

FROM

D. D. MC GREGOR
PRIMARY METALS DIVISION
PITTSBURGH OFFICE - 23

TO

MR. G. E. GRADDY
ALCOA TECH. CENTER

PRIVILEGED AND
CONFIDENTIAL

1981 March 20

PLAINTIFF'S
EXHIBIT
AL-1439

RE: TESTING OF CATHODE MATERIALS

Confirming discussions at the 1981 March 19 HPTF meeting, please contact the following plants to obtain representative cathode block samples for sodium intercalation tests: (Sufficient samples for Dr. Belitskus' work should be included along with yours. Please coordinate with him.)

Badin - Locally manufactured block
Tennessee - Locally manufactured block
Vancouver - Alcan cathode block
Midwest cathode block

In addition, you will make longer term (than the 24-hour) tests of insulation materials in a bath environment. Among those to be included are:

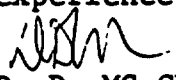
Superex 2000
IV-20
IV-19
Keene Monoblock
(Such others as you and Mr. Caprio select)

Representative samples can be obtained from various plants, or Mr. Caprio can obtain them from vendors. You are requested to arrange for these samples.

For plants' and Mr. Caprio's information, further testing has shown no significant difference between Superex 2000, IV-20, or IV-19 with regard to bath attack in a 24-hour laboratory test. Our current recommendations to plants, from the HPTF discussions, are to install a minimum of 10 pots and a maximum of 20 pots, using IV-19 in both bottom and sides. Keene Monoblock also presents no significant personnel hazard and is approved for use in sides only. It should not be used in bottoms, due to extremely low compressive strength.

Dr. Fisher will run bottom heat loss surveys on the 6 Massena pots installed with IV-19 bottoms - along with 6 control pots.

At the fall HPTF meeting, this subject will be reviewed and plants' experience discussed.


D. D. MC GREGOR

IV-19 looks promising at Massena 3/17/81

APC 003928

DDM:mfq

cc: See page 2



Mr. G. E. Graddy
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cc: M. B. Dell - ATC-C
D. L. Belitskus - ATC-C
M. Caprio - Pittsburgh (19)
S. C. Jacobs - Pittsburgh (23)
L. A. Hartley - Badin Works
B. M. Triko - Massena Operations
D. A. Nelsen - Pt. Comfort Operations
E. B. Colley - Pt. Comfort Operations
G. H. Lantz - Rockdale Works
G. A. Turnbow - Tennessee Oprns. (South Plant)
P. C. Ames - Vancouver Operations
D. J. Carney - Warrick Operations
M. H. Johnson - Wenatchee Works
I. B. Beaumont - Pt. Henry Works
R. J. Leser - Veracruz Works, Mexico
N. L. Sundaram - Paranam Operations

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FROM D. D. McGREGOR
PRIMARY METALS DIVISION
PITTSBURGH OFFICE

TO MR. V. D. GRISWOLD
WARRICK OPERATIONS

1981 March 23

RE: POTLINING INSULATION IV-19 & IV-20

Reference your letter dated 81/02/11, same subject.

Further testing at ATC of captioned and other materials reveal no significant differences in resistance to bath cutback.

IV-20 and Superex 2000 appear to be equivalent materials in regard to physical characteristics and both contain crystoballite, a form of respirable silicon. People handling these materials should wear appropriate masks.

IV-19 and Keene monoblock present no serious handling problems insofar as we know. These materials are currently recommended in the lower sides where many of our plants must cut insulation to fit.

Further and more extensive tests are planned.

At the HPTF meeting in 1981 March, it was recommended that all plants install 10 to 20 pots using IV-19 throughout as insulation (bottom and sides).

At the fall HPTF meeting, the further testing and plant experience, including heat loss test results from 6 pots currently installed at Massena, along with control pots, will be reviewed.

In summary, Warrick should not standardize on IV-19 as proposed, but should continue to use IV-20 or Superex 2000 in bottoms. Either IV-19 or Keene monoblock can currently be used where cutting is required.


D. D. McGREGOR

DDM:skm

cc: B. D. Wheelless - Warrick
D. J. Carney - Warrick
M. J. Caprio - Pittsburgh, 19

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