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PATENTS ONLY

	Alcoa Inc. Alcoa Technical Center 100 Technical Drive Alcoa Center, PA 15069-0001	 Authorized to be charged to deposit account 8. Deposit Account No. 01-1000 (Attach duplicate copy of this page if paying by deposit account
 	Name and address of party to whom correspondence concerning document should be mailed: Thomas R. Trempus	7. Total fee (37 CFR 3.41): \$40.00
		numbers attached? □ Yes ■ No
	A. Patent Application No.(s)	B. Patent No.(s)
	2. 12/27/2001 4. 12/20/2001 Application number(s) or patent number(s):	
	■ Assignment	201 Isabella Street Pittsburgh, PA 15212-5858
3.	☐ Security Agreement ☐ Change of Name ☐ Other ☐ Change of Name ☐ Other ☐ 3. 12/13/2001	Pittsburgh, PA 15212-5858 Additional name(s) & address(es) attached?

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PATENT REEL: 012610 FRAME: 0918

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, Israel Stol, of <u>Pittsburgh</u> in the County of <u>Allegheny</u> and State of <u>Pennsylvania</u>, John W. Cobes, Jr. of <u>Lower Burrell</u> in the County of <u>Westmoreland</u> and State of <u>Pennsylvania</u>, Michael Braun, of <u>Wendhausen</u> and the Country of <u>Germany</u>, Greg S. White, of Mars, in the County of <u>Butler</u> and State of <u>Pennsylvania</u> respectively;

Hereby sell, assign and transfer to Alcoa Inc., a corporation of the state of Pennsylvania, having a place of business at Pittsburgh, in the County of Allegheny, and State of Pennsylvania, 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 but not claimed, and any and all improvements which are disclosed but not claimed, in the application for United States Patent, Serial No. 09/990,807, Filed November 20, 2001 entitled "A Joint Structure And Method For Making A Joint Structure" (Atty. Docket No. 98-2161) 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

PATENT REEL: 012610 FRAME: 0919 applications for patents and all patents on said improvements, in said Assignee, its successors, assigns and legal representatives.

RECORDED: 02/11/2002

Covenant with said Assignee, its successors, assigns and legal representatives that we have made to others no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed, and that we have full right to convey the same as herein expressed.

Israel Stol Date

Date

John W. Cobes, Jr

Michael Braun

Date

Date

Greg 8. White Date

PATENT REEL: 012610 FRAME: 0920