PLAINTIFF'S EXHIBIT
AL-593

JUL 20 1977 7-18-77

INSPECTION OF T.C. WIRE ON BLDG 34 PREHEAT FURNACES.

Bob Reasbestos covered & fiberglass still holding up very well

#1 P.H.

FURNACE COUPLE WIRING — NEW F.G. (fiberglass) GOOD COND.

LOAD COUPLE WIRING. — ASBESTOS (FLEX) GOOD COND.

#2 P.H.

FURNACE COUPLE — ASBESTOS — GOOD COND.

O.T. COUPLE — NEW F.G. — GOOD

LOAD COUPLE — ASBESTOS (FLEX) — GOOD COND.

#3 P.H.

ALL COUPLE WIRING — NEW F.G. — GOOD

F.W.F.

411084 1446

JUL 20 1977 7-18-77

INSPECTION OF T.C. WIRE ON BLDG 34 PREHEAT FURNACES.

Bob Reasbestos covered & fibre glass still holding up very well

#1 P.H.

FURNACE COUPLE WIRING — NEW F.G. (fibre glass) GOOD COND.

LOAD COUPLE WIRING. — ASBESTOS (FLEX) GOOD COND.

#2 P.H.

FURNACE COUPLE — ASBESTOS — GOOD COND.

O.T. COUPLE — NEW F.G. — GOOD

LOAD COUPLE — ASBESTOS (FLEX) — GOOD COND.

#3 P.H.

ALL COUPLE WIRING — NEW F.G. — GOOD

F.W.F.

411084 1448

W. J. BOVARD, M. D.

VANCOUVER OPERATIONS

B. E. MOORE

VANCOUVER OPERATIONS

February 23, 1976

RE: GUIDELINES TO AVOID SKIN PROBLEMS IN WORKING WITH FIBREGLASS

The following recommendations are from the medical director at the largest fibreglass manufacturing plant in the midwest.

1. Good personal hygiene is the single most effective measure to avoid skin problems.
2. Avoid direct skin contact. (Use gloves, sleeves, loose fitting collars and belts.)
3. Shower after with warm water then cleanse skin with a stiff washcloth, using any common emollient.
4. The "hardening", acclimation, or time to "become used to" the material varies between 2-4 days.
5. The rash has a typical appearance; if in doubt, let me see the employee.
6. People who persist with problems after 5 days should be evaluated for special sensitivity (rare).
7. If to be used "overhead", goggles should be used.
8. Thousands of people work with this material daily and have learned it need not produce any problems if the above are carefully followed.

W. J. BOVARD

WJB:fh

cc: G. P. Nelson
L. L. Haisch
D. L. Werner

ALCOA

411084 1449

TELEGRAM

~~TBR~~
RPC

This Copy for ☐ TELEGRAPH OFFICE ☒ FILE ☐ CONFIRMATION ☐

POINT OF ORIGIN & DATE: PITTSBURGH OFFICE 20APR76

TO:

D. T. OLIVER
ALCOA
GOWERTON
SWANSEA
WALES

CC: T. I. S. BOAK, JR., PITTSBURGH

C. P. FLETCHER, ALCOA, GOWERTON, SWANSEA, WALES

N. K. HARDMAN, ALCOA, GOWERTON, SWANSEA, SWALES

W. K. WEBB, PITTSBURGH (with copy telex)

REURTELEX 16APRIL. VANCOUVER OPERATIONS HAS FOUND SATISFACTORY ALTERNATE. MAILING YOU COPY OF CORRESPONDENCE.

ROBERT P. CARTER
ALUMINUM COMPANY OF AMERICA, PITTSBURGH

RPC:lmn

cc: M. J. Caprio, Pittsburgh 19: (with copy telex)

Note to Caprio: Sending copies W.K.Webb letter 15Dec75 to J.H.Pierce, and M. L. Miner letter 24Mar76 to W. K. Webb.

Copy to Marsha Frank, 14AB, on 27Apr76

SF-1202 REV. 1-71

411084 1450

RCA8928-16•

ALCOA B PGH

ALCOAMFG SWNSEA

SRL 5 16TH APRIL 1976 ES TAPED 3/00

TO MR ROBERT P CARTER ALCOA PITTSBURGH

HEALTH AND ENVIRONMENT DEPARTMENT

CC MR T I S BOAK JR ALCOA PITTSBURGH

CC MR C P FLETCHER ALCOA WAUN

CC MR N K HARDMAN ALCOA WAUN

WE USE THERMOCOUPLE WIRE WITH ASBESTOS INSULATION FOR FURNACE TEMPERATURE MEASUREMENT. MAXIMUM OPERATING TEMPERATURE IS 650 DEGREES CENTIGRADE IN SOAKING PITS. CAN YOU COMMENT ON THIS AND SUGGEST ALTERNATIVE INSULATING MATERIALS.

FROM D T OLIVER ALCOA MFG WAUNARLWYDD

E

ALCOAMFG SWNSEA•

ALCOA B PGH

FROM W. L. MINER

VANCOUVER OPERATIONS

TO W. K. WEBB

PITTSBURGH OFFICE - 20

MARCH 24, 1976

RE: ASBESTOS COVERED THERMOCOUPLE WIRE

WE HAVE HAD APPROXIMATELY NINETY DAYS EXPERIENCE SINCE YOUR LETTER OF DECEMBER 15, 1975, WITH CLAUDE S. GORDON FIBRE GLASS OVER ASBESTOS, CATALOG NUMBER K20-2-202, 20 GAGE (CHROMEL-ALUMEL) THERMOCOUPLE WIRE.

OUR EXPERIENCE THUS FAR IN THE INGOT DEPARTMENT AND THE EXTRUSION MILL HAS BEEN VERY GOOD.

THANK YOU FOR YOUR HELP IN THIS MATTER, AND WE WOULD APPRECIATE HEARING FROM YOU AS FURTHER DEVELOPMENTS ARISE.

W. L. MINER

WLM:J

CC: B. A. BEEBE - CLEVELAND WORKS
R. P. CARTER - PITTSBURGH OFFICE - 7
L. EGGLESTON - MASSENA OPERATIONS
G. R. FARNETH - PITTSBURGH OFFICE - 22
P. H. GOMULKIEWICZ - WENATCHEE WORKS
P. KENY, JR. - DAVENPORT WORKS
P. B. MATHEWSON - LAFAYETTE WORKS
R. W. PLUMMER - PITTSBURGH OFFICE - 20
F. E. ROBINSON - VERNON WORKS
J. SEXTON - TENNESSEE OPERATIONS
J. A. SMITH - WILLIAM PENN - 4
R. G. TANGERINI - CRESSONA WORKS
T. N. WAGNER - MARSHALL WORKS
M. W. WALL - BADIN WORKS
B. WRIGHT - WARRICK OPERATIONS
M. J. Caprio, 19AB, 29Mar76

411084 1452

ALCOA

EE-4569 (REV 11-80)

THIS COPY FOR: MR. R. P. CARTER - PITTSBURGH OFFICE - 7

FROM W. K. WEBB
PITTSBURGH OFFICE - 20

MR. J. H. PIERCE
VANCOUVER OPERATIONS

December 15, 1975

RE: ASBESTOS COVERED THERMOCOUPLE WIRE

As we agreed in our recent telephone conversation, I have investigated use of subject material in furnaces and soaking pits with regard to possible health hazard due to the asbestos insulation.

I have discovered no instance in Alcoa's organization where anyone considered the amount of asbestos on electrical wiring to be a health hazard. I discussed this with R. P. Carter in the Health and Environment Department and he feels that the limited exposure in this connection could hardly be considered a health hazard. Even though some abrasion takes place in soaking pits and furnaces where load thermocouples are used, it is doubtful if enough fibres are separated from the wire to exceed any OSHA standards. However, it is impractical or most likely impossible to measure the fibre content of the air in furnaces against uncertain OSHA standards to prove this point. Therefore, I suggest we use fibre glass covered thermocouple wire instead of the traditional asbestos.

In discussing this with Tennessee personnel, I found they are trying out a Claud S. Gordon fibre glass over asbestos, Catalog No. J20-2-202, 20 gage wire. Also in checking with Claud S. Gordon it was discovered they are working on a new glass insulation which may be superior in abrasion resistance to the fibre glass braid. The motivation for this is in steel industry where there has been some OSHA criticism. But I hasten to point out their application is much more severe both in temperature and handling than anything we experience.

In the worst case where OSHA or others may insist there is a health hazard and where the abrasion resistance of the fibre glass braid is unacceptable, we could use wire with stainless steel overbraid. This is expensive, of course, and I doubt if it will become necessary.

Fibre Glass-Fibre Glass, Asbestos-Fibre Glass and Asbestos-Asbestos are all similarly priced with fibre glass perhaps slightly lower. All three of these types are more expensive than the commonly used asbestos twisted with no overbraid. In the quantities we use on a given furnace, I don't believe the added cost of overbraid will be burdensome.

I will continue to pursue this and when more information is available, I will pass it on to you.

411084 1453

ALCOA

In the meantime I suggest you have your people try the fibre glass overbraid and advise me of your results. The wire is available from most of the vendors you now deal with.

W. K. Webb

W. K. WEBB

WKW:dms

cc: B. A. Beebe - Cleveland Works
R. P. Carter - Pittsburgh Office - 7
L. Eggleston - Massena Operations
G. R. Farneth - Pittsburgh Office - 22
P. H. Gomulkiewicz - Wenatchee Works
P. Keny, Jr. - Davenport Works
P. B. Mathewson - Lafayette Works
R. W. Plummer - Pittsburgh Office - 20
F. E. Robinson - Vernon Works
J. Sexton - Tennessee Operations
J. A. Smith - William Penn - 4
R. G. Tangerini - Cressona Works
T. N. Wagner - Marshall Works
M. W. Wall - Badin Works
B. Wright - Warrick Operations
cc: J.H.Dunbar, 23AB, on 17Dec75