. The wet film thickness ing shall be approximately 1/10".

Bends shall be covered before adjacent straight sections aluminium [illegible] applied with a minimum of 3" overlap the finish.

2.4 Flanges and Valves

Flanges and valves shall be covered with removable boxes flexible mineral wool faced with wire netting. The boxes shall cated generally in accordance with ICI Specification M5001.

2.5 Pipe Supports

Pipe hangers for outside use shall be provided with a weat as illustrated in ICI Specification M5001, Figure 3.

Pipe rollers or Slipper supports shall be treated generall in ICI Specification M5001, Figure 6.

3.6 Stainless Steel Equipment

Before the application of the insulation of stainless stee and equipment shall be wrapped with aluminium foil of approximat. Foil shall be fitted with laps so as to shed water and the overl shall be a minimum of 2". At flanges, valves etc. the foil shall l snugly against the steel surface and held in place with wire ties wire ties or bands shall be used where necessary.

PROJECT H929 L.P. STEAM MAINS - STAGE I

AMENDMENTS TO HOT SPECIFICATION NO. CO/M 21

These amendments are made to permit the use of asbestos-free insulation in place of calcium silicate and asbestos cement.

Part 1 - Supply only of Calcium Silicate Insulation

1.1 Moulded Calcium Silicate Insulation

Moulded Calcium Silicate asbestos-free magnesia shall be used in place of Calcium Silicate as specified.

Part II - Application, Fixing and Protection of Calcium Silicate Thermal Insulation

1.1 Calcium Silicate

The insulation shall be Magnesia 66 supplied by the Chemical and Insulating Company, Darlington, and shall be wholly free of asbestos. Alternative materials may only be used with the approval of the Company. Where Calcium Silicate is mentioned in this Specification, it shall be taken to be Magnesia 66.

1.2 Protective Coating

Protective coating applied over the insulation shall be Composition 14 as supplied by the Chemical Insulating Company, Darlington and shall be wholly free of asbestos. Alternative materials may only be used with the approval of the Company.

1.4 Asbestos Cloth

Glass cloth shall be used at expansion joints, and shall be Ty glass Y 326A made by Fothergill and Harvey, or an equivalent material.

2.2 Mattresses

Mattresses shall be made from glass cloth with the weather surface aluminised. The filling may be Magnesia 66 or mineral wool or glass wool as appropriate. Where the temperature exceeds the maximum quoted by the manufacturer for the glass cloth, a metal covered removable box shall be used.

3. "Protection against Oil Spillage"

(a) light gauge crimped aluminium with a paper backing is not acceptable. Aluminium, if used, must be painted on the inner surface. Light gauge stainless steel is also suitable.

6. Pipes with Steam or Electric Tracing

The bright aluminium foil used to wrap pipe and tracer shall be not less than 46 swg.

ADDENDUM

Special Protection for Hot Austenitic Steel Surfaces

The aluminium foil shall be not less than 46 swg. It is recommended that the insulation on pipes, valves etc., made of austenitic steel should be waterproofed The method given under "Protection against Oil Spillage" in Section 3 would be suitable.

Rochdale.

Mr.

To: A.1/EG
EAE
Copies: ACM/WKD/EBG

19t

H.M. Dockyard, Devonport

Many thanks for your memo of 14th Apr
the current situation with regard to the li
of our XA.136 on the "Torquay".

Certainly for the present the omens c
look favourable and obviously when the "Torq
in Port in June Dr. W. K. Donaldson will nee
the vessel with you in order to examine the
in detail.

If you are able to obtain a copy of t
report from Mr. Empson, this, of course, wil
helpful to us.

(TURNER & NEWALL LTD.)

WASHINGTON, CO. DURHAM, ENGLAND.

TELEPHONE WASHINGTON 3333 . TELEX 53413 NEWCHEM WSHNGTN . TELEGRAMS NEWCHEM WASHINGTON

YOUR REF

OUR REF RHW/CMR

25th October 1966

Dr. S. Holmes,
Asbestosis Research Council,
c/o Turner Brothers Asbestos Co.Ltd,
P.O. Box.No.40.,
ROCHDALE, Lancashire.

Dear Dr. Holmes,

ASBESTOSIS PRECAUTIONS

I thought you might be interested in sighting a copy of a report sent to me by Mr. Collier, our Northern Area Manager, following discussions with I.C.I. Although it would appear that the medical side of I.C.I. are perhaps looking at the matter sympathetically, nevertheless, their engineering staff are approaching the problem - wherever possible - by avoiding the use of insulants with an asbestos content.

Yours sincerely,

ROBERT H. WILSON,
Director.

Encl.

c. JW/GRP/PEB/RA
JFK

68/711-12

Rochdale

Mr. J. M. Wilkinson,
Newcastle Office.

ACM/DC
To: JMW
Copy: SHs/SM

CONFIDENTIAL

26th January 1967.

Asbestos Insulation Cloth

I.C.I. Ltd.

Various reports have reached us, as I expect you know, about I.C.I's attitude towards asbestos materials, and it has been said that the official attitude of I.C.I., largely stimulated by their medical advisers, is that they should continue to use asbestos materials but should search for alternatives and if suitable ones were found then they should be used. Newalls and ourselves have been trying to locate the man or the committee in I.C.I. who would have the last word in such a matter but we have not been successful. Mr. Edmonds, however, has just been informed by a contact in I.C.I's Purchasing Department in London that a Mr. A. W. Elmes at Billingham has a considerable amount of influence and I would like you to try to make contact with this man. I do not know his title, and it would be best if Mr. Edmonds' name was not mentioned in any discussions with him. In short, try to find some reason for approaching Mr. Elmes to see what decisions, if any, he has made with respect to the usage of asbestos materials by I.C.I. for insulation and other purposes including asbestos cloth which they buy mainly from Witty & Wyatt. You can tell him that if they are worried about the emission of dust from cloth in particular, work is going on here to produce treated cloths (these were the ones mentioned at Darlington last week) which would make them quite safe. If you are in any doubt as to what to say to Mr. Elmes on the score of the health side, would you please have a word with Dr. Holmes before you go.

A. C. Mann.

TURNER BROTHERS ASBESTOS COMPANY LTD.

Office of Origin	To
London	Mr. E. B. Gates Rochdale

Ref:- EAE/PM
EBG

Your Ref:-

26th January, 196

I.C.I.
Asbestos Cloth

I recently promised that I would let you have the name of the gentleman at Billingham who, I believe, to be concerned with health risks associated with the use of asbestos lagging materials It is Mr. A. W. Elms, but I would be glad if you would give him no reason to think that his name was provided by I.C.I. London.

E. A. Edmonds

Mr. Wilson.

This is, of course, relevant to our recent conversation about the Chairman's interest in this matter, when you intended writing to Mr. Edmonds. The problem now is how to get in touch "accidentally" with Mr. Elms, and I can suggest only that we sound around our own people (Dr. Holmes & Mr. Wilkinson) to see if they know him or know of him, in order to arrange for Dr. Holmes to meet him.

EsG

Mr. A. C, Mann

NEWALLS INSULATION & CHEMICAL CO. LTD.

WASHINGTON

TO

STRICTLY PRIVATE & CONFIDENTIAL

J. WADDELL, ESQ.,
Turner Brothers Asbestos Co.Ltd,
ROCHDALE

R REF. OUR REF. RHW/CMR 7th February 1967

c. KN/GAP/PEB/JWD
LSH/GJ

68/709-10

I.C.I. SLOUGH - ASBESTOS CONTAINING MATERIAL

I have managed to get hold of a copy of a directive issued by I.C.I. Slough. Briefly, it indicates that the use of asbestos-containing material will be discontinued forthwith but it does say that asbestos-free magnesia/calcium silicate and cement will be considered when readily available.

Regarding Sections (6) I.C.I. indicate that a Supplier has succeeded in producing an asbestos-free cement and asbestos-free magnesia, obviously this refers to Darlington Insulation Co.Ltd.

There does not appear to be any specific reference to asbestos jointing but the write-up concentrates on the lagging systems, and as far as we are concerned if we can commercially produce asbestos-free calcium silicate we may be able to regain some of the market and, of course, the same remark is applicable to J.W.R. should they be in a position to produce a satisfactory BD 2 cement, not only for application to asbestos-free magnesia/calcium silicate but to other preformed mineral type insulants also.

ROBERT H. WILSON

Copies ANN(2)/ACM(2)

Enclosure

68/705-

Circulation:

Mr. A. Forbes
Mr. S.F. Osborne
Mr. F.W. Hughes
Mr. C. Fishwick
Mr. E.W. Lees
Dr. R. Piper
Mr. H. Prior
Mr. L.H. Melbourn
Mr. J.A. Churchil
Mr. A.J. Riddell
Sir James Stuart-
File.

23rd January, 196

See 31/1/67

ASBESTOS HAZARDS ENGINEERING INSULATION WORK

Having considered the enclosed paper by Mr. J.A. Ch the Engineering Manager has decided that the use of asbestos asbestos-containing materials will be discontinued in the Div forthwith.

Recommendations 2.1 to 2.5 will therefore be adopte all insulation work. Engineers placing orders or contracts s take action accordingly.

Engineers should note that asbestos-free versions o magnesia materials in both preformed and plastic condition an setting compounds are under development by the insulation man

Mr. Churchill will circulate engineers with the det acceptable materials against recommendation 2.5 when these ar

D.E. Evans.

ASBESTOS HAZARDS

INVESTIGATION INTO THE USE OF ASBESTOS-FREE LAGGING SYSTEMS AND VACUUM CLEANERS FOR REMOVING ASBESTOS DUSTS AND FIBRES.

1. INTRODUCTION

At a meeting on December 5th 1966, Dr. Piper outlined the hazards connected with the use of asbestos and recommended certain measures to minimise these hazards.

Among the actions agreed were investigations to be carried out by the writer into the implications of eliminating asbestos from future thermal insulation systems and the establishment of principles for the specification of new thermal insulation systems.

2. RECOMMENDATIONS

For reasons outlined below it is recommended that all future lagging is carried out in accordance with the following principles:-

2.1 Slag wool or glass fibre will be used, normally as preformed, canvas-backed sections or mattresses.

2.2 Protection from mechanical damage will be provided only where essential and will be carried out in galvanised steel or aluminium.

2.3 Protection from spillage of liquids will be provided where necessary by sheet metal with generous laps designed to shed the liquid.

2.4 Weatherproofing is to be carried out by covering outdoor work with two-ply roofing felt and wire netting unless there is an exceptional fire hazard necessitating the exclusion of flammable materials. In such cases metal cladding is to be used.

2.5 Asbestos-free magnesia and calcium silicate will be considered when they become readily available, as will also the asbestos free cement finish which is being developed.

2.6 Vacuum cleaners are to be provided at all major factories for dealing with asbestos dust produced during maintenance operations. These must have a filter on the exhaust with a performance at least as good as 98% efficiency at 2 microns. Legislation at present being prepared may insist that these vacuum cleaners discharge by hose to exhaust ducting or to the outside atmosphere.

INSULATION SYSTEMS IN NORMAL USE WITHIN THE DIVISION

Until recently the vast majority of lagging applied in the Division consisted of 85% Magnesia in sectional and plastic form covered with hard setting composition. Recently 85% Magnesia has been replaced with Calcium Silicate, a new material which is slightly cheaper than Magnesia and has similar properties. Both 85% Magnesia and Calcium Silicate lagging contain about 12% Asbestos as reinforcement.

The hard setting composition, which consisted of plaster, magnesia, asbestos and perhaps jute, has been replaced by asbestos cement, which has superior physical properties at roughly the same cost.

At Orb Mill the lagging of pipework, except in the boiler house was carried out in slag wool because the appearance and strength of Magnesia lagging was not considered to be worth the extra cost of about 30%.

Slag wool and glass fibre have also been used in other places such as depots and office blocks.

3. Contd:

Absorption of liquids has been a particular problem where s flammable liquids can occur. Metal cladding has normally been cases, with generous overlaps arranged to shed the liquid.

Weatherproofing of lagging within this Division is mainly c two ply roofing felt held on with binding wire and wire netting, asbestos finishes have been introduced recently at Slough becaus superior appearance and ease of painting.

4. ALTERNATIVE ASBESTOS-FREE SYSTEMS.

The main asbestos-free insulation materials commercially av slag wool and glass fibre. These are readily available in secti canvas backing. Oversize sections can be used for the lagging o valves.

The finished appearance of canvas backed slag wool or glass though inferior to cement finished calcium silicate and similar adequate and has been quite satisfactory at Orb Mill.

Weatherproofing can be achieved using 2 ply roofing felt wi laps arranged to shed liquid, all properly wired on and painted. exceptional fire risk, where flammable materials must be exclude cladding can be used.

The mechanical strength of slag wool or glass fibre lagging except where it is liable to be hit by portable containers, tool high level pipes with systems which will allow ladders to be sup them on rare occasions is not economically justifiable. Where n softer systems can be protected with metal cladding, but this is on complex piping and must be restricted to essential locations.

Where spillage of flammable liquids is liable to occur, met should be used, with generous laps arranged to shed liquid.

High temperature applications, over about 200°C (400°F) req attention because some of the binding materials normally used be these temperatures. High temperature resistant slag wool and gl therefore be used above these temperatures.

5. COSTS.

The cost of canvas backed slag wool or glass fibre applied is about 30% less than the cost of Calcium Silicate or Magnesia asbestos finish.

Metal cladding costs about the same as the slag wool or glas depending on the complexity of the job.

The overall costs of lagging systems using asbestos free ma should be somewhat lower than those of comparable lagging system Calcium Silicate or Magnesia with cement asbestos finish, provid metal cladding is kept to a minimum.

6. OUTLOOK

Various suppliers are making great efforts to produce accep free magnesia or calcium silicate lagging materials, but so far to have succeeded and he is not in full production. The materi reinforced magnesia, but the nature of the fibre is not yet disc supplier is said to be producing an asbestos free cement finish.

There is little doubt that before long these asbestos free be available and that the prices will be close to those of the m

6. Contd:

they replace.

It is probable, however, that slag wool and glass fibre materials will remai[illegible] more economical, and in making the selection the ease and [illegible] application of these materials should be considered against the appearance and strength of the others.

7. VACUUM APPARATUS

Asbestos dust, such as is formed when disturbing and replacing existing lagging during maintenance operations, should be removed by vacuum cleaners havin filters sufficiently fine to prevent the emission of asbestos dusts and fibres.

No very firm information is available on the degree of filtration required, but the British Vacuum Cleaner Co. can supply industrial vacuum cleaners complete with 'absolute' filters on their exhausts, giving 98% efficiency at 2 microns. They advise that this is adequate.

The cost of such a machine, fitted with flameproof motor and starter and with an 'absolute' filter would be about £500, including all the necessary attachments.

The cost of adding an absolute filter to an existing machine would be about £100.

There are other less costly machines available, such as the Jet-Vac machine at Stowmarket which costs about £200, and is claimed by the makers to be adequate, but a careful check would have to be made of the filtration efficiency in each case.

Clearer guidance should be available when legislation, at present being prepared, is published.

It is quite possible that this legislation will insist on discharge to outside atmosphere or to mechanical extraction ventilation ducts.

In any case, respirators must be worn even when using a vacuum cleaner to clear up dusts containing asbestos, because some dust will inevitably be disturbed without being caught by the vacuum cleaner.

JAC/MSG
17th January, 1967.

JCG Paints

Very little cloth
Empson on
March 2nd
seeing applicit