

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT2691589

SUBMISSION TYPE:	NEW ASSIGNMENT						
NATURE OF CONVEYANCE:	ASSIGNMENT						
CONVEYING PARTY DATA							
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>MICHAEL LUNDH</td> <td>08/09/2013</td> </tr> <tr> <td>XIAOJING ZHANG</td> <td>08/19/2013</td> </tr> </tbody> </table>		Name	Execution Date	MICHAEL LUNDH	08/09/2013	XIAOJING ZHANG	08/19/2013
Name	Execution Date						
MICHAEL LUNDH	08/09/2013						
XIAOJING ZHANG	08/19/2013						
RECEIVING PARTY DATA							
Name:	ABB RESEARCH LTD.						
Street Address:	AFFOLTERNSTRASSE 44						
City:	CH-8050 ZURICH						
State/Country:	SWITZERLAND						
PROPERTY NUMBERS Total: 1							
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>14158497</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	14158497		
Property Type	Number						
Application Number:	14158497						
CORRESPONDENCE DATA							
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Phone:	203-324-6155						
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<i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i>							
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Address Line 4:	STAMFORD, CONNECTICUT 06905						
ATTORNEY DOCKET NUMBER:	04189-P0147A						
NAME OF SUBMITTER:	WESLEY W. WHITMYER JR.						
Signature:	/Wesley W. Whitmyer Jr./						
Date:	01/21/2014						
Total Attachments: 4 source=04189-P0147A#page1.tif source=04189-P0147A#page2.tif source=04189-P0147A#page3.tif source=04189-P0147A#page4.tif							

Assignment

WHEREAS, We, the undersigned inventors, have made certain inventions or discoveries (or both) as set forth in an application for Letters Patent of the United States of America, entitled **Method And A Control System For Controlling A Melting Process**, bearing U.S. Patent Application No. 14/158,497 and filed on January 17, 2014;

WHEREAS, ABB Research Ltd., a company organized and existing under the laws of Switzerland, and having an office and place of business at Affolternstrasse 44; CH-8050 Zurich, Switzerland, and, together with its successors and assigns is hereinafter called "Assignee", and is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

NOW THEREFORE, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in any and all countries, including all divisional, renewal, substitute, continuation and convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;

2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in our names or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;

3. Authorize and request the Commissioner of Patents of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patents to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;

4. Warrant that we have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that we have good right to assign the same to Assignee without encumbrance;

5. Bind our heirs, legal representatives and assigns, as well as ourselves, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to us or them, all acts reasonably serving to assure that said inventions and discoveries, said patent applications and said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by us, our heirs, legal representatives and assigns if this assignment had not

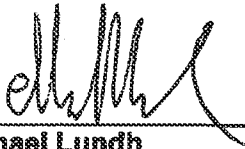
Page 2
Assignment
Serial No.

04189-P0147A

been made; and particularly to execute and deliver to Assignee all lawful application documents, including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to us relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in our control or in the control of our heirs, legal representatives or assigns, which may be useful for establishing the facts of our conceptions, disclosures, and reduction to practice of said inventions and discoveries.

IN WITNESS WHEREOF, we, Michael Lundh and Xiaojing Zhang, have hereunto set our hands and affixed our seals.

2013-08-09
Date



Michael Lundh
Haspelgatan 13
S-72349 Vasteras, Sweden

Declaration of Witness

I declare that I was personally present and did see Michael Lundh, who is personally known to me to be the person named in this assignment, duly sign and execute the same.

Declared at _____, on 2013-08-19



Signature of Witness

Mats Molander

Name of Witness

2013-08-19
Date

Xiaoqing Zhang
Xiaoqing Zhang
Fyrbaksvagen 8, lgh 27
S-722 10 Vasteras, Sweden

Declaration of Witness

I declare that I was personally present and did see Xiaoqing Zhang, who is personally known to me to be the person named in this assignment, duly sign and execute the same.

Declared at _____, on 2013-08-19.

Mats Molander
Signature of Witness

Mats Molander
Name of Witness