FORM PTC 1595 (Rev. 6-93)

OMb No. 0651-0011 (exp. 4/94)

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To the Honorable Commissioner of Patents and Tra	ademarks: Please record the attached original documents or copy thereof.
1. Name of conveying party(ies): Michael G. Mangum  Additional name(s) of conveying party(ies) attached  Yes  No	2. Name and address of receiving party(ies)  Name: TRW Inc.  Internal Address:
3. Nature of conveyance:  ☑ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other	Street Address: 1900 Richmond Road
Execution Date: November 28, 2000	City:Lyndhurst State: OH Zip: 44124
	Additional name(s) and address(es) attached?   Yes   No
A. Patent Application No.(s)	B. Patent No.(s)  But the execution date of the application is November 28, 2000  But the execution date of the application is November 28, 2000  But the execution date of the application is November 28, 2000
5. Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved 1
Name: THOMAS L. TAROLLI, ESQ.	7. Total fee (37 CFR 3.41)\$40.00
Internal Address: Tarolli, Sundheim, Covell,  Tummino & Szabo L.L.P.	☑ Enclosed ☐ Authorized to be charged to deposit account.
Street Address: 526 Superior Avenue	8. Deposit Account No.
City: <u>Cleveland</u> State: <u>Ohio</u> Zip: <u>44114-1400</u>	(Attach duplicate copy of this page if paying by deposit account)
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original document  RICHARD A. SUTKUS  Name of Person Signing  Reg. No. 43,941  Signature	information is true and correct and any attached copy is a true copy of the  11-30-00  Date  Ing cover sheet, attachments, and document: 3
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Mail Documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments Washington D.C. 20231

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**PATENT REEL: 011322 FRAME: 0549** 

## ASSIGNMENT

WHEREAS, we, Michael G. Mangum, Peter J. Astrauskas, and David D. Ryder, of Mesa, County of Maricopa, and State of Arizona; of Mesa, County of Maricopa, and State of Arizona; of Sparks, County of Washoe, and State of Nevada; respectively, have made new and useful improvements in BINDER FOR A GAS GENERATING MATERIAL:

WHEREAS, TRW Inc., a corporation duly organized and existing under the laws of the State of Ohio, having a place of business at Lyndhurst, County of Cuyahoga, State of Ohio, is desirous of acquiring the entire right, title and interest in and to the said improvements and all patents therefor to be obtained in the United States of America and countries foreign to the United States;

NOW THEREFORE, BE IT KNOWN that for valuable considerations to us paid, the receipt whereof⊣s hereby acknowledged, we, the said Michael G. Mangum, Peter J. Astrauskas, and David D. Ryder do hereby assign, sell and set over unto the said TRW Inc. its successors or assigns, the entire right, title and interest in and to the said improvements and any and all inventions pertaining thereto, the application for United States patent executed by us respectively on the \_\_\_\_\_ day of and the day of 20 all patents therefor in the United States of America and elsewhere, and the right to apply for patents therefor in all countries foreign to the United States and to claim for such applications the priority of United States applications, and we hereby request the Commissioner of Patents of the United States, and any official of any country or countries foreign to the United States whose duty it is to issue patents, to issue such patents to the said TRW Inc. its successors or assigns; and we further agree to execute such other applications and other instruments and do all other acts as may be deemed necessary by the said TRW Inc. its successors or assigns in order to fully secure, protect and preserve its rights to the said improvements and to obtain patents therefor in the United States of America and all countries foreign to the United States, all without further consideration but at the expense of the said TRW Inc. its successors or assigns.

Michael G. Mangum

COUNTY OF NO PO

SS:

day of Milen , 2000

Personally appeared before me Michael G. Mangum to me known to be the person named in and who executed the above instrument, and acknowledged to me that he executed the same for the uses and the purposes therein mentioned.

TRINA J. RAND :
TOTARY PUBLIC STATE OF ARIZONA
MARICOPA COUNTY My Comm Expires 4-7-03

Motary Public

PATENT REEL: 011322 FRAME: 0550

Signed at County of This	day of	and State of , 20 .
		Peter J. Astrauskas
STATE OF	)	
COUNTY OF	)	SS:
named in and who executed	d the above	day of , 20 .  I. Astrauskas to me known to be the person instrument, and acknowledged to me that he purposes therein mentioned.
		Notary Public
Signed at County of This	day of	and State of , 20 .
		David D. Ryder
STATE OF	)	
COUNTY OF	)	SS:
in and who executed the	above insti	day of , 20 . Ryder to me known to be the person named rument, and acknowledged to me that he purposes therein mentioned.
		Notary Public

RECORDED: 11/30/2000

PATENT REEL: 011322 FRAME: 0551