503173234 02/10/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3219849

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MARK WILLIAM KENNEDY	01/30/2015
SHAHID AKHTAR	02/03/2015
ROBERT FRITZSCH	02/02/2015
JON ARNE BAKKEN	02/02/2015
RAGNHILD ELISABETH AUNE	01/30/2015

RECEIVING PARTY DATA

Name:	NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU)
Street Address:	C/O NTNU TECHNOLOGY TRANSFER AS, KLAEBUVEIEN 153
City:	TRONDHEIM
State/Country:	NORWAY
Postal Code:	N-7491

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14396968

CORRESPONDENCE DATA

Fax Number: (703)205-8050

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: (703) 205-8000

Email: mailroom@bskb.com, lboone@bskb.com
Correspondent Name: BIRCH, STEWART, KOLASCH & BIRCH, LLP

Address Line 1: P.O. BOX 747

Address Line 4: FALLS CHURCH, VIRGINIA 22040-0747

ATTORNEY DOCKET NUMBER:	6080-0105PUS2
NAME OF SUBMITTER:	LA TESA BOONE
SIGNATURE:	/LA TESA BOONE/
DATE SIGNED:	02/10/2015

Total Attachments: 9

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PATENT REEL: 034928 FRAME: 0913

BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747 Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

Title of Invention APPARATUS AND METHOD FOR PRIMING A MOLTEN METAL

	As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:
	This declaration is directed to the application attached hereto.
Application not Attached	If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:
Enter Appln. No.	⇒ United States Application Number or PCT International Appln. No. PCT/IB2013/000775
Enter Filing Date	⇔ filed on April 23, 2013
	The above-identified application was made or authorized to be made by me.
	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
	I have reviewed and understand the contents of the above-identified application, including the claims.
`	I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.
	WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.
nsert Name f Assignee	→ WHEREAS, Norwegian University of Science and Technology (NTNU)
isert Address f Assignee	of c/o NTNU Technology Transfer AS, Klaebuveien 153, N-7491 Trondheim, Norway,
	its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and
beck Box if ppropriate	in any foreign countries.
	NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

Page 1

BSKB-DECASSIGN(09-12)

The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL N	AME OF INVENTOR	
Inventor's Name	Mark William KENNEDY	Date: 30/01/20/5
Inventor's Signature ⇒ Signature:	- Mal Mand	
* *		entire inventive entity, must accompany this form.
Use a separate form for each i	nventor; or check the box below and complete	the attached page(s) to list additional inventors.
Additional inventors are b	peing named on the 1 supplemental sheet(s) at	ached hereto.

Page 2

BSKB-DECASSIGN-SINGLE (09-12)

SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

LEGAL NAME OF JOINT INVENTOR, IF ANY

ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

Date: _____ Inventor's Name ➡ Inventor: Shahid AKHTAR Inventor's Signature ⇒ Signature: LEGAL NAME OF JOINT INVENTOR, IF ANY ⇒ Inventor: Robert FRITZSCH Date: Inventor's Signature ⇒ Signature: LEGAL NAME OF JOINT INVENTOR, IF ANY ⇒Inventor: Jon Arne BAKKEN Date: Inventor's Name Inventor's Signature ⇒Signature: LEGAL NAME OF JOINT INVENTOR, IF ANY Date: Inventor's Name ⇒Inventor: Ragnhild Elisabeth AUNE Inventor's Signature
⇒Signature: LEGAL NAME OF JOINT INVENTOR, IF ANY Date: _____ Inventor's Name ⇔Inventor: Inventor's Signature ⇔Signature: LEGAL NAME OF JOINT INVENTOR, IF ANY Date: Inventor's Name ⇔Inventor: LEGAL NAME OF JOINT INVENTOR, IF ANY Date: Inventor's Name ⇔Inventor: Inventor's Signature LEGAL NAME OF JOINT INVENTOR, IF ANY Date: Inventor's Name ⇔Inventor: Inventor's Signature

⇔Signature:

PATENT BSKB-DECASSIGN\(09-12)

REEL: 034928 FRAME: 0916

BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747

Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

Title of Invention	⇔	APPARATUS AND METHOD FOR PRIMING A MOLTEN METAL
		As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:
		This declaration is directed to the application attached hereto.
Application not Attached	⇔	If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:
Enter Appln. No.	⇔	United States Application Number or PCT International Appln. No. PCT/IB2013/000775
Enter Filing Date	⇔	filed on April 23, 2013
		The above-identified application was made or authorized to be made by me.
		I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
		I have reviewed and understand the contents of the above-identified application, including the claims.
		I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.
		WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.
Insert Name of Assignee	⇔	WHEREAS, Norwegian University of Science and Technology (NTNU)
Insert Address of Assignee	⇔	of c/o NTNU Technology Transfer AS, Klaebuveien 153, N-7491 Trondheim, Norway,
22.2.303.80.00		its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and

Check Box if Appropriate

in any foreign countries.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

Page 1

PATENT BSKB-DECASSIGN(09-12)

REEL: 034928 FRAME: 0917

The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

Inventor's Name	' Inventor:	Mark William KENNEDY	Date:
Inventor's Signature ➪	Signature:		
Use a separate fo	orm for each i	O/SB/14 or equivalent), including naming the entire inventive inventor; or check the box below and complete the attached papering named on the $\underline{1}$ supplemental sheet(s) attached hereto.	e entity, must accompany this form. ge(s) to list additional inventors.

PATENT DECASSIGN-SINGLE (09-12)

SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name	→ Inventor: Shahid AKHTAR	Date: 03-02-2015
Inventor's Signature	Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒ Inventor: Robert FRITZSCH	Date:
Invénior's Signature	⇔ Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	•
Inventor's Name	◆Inventor: Jon Arne BAKKEN	Date:
Inventor's Signature	⇔Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒Inventor: Ragnhild Elisabeth AUNE	Date:
Inventor's Signature	[©] Signature:	· · · · · · · · · · · · · · · · · · ·
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor:	Date:
Inventor's Signature	*Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇒Inventor:	Date:
Inventor's Signature	©Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
Inventor's Name	≈Inventor:	Date:
Inventor's Signature	⇔Signature:	
	LEGAL NAME OF JOINT INVENTOR, IF ANY	
inventor's Name	*Inventor:	Date:
inventor's Signature	Signature:	

BSKB-DECASSIGN\(09-12)

PATENT REEL: 034928 FRAME: 0919

BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747

Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

UNITED STATES PATENT RIGHTS, OR

	United States Plus all Foreign Patent Rights
Title of Invention	⇒ APPARATUS AND METHOD FOR PRIMING A MOLTEN METAL
	As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:
	This declaration is directed to the application attached hereto.
Application not Attached	⇒ If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:
Enter Appln. No.	⇒ United States Application Number or PCT International Appln. No. PCT/IB2013/000775
Enter Filing Date	⇔ filed on April 23, 2013
	The above-identified application was made or authorized to be made by me.
	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
	I have reviewed and understand the contents of the above-identified application, including the claims.
	I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.
	WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.
Insert Name of Assignee	⇒ WHEREAS, Norwegian University of Science and Technology (NTNU)
Insert Address of Assignee	⇔ of c/o NTNU Technology Transfer AS, Klaebuveien 153, N-7491 Trondheim, Norway,
of Assignee	its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and
Check Box if Appropriate	in any foreign countries.
	NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories,

dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or

PATENT BSKB-DECASSIGN(09-12) **REEL: 034928 FRAME: 0920**

terms for which the same may be granted.

The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

Inventor's Name □ Inventor:	Mark William KENNEDY	Date:		
Inventor's Signature ⇔ Signature:				
An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.				
\square Additional inventors are being named on the $\underline{1}$ supplemental sheet(s) attached hereto.				

PATENT DECASSIGN-SINGLE (09-12)

SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name	⇒ Inventor:	Shahid AKHTAR	Date:
Inventor's Signature	^{e ⇔} Signature:		
	LEGAL N	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔ Inventor:		Date: 02 02 2015
Inventor's Signature	° ⇔ Signature:	247	
	LEGAL N	AME OF JOIN PINVENTOR, IF ANY	
Inventor's Name	⇔Inventor:	Jon Arne BAKKEN	Date: 02.02.2015
Inventor's Signature	[⇔] Signature:	Jon arue Ralchan	
	LEGAL N.	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor:	Ragnhild Elisabeth AUNE	Date: 39/1 - 2015
Inventor's Signature	⇔Signature:	Ragnfild & Aure	
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
Inventor's Name	⇔Inventor:		Date:
Inventor's Signature	⇔Signature:		
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
inventor's Name	⇒Inventor:		Date:
inventor's Signature	⇔Signature:		
	LEGAL NA	AME OF JOINT INVENTOR, IF ANY	
nventor's Name	⇔Inventor:		Date:
nventor's Signature	⇒Signature:		
	LEGAL NA	ME OF JOINT INVENTOR, IF ANY	
aventor's Name	⇔Inventor:		Date:
wentor's Signature	⇔Signature:	·	

BSKB-DECASSIGN \(09-12)

PATENT REEL: 034928 FRAME: 0922

RECORDED: 02/10/2015