

Docket No. RD-27,251

FORM PTO 1595 1-31-92 10112698

101126981 PATENTS ONLY T U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

IAIENI	O SINE I
To the Honorable Commissioner of Patents and Trademarks:	Please record the attached original documents or copy thereof.
1. Name of conveying party(ies): Asish Ghosh Frederic J. Klug Philip H. Monaghan Paul S. Svec Robert A. Giddings Additional name(s) of conveying party(ies) attached? Yes No	Name and address of receiving party(ies): Name:
3. Nature of conveyance: 8 3 4 9 9	Street Address: One River Road City: Schenectady State: NY ZIP: 12345 Additional name(s) & address(es) attached? Yes No
 Application number(s) or patent number(s): If this document is being filed together with a new app Jul 13, 1999 Jul 19, 1999 Jul 28, 1999 	olication, the execution date of the application is: Jul 20, 1999
A. Patent Application No.(s) 09/352,111 Additional numbers attact	B. Patent No.(s)
5. Name and address of party to whom correspondence concerning document should be mailed: Name: General Electric Company Internal Address: CRD Patent Docket Rm. 4A59 Bldg. K-1, Salamone P.O. Box 8 Street Address: One Research Circle City: Schenectady State: NY ZIP: 12301	6. Total number of applications and patents involved: 7. Total fee (37 CFR 3.41\$40.00 Enclosed Authorized to be charged to deposit account 8. Deposit account number: 07-0868
DO NOT USE	THIS SPACE
Name of Person Signing	formation is true and correct and any attached copy August 16, 1999 Signature of pages including cover sheet, attachments and document
OMB No. 0651-0011 (exp 4/94)	
Mail documents to be recorded with required cover sheet information to:	ach this portion Patents and Trademarks 40E

In consideration of One Dollar and Other good and valuable consideration, of which I acknowledge receipt, I (we) Asish Ghosh Frederic J, Klug Philip H, Monaghan Paul S, Svec Robert A, Giddings Self-acctady, New York Robert A, Giddings Self-acctady, New York Frederic J, Klug Philip H, Monaghan Paul S, Svec Robert A, Giddings Self-acctady, New York Schenectady, New York Self-acctady, New York Self-acctady Self-acctady Self-acctady This Self-acctady Acceptage acctanged acc	ASSIGNMENT	Docket Number RD-27,251
Frederic J. Klug of Schenectady, New York Phttp. H. Monaghan of Hampton Virginia Paul S. Svec Schenectady, New York Robert A. Giddings of Scota, New York Schenectady, New York Robert A. Giddings of Schenectady, New York Schenectady, New York Schenectady, New York Office of Schenectady, New York Schenectady, New York Office of Schenectady Office o	In consideration of One Dollar and Other good and valuable con	sideration, of which I acknowledge receipt, I (we)
Philip H. Monagnan Paul S. Svec Of Scotia, New York Robert A. Giddings Schenectady, New York Schenectady Which is a complete entire right, title and interest in an assigns the entire right, title and interest in an activation of the schene in the s		
Paul S. Svec Robert A. Giddings From Schemetady, New York From Schemetady From Schemetady From Schemetady From Schemetady From Schemetady From Schemetady From From Schemetady From From Schemetady From From From From From From From From	Frederic J. Klug	of Schenectady, New York
Paul S. Svec Robert A. Giddings of Schenectady, New York of Schenectady of Schenectady, New York of Schenectady of Sche	· ·	of Hampton Virginia
sell and assign to General Electric Company, a New York Corporation its successors and assigns the entire right, title and interest in and to the improvements in A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patient executed concurrently heroorth, or	, ,	of Scotia, New York
sell and assign to General Electric Company, a New York Corporation, as successors and assigns the entire right, title and interest in and to the improvements an A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patient REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES Revecuted concurrently herearch or Revertise Revertise	Robert A. Giddings	ୀ Schen ectady, New York
sell and assign to General Electric Company, a New York Corporation, its successors and assigns the entire right, title and interest in and to the improvements in: A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patent executed concurrently believe to a second of the provided of the concurrently believe to a second of the provisional application Serial No. 60/093,647, filed 7/21/98, and any and all applications for patient interest in any sino all countries, including all divisions, reissues, continuations and extensions thereof, and all rights of provinty resulting from the filling of said United States application, and authorize and request any official whose cutsy it is to issue patents, to issue any patents on said unprovements or resulting therefrom to said General Electric Company or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, Italli communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful caths and generally do everything possible to aid said Company, its successors, assigns, and nominees in outain and enlorce proper patent protection for said improvements in all countries. **Authority** Asish Ghosh** State of New York Sta	•	of
sell and assign to General Electric Company, a New York Corporation as successors and assigns the entire right, title and interest in and to the improvements in A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patent executed concurrently herowith or U.S. Serial No.: 09/352,111 filed 7/14/99 , which is a complete application of Provisional application Serial No. 60/093,647, filed 7/21/98, and any and all applications for patient and patents therefor in any and all applications for patient and patents therefor in any and all applications from the right of said United States application, and authorize and request any official wrives duty it is to issue patents. to issue any patents on said improvements or resulting thereform to said General Electric Company or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, It will communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any logal proceeding, sign all landful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees in octain and enforce proper patient protection for said improvements in all countries. ### Asish Ghosh State of New York Country of Schenectady This i3+\(\text{ day of July 19.97}\) before me personally came the above-named		of
sell and assign to General Electric Company, a New York Corporation, its successors and assigns the entire right, title and interest in and to the improvements in AREINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patent executed concurrently helevelith or		of
sell and assign to General Electric Company, a New York Corporation. As successors and assigns the entire right, title and interest in and to the improvements in A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patent executed concurrently hereafth or X U.S. Serial No. 09/352, 111 filled 7/14/99, which is a complete application of Provisional application Serial, No. 60/093,647, filed 7/21/98, and any and all applications for patents therefor in any and all countries, including all divisions, reissues, continuations and extensions thereof and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose days it is to issue any patents on said improvements or resulting therefrom to said General Electric Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Commany, I will communicate to said Company or its representatives or nominees any facts known to me respecting said murovements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful calks and generally do everything possible to all said Company, its successors, assigns, and nominees to octain and enforce proper patent protection for said improvements in all countries. **HIB-1999** Date** State of New York		of
sell and assign to General Electric Company, a New York Corporation its successors and assigns the entire right, title and interest in and to the improvements in A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patent executed concurrently herewith or		of
sell and assign to General Electric Company, a New York Corporation, its successors and assigns the entire right, title and interest in and to the improvements in A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patent executed concurrently hydrowith, or x U.S. Serial Not 09/352,111 filled 7/14/99 which is a complete application of Provisional application Serial Not 60/093,647, filled 7/21/98, and any and all applications for patents therefor in any and all countries, including all divisions, reissues, continuations and extensions thereof, and aftinghts of pronty resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patents on said improvements or resulting thereform to said General Electric Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, I will communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all lawful papers, secured all divisional continuing and reissue applications, make all rightful obtas and generally do everything possible to aid said Company, its successors, assigns, and nominees to octain and enforce proper patent protection for said improvements in all countries. ### Country of Schenectady This i3+4 day or Jay 19-99, before me personally came the above-named to me personally known as the individual who executed the foregoing assignment. Who acknowledged to the that he/she executed the same of his/her own free will for the purposes therein set to the		of
sell and assign to General Electric Company, a New York Corporation. Its successors and assigns the entire right, title and interest in and to the improvements in: A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patient executed concurrently horsewith, or V. U.S. Serial No.: 09/352, 111 filed 7/14/99, which is a complete application of Provisional application Serial, No.: 60/093,647, filed 7/21/98, and any and all applications for patient and prients therefor in any and all countries, including all divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents to issue any patents on said improvements or resulting thereform to said General Electric Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, full communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all landul papers, execute all divisional, continuing and reissue applications, make all rightful caths and generally do everything possible to all add said Company, its successors, assigns, and nominees to acidin and enforce proper patent protection for said improvements in all countries. ### Country of Schenectady Thisi3+\(\text{day} \) day		of
sell and assign to General Electric Company, a New York Corporation its successors and assigns the entire right, title and interest in and to the improvements in A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patent executed concurrently herapith, or		of
sell and assign to General Electric Company, a New York Corporation, its successors and assigns the entire right, title and interest in and to the improvements in A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patent executed concurrently herewith or V. U.S. Serial No.: 09/352,111 filed 7/14/99, which is a complete application of Provisional application Serial No. 60/093,647, filed 7/21/98, and any and all applications for patent and patents therefor in any and all countries, including all divisions, reissues, continuations and extensions thereof and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any atents on said improvements or resulting thereform to said General Electric Company or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, I will communicate to said Company of its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all larvill papers, execute all divisional continuing and reissue applications, make all rightful daths and generally do everything possible to aid said Company, its successors, assigns, and nominees to outain and enforce proper patent protection for said improvements in all countries. **THISTORY OF THE ACT OF		of
sell and assign to General Electric Company, a New York Corporation, its successors and assigns the entire right, title and interest in and to the improvements in A REINFORCED CERAMIC SHELL MOLD, AND RELATED PROCESSES invented by me (us), as described in the application for United States patent executed concurrently herewith, or U.S. Serial No.: 09/352,111 filled 7/14/99 , which is a complete application of Provisional application Serial No. 60/093,647, filled 7/21/98, and any and all applications for paterials and patents therefor in any and all countries, including all divisions, reissues, continuations and extensions thereof, and off rights of priority resulting from the filling of said United States application, and authorize and request any official whose dusy it is to issue patents, to issue any patents on said improvements or resulting thereform to said General Electric Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, I will communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful caths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said improvements in all countries. ### Asin Ghosh State of New York County of Schenectady This i3+\underline{A} day or July 19-27, before me personally came the above-named **Asin Ghosh** to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein assignment. Who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein assignment.		uf
invented by me (us), as described in the application for United States patent executed concurrently bereveth, or		of
invented by me (us), as described in the application for United States patent executed concurrently herewith, or which is a complete application of Provisional application Serial No. 60/093,647, filed 7/21/98. u.s. Serial No.: 09/352,111 filed 7/14/99 which is a complete application of Provisional application Serial No. 60/093,647, filed 7/21/98. and any and all applications for patent and patents therefor in any and all countries, including all divisions, reissues, continuations and extensions thereof and attends of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patents on said improvements or resulting therefrom to said General Electric Company or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, I will communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make ait rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to octain and enforce proper patent protection for said improvements in all countries. Align Provide		pration, its successors and assigns the entire right, title and
invented by me (us), as described in the application for United States patent executed concurrently herewith or very state of very stat	·	ED PROCESSES
invented by me (us), as described in the application for United States patent executed concurrently herawith, or U.S. Serial No.: 09/352,111 filled 7/14/99 , which is a complete application of Provisional application Serial No.: 60/093,647, filled 7/21/98. and any and all applications for patent and patents therefor in any and all countries, including all divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filling of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patents on said improvements or resulting thereform to said General Electric Cempany, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, I will communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to octain and enforce proper patent protection for said improvements in all countries. ###################################		
executed concurrently herewith, or V.S. Serial No.: 09/352,111 filed 7/14/99 , which is a complete application of Provisional application Serial No. 60/093,647, filed 7/21/98. and any and all applications for patent and patents therefor in any and all countries, including all divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patents on said improvements or resulting therefrom to said General Electric Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, I will communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said improvements in all countries. Asish Ghosh		
executed concurrently herewith, or \text{\text{V}} U.S. Serial No.: 09/352,111 filed 7/14/99 , which is a complete application of Provisional application Serial No. 60/093,647, filed 7/21/98. and any and all applications for patent and patients therefor in any and all countries, including all divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patents on said improvements or resulting therefrom to said General Electric Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, I will communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said improvements in all countries. ### Country of Schenectady This i3+\text{\text{d}} day or		
continuations and extensions thereof, and all rights of priority resulting from the filling of said United States application, and authorize and request any official whose duty it is to issue patents, to issue any patents on said improvements or resulting therefrom to said General Electric Company, or its successors or assigns and agree that on request and without further consideration, but at the expense of said Company, I will communicate to said Company or its representatives or nominees any facts known to me respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid said Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for said improvements in all countries. State of New York State of New York Asish Ghosh This 3444 day of 3456 Ghosh This 3454 day of 3456 Ghosh To me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set for the	executed concurrently herewith, or U.S. Serial No.: 09/352,111 filed 7/14/9	, which is a complete application of
State of New York County of Schenectady This i3+\(\lambda\) day of July 19-99, before me personally came the above-named Ausor Ghosh to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set for the	continuations and extensions thereof, and all rights of priority reauthorize and request any official whose duty it is to issue pate therefrom to said General Electric Company, or its successors consideration, but at the expense of said Company, I will commatted known to me respecting said improvements and testify in continuing and reissue applications, make all rightful oaths and	esulting from the filing of said United States application, and onts, to issue any patents on said improvements or resulting or assigns and agree that on request and without further nunicate to said Company or its representatives or nominees any any legal proceeding, sign all lawful papers, execute all divisional, generally do everything possible to aid said Company, its
State of New York County of Schenectady This 13+4 day or 1999, before me personally came the above-named Ausor Ghosh to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set for the	l los	all of-
State of New York County of Schenectady This 13+4 day of July 1999, before me personally came the above-named Apiso Ghosh to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set for the	7/13/99	
This i3+4 day or July 1999, before me personally came the above-named Ausa Ghosh to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set for the	Date	Asish Ghoth
This 13+4 day or 12-4 19-29, before me personally came the above-named Abisin Ghosh to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set for the	State of New York	
above-named	County of Schenectady	
executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set for the	This 13+4 day or July	. 19 <u>99</u> , before me personally came the
executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set for the	above-named Austr Ghosh	to me personally known as the individual who
NOTARY PUBLIC IN THE STATE OF A PORT OF THE STATE OF THE	executed the foregoing assignment, who acknowledged free will for the purposes therein set forth	to me that he/she executed the same of his/her own
Seal RESIDING IN SCHENECTADY COUNTY (Notary Public)	RESIDING IN THE STATE OF NEW WAR	Rautten B. La Buglio (Notary Public)

Page 1 of 3

PATENT REEL: 010183 FRAME: 0080

ASSIGNMENT

Docket Number RD-27,251 <

7-19-99	Frederic Cly
Date	Frederic J. Klug
State of New York SS:	
County of Schenectady	
This 1944 day of July	, 19 <u>99</u> , before me personally came
the above-named Frederic J. Klug	to me personally known as the
individual who executed the foregoing assignment, v	who acknowledged to me that he/she executed the
same of his/her own free will for the purposes therei	n set forth.
KATHLEEN B. LOBUGLIO NOTARY PUBLIC IN THE STATE OF NEW YORK	Rottle B. P. D. 1
RESIDING IN SCHEMESTADY COUNTY Seal MY COMMISSION EXPIRES MAY 19, 20 40	Kathleen B Lokrafis (Notary Public)
<u> </u>	Philip H. Monaghan
	Pர்பூழ் H. Monagnan
State of	
County of June 100	
This 38 th day of	, 19^{5} , before me personally came
the above-named Philip H_Monagha	nto me personally known as the
individual who executed the foregoing assignment, v	vho acknowledged to me that he/she executed the
same of his/her own free will for the purposes therein	n section.
	J. UNG
Seal -	(Notary Public)
- Lly Commission Expires Goldani 21, 2000	
-/ /	
1/20/99	Thut S. Jues
/ Date/	Paul S. Svec
State of New York	
County of Schenectady	
This 201h day of July	, 19 <u>99</u> , before me personally came
the above-named Paul S. Svec	to me personally known as the
individual who executed the foregoing assignment, visame of his/her own free will for the purposes therei	
KATHLEEN B. LOBUGLIO NOTABY PUBLIC HE FHE STATE OF NEW YORK RESIDING HERE CHENICITADY COUNTY	
MY COMMISSION EXPIRES MAY 19, 20 (2) Seal	Lastem B. La Bruglio
OGAI	(Notary Public) (

ASSIGNMENT

Docket Number RD-27,251

J 0/4		
J	13, 1999 Date	Robert A. Giddings
ate of <u>New York</u>	<u>(</u>	
ounty of Schenect		
This 1344	day of July	, 19 <u><i>99</i></u> , before me personally came
the above-named individual who exe	Robert A. Giddings	to me personally known as the acknowledged to me that he/she executed the
NOTARY P	KATHLEEN B. LOBUGLIO	(Notary Public)
		(Notary Public) /
	Date	
tate of) SS:	
ounty of)	
the above-named		, 19, before me personally came to me personally known as the
the above-named individual who exe		to me personally known as the acknowledged to me that he/she executed the
the above-named individual who exe same of his/her ov	ecuted the foregoing assignment, who	to me personally known as the packnowledged to me that he/she executed the set forth.
the above-named individual who exessame of his/her over the Seal	ecuted the foregoing assignment, who	to me personally known as the packnowledged to me that he/she executed the set forth.
the above-named individual who exessame of his/her over the Seal	ecuted the foregoing assignment, who wn free will for the purposes therein s	to me personally known as the packnowledged to me that he/she executed the set forth.
the above-named individual who exessame of his/her over the same of his	ecuted the foregoing assignment, who we free will for the purposes therein so Date	to me personally known as the packnowledged to me that he/she executed the set forth.
the above-named individual who exe same of his/her over the same of his	Date	to me personally known as the packnowledged to me that he/she executed the set forth.
the above-named individual who exessame of his/her over the same of his/her over the same of his/her over the above-named individual who exests.	Date	to me personally known as the packnowledged to me that he/she executed the set forth. (Notary Public) , 19, before me personally came to me personally known as the packnowledged to me that he/she executed the