

8-29-03

09-09-2003

Form PTO-1595 (Rev. 10/02)

RECORDATIO PAT



DEPARTMENT OF COMMERCE Patent and Trademark Office

OMB No. 0651-0027 (exp. 6/30/2005)

102544798

Tab settings

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

- Pazhayannur Ramanathan Subramanian
- Earl Claude Helder
- Timothy Joseph Trapp
- Mark Lawrence Hunt
- Timothy V. Stotler

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

2. Name and address of receiving party(ies)

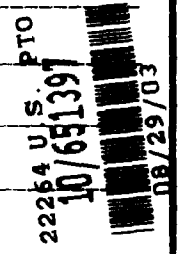
Name: General Electric Company

Internal Address: _____

Street Address: _____
1 River Road

City: Schenectady State: NY Zip: 12345

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



3. Nature of conveyance:

Assignment Merger

Security Agreement Change of Name

Other _____

Execution Date: 08/26/2003

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: 08/29/2003

A. Patent Application No.(s) _____

B. Patent No.(s) _____

Additional numbers attached? Yes No

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

Name: Paul J. DiConza

Internal Address: GE Global Research Center
K-1 3A60

Street Address: 1 Research Circle

City: Niskayuna State: NY Zip: 12309

6. Total number of applications and patents involved: 01

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

Enclosed

Authorized to be charged to deposit account


8. Deposit account number:

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9. Signature.

Christopher L. Bernard [48,234]  08/29/2003

Name of Person Signing Signature Date

Total number of pages including cover sheet, attachments, and documents: 08

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

PATENT
REEL: 014456 FRAME: 0390

ASSIGNMENT

WHEREAS, **Pazhayannur Ramanathan Subramanian, Earl Claude Helder, Timothy Joseph Trapp, Mark Lawrence Hunt and Timothy V. Stotler** (hereinafter referred to as "ASSIGNORS") have invented certain new and useful improvements in an invention entitled:

FRICITION STIR WELDING APPARATUS AND ASSOCIATED THERMAL MANAGEMENT SYSTEMS AND METHODS

_____ for which U.S. Patent Application No. _____ was filed on _____; or

X for which an application for a United States patent is being submitted to the United States Patent and Trademark Office herewith; and

WHEREAS, General Electric Company, a New York Corporation, (hereinafter referred to as "ASSIGNEE") is desirous of acquiring the entire right, title, and interest in and to said invention, and in and to said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, in accordance with the obligations entered into pursuant to an Employee Innovation and Proprietary Information Agreement or other agreement and/or for other good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell and transfer to said ASSIGNEE, and to ASSIGNEE'S successors and assigns, ASSIGNORS' entire right, title, and interest in and to said invention in the United States and its territorial possessions and in any and all foreign countries and to all Letters Patent or similar legal protections in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any application claiming priority to/from the application, or any continuation, division, continuation-in-part, reexamination, renewal, substitute, extension, or reissue thereof or any legal equivalent thereof in a foreign country for the full term(s) for which the same may be granted; and authorize and request the

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Commissioner for Patents of the United States and any official of any foreign country whose duty it is to issue patents or legal equivalents thereof, to issue same for this invention to ASSIGNEE, its lawful successors and assigns.

ASSIGNORS further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention, said application, and said Letters Patent and legal equivalents thereof in foreign countries as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments, or affidavits required to apply for, obtain, maintain, issue, and/or enforce said invention, said application, and said Letters Patent and legal equivalents thereof in foreign countries which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, we have hereunto set hand and signed on the date indicated below:

SIGNATURES

The signatures must correspond to the name(s) of the inventor(s) above.

INVENTOR # 1

Pazhayannur Ramanathan Subramanian 8-26-03
Pazhayannur Ramanathan Subramanian Date Signed

Submitted and sworn to, or affirmed before me this 26th day of August, 20 03.

Signature of Notary Public: Rita M. Lynch (SEAL)
My Commission Expires: _____

RYLA M. LYNCH
Notary Public, State of New York
Qual. In Rensselaer Co. No. 0119078764
Commission Expires 8/29/06

INVENTOR # 2

Earl Helder

Earl Claude Helder

08/22/03

Date Signed

Submitted and sworn to, or affirmed before me this 22nd day of August, 2003.

Signature of Notary Public:

Kim Franks

(SEAL)

My Commission Expires:

KIM FRANKS
Notary Public, State of Ohio
No. 264102
Qualified in Butler County
Commission Expires September 28, 2008



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INVENTOR # 3

Timothy J. Trapp
Timothy Joseph Trapp

August 26, 2003
Date Signed

Submitted and sworn to, or affirmed before me this 26th day of August, 2003.

Signature of Notary Public: Michelle R. Lavery
My Commission Expires: 2-23-07

(SEAL)



MICHELLE R. LAVERTY
Notary Public, State of Ohio
My Commission Expires 02-23-07

INVENTOR # 4

Mark Lawrence Hunt

Mark Lawrence Hunt

8/19/03

Date Signed

Submitted and sworn to, or affirmed before me this 19th day of AUGUST, 2003.

Signature of Notary Public:

W. R. Hunt

My Commission Expires:

6-21-2006

(SEAL)

INVENTOR # 5

T. Stotler

8/26/03

~~Tim Vernon Stotler~~

Date Signed

TIMOTHY V

Submitted and sworn to, or affirmed before me this 26th day of August, 20 03.

Signature of Notary Public: *Michelle R. Lavery* (SEAL)

My Commission Expires: 2-23-07



MICHELLE R. LAVERTY
Notary Public, State of Ohio
My Commission Expires 02-23-07