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To the Assistant Commissioner for Patents:
Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Sang Hoon JOO, Sang Deuk LEE, Myoung Kyun SHIN,
Jun Hyuk LEE, Min Young CHO, Hang Goo KIM
and Heung Won KANG

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

3. Nature of conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

Execution Date: July 20, 1999

2. Name and address of receiving party(ies)

Name: POHANG IRON & STEEL CO., LTD.;

Internal Address: _____

Street Address: 1 Koedong-Dong, Nam-Ku, Pohang-si,
Kyungsanbook-do 790-300, Republic of Korea;

City: _____

State: _____ ZIP: _____

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

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: July 20, 1999

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Kent E. BaldaufInternal Address: Webb Ziesenheim LogsdonOrkin & Hanson, P.C.Street Address: 700 Koppers Building436 Seventh AvenueCity: Pittsburgh State: PA ZIP: 15219-18186. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41).....\$ 40.00☒ Enclosed with filing fee☐ Authorized to be charged to deposit account

8. Deposit account number:

(Attach triplicate copy of this page if paying by deposit account)

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9. Statement and signature.

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.

Kent E. BaldaufName of Person Signing
Reg. No. 25,826Kent E. Baldauf
SignatureAugust 19, 1999
Date

Total number of pages including cover sheet, attachments and document

4

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

PATENT
REEL: 010337 FRAME: 0764

2. RESEARCH INSTITUTE OF INDUSTRIAL
SCIENCE & TECHNOLOGY
San 32, Hyoja-dong, Nam-ku,
Pohang-si, Kyungsangbook-do 790-330,
Republic of Korea; and

VOEST-ALPINE INDUSTRIEANLAGENBAU GMBH
Turmstrasse 44
A-4031 Linz, Austria; respectively.

ASSIGNMENT

WHEREAS, We, Sang Hoon Joo, Sang Deuk Lee, Myoung Kyun Shin, Jun Hyuk Lee, Min Young Cho, Hang Goo Kim and Heung Won Kang, residing in Research Institute of Industrial Science & Technology, San 32, Hyoja-dong, Nam-ku, Pohang-si, Kyungsangbook-do 790-330, Republic of Korea; Research Institute of Industrial Science & Technology, San 32, Hyoja-dong, Nam-ku, Pohang-si, Kyungsangbook-do 790-330, Republic of Korea; Research Institute of Industrial Science & Technology, San 32, Hyoja-dong, Nam-ku, Pohang-si, Kyungsangbook-do 790-330, Republic of Korea; Research Institute of Industrial Science & Technology, San 32, Hyoja-dong, Nam-ku, Pohang-si, Kyungsangbook-do 790-330, Republic of Korea; and Research Institute of Industrial Science & Technology, San 32, Hyoja-dong, Nam-ku, Pohang-si, Kyungsangbook-do 790-330, Republic of Korea; have invented certain new and useful improvements entitled APPARATUS FOR MANUFACTURING MOLTEN PIG IRON AND REDUCED IRON BY UTILIZING FLUIDIZED BED, AND METHOD THEREFOR for which we have this day executed an application for United States Letters Patent;

AND, WHEREAS POHANG IRON & STEEL CO., LTD. and RESEARCH INSTITUTE OF INDUSTRIAL SCIENCE & TECHNOLOGY, both corporations of the Republic of Korea, and VOEST-ALPINE INDUSTRIEANLAGENBAU GMBH, a corporation of Austria, having a place of business at 1 Koedong-dong, Nam-ku, Pohang-si, Kyungsangbook-do 790-300, Republic of Korea; San 32, Hyoja-dong, Nam-ku, Pohang-si, Kyungsangbook-do 790-330, Republic of Korea; and Turmstrasse 44, A-4031 Linz, Austria, respectively, hereinafter called the "assignees", are desirous of acquiring the entire right, title, and interest in and to said application and the inventions and improvements therein disclosed.

NOW, THEREFORE, in consideration of One (\$1.00) Dollar and other good and valuable consideration paid to us by said assignees, the receipt of which is hereby acknowledged, we do hereby assign, sell, transfer, and set over unto said assignees the entire right, title and interest in and to said application and the inventions and improvements therein disclosed for the United States and all foreign countries and any Letters Patent which may issue therefor in the United States and all foreign countries and all divisions, reissues, continuations, renewals, and/or extensions thereof, said assignees to have and to hold the interests herein assigned to the full ends of the terms of said Letters Patent and any and

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| REEL: 010337 FRAME: 0766

all divisions, reissues, continuations, renewals, and/or extensions thereof, respectively, as fully and entirely as the same would have been held and enjoyed by us had this assignment not been made.

The Commissioner of Patents and Trademarks is requested to issue such Letters Patent in accordance herewith. We covenant that we are the lawful owners of the said application, inventions, and improvements, that the same are unencumbered, that no license has been granted to make, use, or vend the said inventions or improvements or any of them, and that we have the full right to make this assignment.

And for the consideration aforesaid, we agree jointly and individually that we will communicate to said assignees or the representatives thereof any facts known to us respecting said inventions and improvements, and will, upon request, but without expense to us, testify in any legal proceedings, sign all lawful papers, execute all divisional, reissue, continuation, renewal, and/or extension applications, make all rightful oaths, and generally do all other and further lawful acts, deemed necessary or expedient by said assignees or by counsel for said assignees, to assist or enable said assignees to obtain and enforce full benefits from the rights and interests herein assigned. This assignment shall be binding upon our heirs, executors, administrators, and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors, and/or assigns, as the case may be, of said assignees.

Dated: July 20, 1989

Sang Hoon Joo
Sang Hoon Joo

Dated: July 20, 1989

Sang Deuk Lee
Sang Deuk Lee

Dated: July 20, 1989

Myoung Kyun Shin
Myoung Kyun Shin

Dated: July 20, 1989

Jun Hyuk Lee
Jun Hyuk Lee

Dated: July 20, 1989

Min Young Cho
Min Young Cho

Dated: July 20, 1989

Hang Goo Kim
Hang Goo Kim

Dated: July 20, 1989

Heung Won Kang
Heung Won Kang

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RECORDED: 08/19/1999

REEL: 010337 FRAME: 0767