RECORDATION FORM COVER SHEET PATENTS ONLY

2-12-99 The Commissioner of Patents and Trademarks February 5, 1999 Washington, D.C. 20231 Attention: Assignment Branch Atty. Ref.: MP-207 02-26-1999 Please record the attached original document or copy therec Name of Conveying Party(ies): (1) Martin A. Callaway (2) Robert D. Adair 100973589 (3) Kenneth S. Murphy (4) Theodore J. Maniurski Name and Address of Receiving Party(ies): Howmet Research Corporation 1500 Warner Street Whitehall, MI 49461 Nature of Conveyance: [] Security Agreement [] Merger [] License [] Other: [X] Assignment
[] Change of Name Execution Date of Document: (1) January 27, 1999, (2) January 14, 1999, (3) and (4) Januaary 15, 1999. If this document is being filed together with a new application, the execution date of the application is: -Patent Application Numbers: Patent Numbers: 09/201,648 Total Number of Applications and Patents Involved: 1 . An enclosed check includes the recording fee of \$40.00 Mail correspondence concerning Mr. Edward J. Timmer the document to: Walnut Woods Centre 5955 W. Main Street Kalamazoo, MI 49009 To the best of my knowledge and belief, the foregoing information is true and correct, and any attached copy is a true copy of the original document. Respectfully submitted, Timmer (Reg.No. 27 Walnut Woods Centre

5955 W. Main Street Kalamazoo, MI 49009

Encl: Assignment Check

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

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ASSIGNMENT

WHEREAS, we (1) Martin A. Callaway, (2) Robert D. Adair, (3) Kenneth S. Murphy, and (4) Theodore J. Maniurski, hereinafter called "ASSIGNORS", residing at (1) HC 80 Box 512, Nallen, West Virginia; (2) 8395 East Pontaluna, Nunica, Michigan; (3) 3839 Applewood, Muskegon, Michigan; and (4) 7264 Durham Road, Whitehall, Michigan have invented certain new and useful improvements in VAPOR DEPOSITION TEMPERATURE CONTROL APPARATUS AND METHOD for which application Serial No. 09/201,648 for United States Letters Patent was filed on November 30, 1998; and

WHEREAS, Howmet Research Corporation hereinafter called "ASSIGNEE", a corporation of the State of Delaware having a place of business at 500 Warner St., Whitehall, Michigan 49461 is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefor in the United States and in any and all foreign countries.

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, the receipt whereof is hereby acknowledged, and other valuable consideration, we the ASSIGNORS have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said ASSIGNEE the full and exclusive right to said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations and extensions thereof.

We hereby authorize and request the Patent Office Officials in the United States and in any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of the entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its successors and assigns.

FURTHER, we agree that we will communicate to said ASSIGNEE or its representative any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths or declarations, and generally cooperate with said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention in the United States and in any and all foreign countries.

IN WITNESS WHEREOF, we have hereunto set our hands this 27 day of ANUARY,

1999.

Signed in the presence of:

Martin A. Callayray

Signed:

Robert D. Adair

Signed:

Kenneth S. Murphy

Signed:

Theodore J. Maniurski

STATE OF W	est Virginia)
COUNTY OF	Fayette)ss.)



On this <u>27th</u> day of <u>January</u>, 1998 personally appeared before me the above-named <u>Martin A. Callaway</u>, Robert D. Adair, Kenneth S. Murphy, and Theodore J. Maniurski, to me known and known to me to be the persons described in and who executed the foregoing instrument and acknowledged the same to be their free act and deed in and for the purposes set forth in said instrument.

Notarizing for Martin A. Callaway Only

March 19, 2007

My Commission expires

ASSIGNMENT

WHEREAS, we (1) Martin A. Callaway, (2) Robert D. Adair, (3) Kenneth S. Murphy, and (4) Theodore J. Maniurski, hereinafter called "ASSIGNORS", residing at (1) HC 80 Box 512, Nallen, West Virginia; (2) 8395 East Pontaluna, Nunica, Michigan; (3) 3839 Applewood, Muskegon, Michigan; and (4) 7264 Durham Road, Whitehall, Michigan have invented certain new and useful improvements in VAPOR DEPOSITION TEMPERATURE CONTROL APPARATUS AND METHOD for which application Serial No. 09/201,648 for United States Letters Patent was filed on November 30, 1998; and

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IN WITNESS WHEREOF, we have 1999.	hereunto set our hands this 14 day of January
Signed in the presence of:	
I. Mooreon Grumm	Signed: Martin A. Callaway Signed: Robert D. Adair
	Signed: Kenneth S. Murphy
	Signed:

PATENT REEL: 9778 FRAME: 0340

Theodore J. Maniurski

STATE OF MICHIGAN) COUNTY OF MUSKEGON)

On this 14 day of JANUARY, 1998 personally appeared before me the above-named Martin A. Callaway, Robert D. Adair, Kenneth S. Murphy, and Theodore J. Maniurski, to me known and known to me to be the persons described in and who executed the foregoing instrument and acknowledged the same to be their free act and deed in and for the purposes set forth in said instrument.

SEAL

// O / - O / - OO My Commission expires

F. MOONEAN BRUMM NOTARY PUBLIC MUSKEGON COUNTY, MI MY COMMISSION EXPIRES OCTOBER 1, 2000

ASSIGNMENT

WHEREAS, we (1) Martin A. Callaway, (2) Robert D. Adair, (3) Kenneth S. Murphy, and (4) Theodore J. Maniurski, hereinafter called "ASSIGNORS", residing at (1) HC 80 Box 512, Nallen, West Virginia; (2) 8395 East Pontaluna, Nunica, Michigan; (3) 3839 Applewood, Muskegon, Michigan; and (4) 7264 Durham Road, Whitehall, Michigan have invented certain new and useful improvements in VAPOR DEPOSITION TEMPERATURE CONTROL APPARATUS AND METHOD for which application Serial No. 09/201,648 for United States Letters Patent was filed on November 30, 1998; and

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IN WITNESS WHEREOF, we have 199 9.	hereunto set our hands this 15 day of January.
Signed in the presence of:	
	Signed:
	Martin A. Callaway
	Signed: Robert D. Adair
I Morriagrumm	Signed: Tenneth & Murshy
J. Yu. D. Service	Kenneth S. Murphy
T. Provilar & Clemn	Signed: Theodore J. Maniurski

STATE OF MICHIGAN) SS. COUNTY OF MUSKEGON)

RECORDED: 02/12/1999

SEAL

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On this 15 day of ANNAN, 1998 personally appeared before me the above-named Martin A. Callaway, Robert D. Adair, Kenneth S. Murphy, and Theodore J. Maniurski, to me known and known to me to be the persons described in and who executed the foregoing instrument and acknowledged the same to be their free act and deed in and for the purposes set forth in said instrument.

I Morre Drumm Notary Public

/0 -01 - 00 My Commission expires

> F. MOONEAN BRUMM NOTARY PUBLIC MUSKEGON COUNTY, MI MY COMMISSION EXPIRES OCTOBER 1, 2000