

Form PTO-1595 (Rev. 09/04)
OMB No. 0651-0027 (exp. 6/30/2005)

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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)/Execution Date(s):

Ho Yu
David D. Leon
Allen M. Hurremel

Execution Date(s) 2/22/05, 3/1/05, 3/11/05

Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies)

Name: Alcoa Inc.

Internal Address: _____

Street Address: 201 Isabella Street

City: Pittsburgh

State: PA

Country: USA Zip: 15212-5858

Additional name(s) & address(es) attached? Yes No

3. Nature of conveyance:

- Assignment Merger
- Security Agreement Change of Name
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- Executive Order 9424, Confirmatory License
- Other _____

4. Application or patent number(s):

This document is being filed together with a new application.

A. Patent Application No.(s)
10/977,006

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Norman F. Hainer, Jr.

Internal Address: _____

Street Address: 100 Technical Drive

City: Alcoa Center

State: PA Zip: 15069

Phone Number: 724-337-2993

Fax Number: 724-337-5859

Email Address: norman.hainer@alcoa.com

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- Authorized to be charged by credit card
- Authorized to be charged to deposit account
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- None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers 1000
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b. Deposit Account Number _____

Authorized User Name Nancy Bayne

9. Signature: Nancy Bayne
Signature

March 14, 2005
Date

Nancy Bayne
Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 7

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ASSIGNMENT

In consideration of One Dollar (\$1.00), and other good, and valuable considerations, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, we, Ho Yu, David D. Leon and Allen M. Hummel; Murrysville, in the County of Westmoreland; Murrysville, in the County of Westmoreland; Cranberry Township, in the County of Butler; all of the State of Pennsylvania, respectively

Hereby sell, assign and transfer to ALCOA INC., a corporation of the Commonwealth of Pennsylvania, having a place of business at Alcoa Corporate Center, 201 Isabella Street, Pittsburgh, Pennsylvania 15212-5858, its successors, assigns, and legal representatives, our entire right, title and interest, for all countries, in and to any and all improvements which are disclosed and claimed, and any and all improvements which are disclosed but not claimed, in the application for United States Patent, **Serial No. 10/977,006, Filed October 28, 2004, entitled "Gas Enhanced Controlled Cooling Ingot Mold"** (Atty. Docket No. 370035-00022) and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed on any of said improvements disclosed in said application; and in and to all original and reissued patents which have been or shall be issued on said improvements;

Authorize and request my attorney to insert above the filing date and application number when they become known;

Authorize and request the Commissioner of Patents and Trademarks to issue to said Assignee, ALCOA INC., its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said improvements, or any of them disclosed in said application;

Agree that, when requested, without charge to but at the expense of said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, we will, for all countries execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said improvements; execute all rightful oaths and other papers; communicate to said Assignee, its successors, assigns, and representatives, all facts known to us relating to said improvements and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said improvements, and for vesting title to said improvements and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns and legal representatives.