PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YONGKANG ZHANG	07/30/2015
JINZHONG LU	07/30/2015
SHUILI GONG	07/30/2015
FENGZE DAI	07/30/2015
SHIKUN ZOU	07/30/2015

RECEIVING PARTY DATA

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PARTMENT OF SCIENCE AND TECHNOLOGY DEVELOPMENT
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DUTHEAST UNIVERSITY
D. 2 SIPAILOU ROAD
JANWU DISTRICT, NANJING
ANGSU
HINA
0096
ANGSU UNIVERSITY
D. 301 XUEFU ROAD
IENJIANG
ANGSU
HINA
2013

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14765538

CORRESPONDENCE DATA

<u>PATENT</u>

503435073 REEL: 036318 FRAME: 0445

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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.

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Email:cgee@hayes-soloway.comCorrespondent Name:NORMAN P. SOLOWAYAddress Line 1:4640 E. SKYLINE DRIVEAddress Line 4:TUCSON, ARIZONA 85718

ATTORNEY DOCKET NUMBER: JINGWEI DOP15US983

NAME OF SUBMITTER: NORMAN P. SOLOWAY

SIGNATURE: /norman p. soloway/

DATE SIGNED: 08/13/2015

Total Attachments: 5

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> PATENT REEL: 036318 FRAME: 0446

1, Yongkang Zhang of Jiangsu, China having invented certain inventions and improvements in METHOD AND APPARATUS FOR INJECTING WATER RESTRAINT LAYER OF LASER SHOCK PROCESSING BLADE and having executed an application for Letters Patent of the United States of America describing the same and based thereon on the 30th day of July , 20 15 (U.S. Patent Application Serial No. 14/765,538 , filed August 3, 2015), for good and valuable consideration, the receipt of which is hereby acknowledged from BELJING AERONAUTICAL MANUFACTURING TECHNOLOGY RESEARCH INSTITUTE, a Chinese company having its principal place of business at Department of Science and Technology Development, Mailbox 340,Beijing 100024, China; SOUTHEAST UNIVERSITY, a Chinese University having its principal place of business at No. 2 Sipailou Road, Xuanwu District, Nanjing, Jiangsu 210096 China and JIANGSU UNIVERSITY a Chinese University having its principal place of business at No. 301 Xuefu Road, Zhenjiang, Jiangsu, 212013 China (hereinafter called the Assignees), do hereby sell, assign and transfer unto the Assignees, its successors, and assigns my entire right, title, and interest, in and to said invention in the United States of America, including all rights, title and interest in the above-mentioned application and any divisional, continuing or reissue application or applications and any patent which may be issued on the said invention in the United States of America;
And for the same consideration I do agree that I will upon request execute any instrument which the Assignees may desire to carry this Assignment into effect and perfect the title transferred hereby or prosecute the above-mentioned application;
And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent on the said application to the Assignees;
And I do hereby jointly and severally covenant for myself and for my legal representatives that I have granted no right or license to make, use, or sell said invention to anyone except the Assignees, that prior to the execution of this deed my right, title, and interest in and to said inventions or any of them or any part thereof has not been otherwise encumbered by me, and that I have not executed and will not execute any instrument in conflict herewith.
IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year nereinafter noted.
nventor's signature Yongkang Zhang Date July . 10, 2015
Vitness: Jiajia Chen Date: July, 30, 2015 Date: July, 30, 2015

PATENT REEL: 036318 FRAME: 0447

METHOD AND APPARATUS FOR INJECTING WATER RESTRAINT LAYER OF LASER SHOCK PROCESSING BLADE and having executed an application for Letters Patent of the United States of America describing the same and based thereon on the 30th day
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of July , 20 15 (U.S. Patent Application Serial No. 14/765 538 filed
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acknowledged from BEIJING AERONAUTICAL MANUFACTURING TECHNOLOGY
RESEARCH INSTITUTE, a Chinese company having its principal place of business at
Department of Science and Technology Development, Mailbox 340, Beijing 100024, China;
SOUTHEAST UNIVERSITY, a Chinese University having its principal place of business at
No. 2 Sipailou Road, Xuanwu District, Nanjing, Jiangsu 210096 China and JIANGSU
UNIVERSITY a Chinese University having its principal place of business at No. 301 Xuefu
Road, Zhenjiang, Jiangsu, 212013 China (hereinafter called the Assignees), do hereby sell, assign
and transfer unto the Assignees, its successors, and assigns my entire right, title, and interest, in
and to said invention in the United States of America, including all rights, title and interest in the
and the month of the application and any divisional continuing on release and the state of the s
and any patent which may be issued on the said invention in the United States of America;
And for the same consideration I do agree that I will upon request execute any instrument
the ribinghoes may desire to carry this Assignment into effect and norfoot the tist
transferred nelectory or prosecute the above-mentioned application.
And I do hereby authorize and request the Commissioner of Patents and Trademarks of
the United States of America to issue Letters Patent on the said application to the Assignees;
And I do hereby jointly and severally covenant for myself and for my legal
representatives that I have granted no right or license to make the
and one except the cassignees, that prior to the execution of this dead
The to said the children of any nort thoroat has med to the contract t
by me, and that I have not executed and will not execute any instrument in conflict herewith.
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IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year
hereinafter noted.
Towns and the second se
Inventor's signature //nzhong /u Date July 30, 2015
Full name (typed or printed) Jinzhong Lu
Witness: Xian above Thank Thank I also to
Witness: Xiao ging Zhang Witness: Deshui Ma Date: July 30, 2015 Date:
Witness: Xiao girig Zhang Witness: Deshui Ha Date: July: 30, 2015 Date: Jaly: \(\frac{1}{2}\tau. \)
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I, Shuili Gong of Beijing, China having invented certain inventions and improvements in METHOD AND APPARATUS FOR INJECTING WATER RESTRAINT LAYER OF LASER SHOCK PROCESSING BLADE and having executed an application for Letters Patent of the United States of America describing the same and based thereon on the 30th day of July , 2015 (U.S. Patent Application Serial No. 14/765,538 , filed August 3, 2015), for good and valuable consideration, the receipt of which is hereby acknowledged from BEIJING AERONAUTICAL MANUFACTURING TECHNOLOGY RESEARCH INSTITUTE, a Chinese company having its principal place of business at Department of Science and Technology Development, Mailbox 340,Beijing 100024, China; SOUTHEAST UNIVERSITY, a Chinese University having its principal place of business at No. 2 Sipailou Road, Xuanwu District, Nanjing, Jiangsu 210096 China and JIANGSU UNIVERSITY a Chinese University having its principal place of business at No. 301 Xuefu Road, Zhenjiang, Jiangsu, 212013 China (hereinafter called the Assignees), do hereby sell, assign and transfer unto the Assignees, its successors, and assigns my entire right, title, and interest, in and to said invention in the United States of America, including all rights, title and interest in the above-mentioned application and any divisional, continuing or reissue application or applications and any patent which may be issued on the said invention in the United States of America; And for the same consideration I do agree that I will upon request execute any instrument which the Assignees may desire to carry this Assignment into effect and perfect the title
transferred hereby or prosecute the above-mentioned application;
And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent on the said application to the Assignees;
And I do hereby jointly and severally covenant for myself and for my legal representatives that I have granted no right or license to make, use, or sell said invention to anyone except the Assignees, that prior to the execution of this deed my right, title, and interest in and to said inventions or any of them or any part thereof has not been otherwise encumbered by me, and that I have not executed and will not execute any instrument in conflict herewith.
IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year hereinafter noted.
Inventor's signature Shuili Gong Date July, 30, 2015 Full name (typed or printed) Shuili Gong
Witness: Peghui Hu Date: July, 30. 2017 Witness: Youli Huang Date: July, 30, 2015
1

I, Fengze Dai of Jiangsu, China having invented certain inventions and improvements in METHOD AND APPARATUS FOR INJECTING WATER RESTRAINT LAYER OF LASER SHOCK PROCESSING BLADE and having executed an application for Letters Patent of the United States of America describing the same and based thereon on the 30th day of July 2015 (U.S. Patent Application Serial No. 14/765,538 , filed August 3, 2015), for good and valuable consideration, the receipt of which is hereby acknowledged from BEIJING AERONAUTICAL MANUFACTURING TECHNOLOGY RESEARCH INSTITUTE, a Chinese company having its principal place of business at Department of Science and Technology Development, Mailbox 340,Beijing 100024, China; SOUTHEAST UNIVERSITY, a Chinese University having its principal place of business at No. 2 Sipailou Road, Xuanwu District, Nanjing, Jiangsu 210096 China and JIANGSU UNIVERSITY a Chinese University having its principal place of business at No. 301 Xuefu Road, Zhenjiang, Jiangsu, 212013 China (hereinafter called the Assignees), do hereby sell, assign and transfer unto the Assignees, its successors, and assigns my entire right, title, and interest, in and to said invention in the United States of America, including all rights, title and interest in the above-mentioned application and any divisional, continuing or reissue application or applications and any patent which may be issued on the said invention in the United States of America; And for the same consideration I do agree that I will upon request execute any instrument which the Assignees may desire to carry this Assignment into effect and perfect the title transferred hereby or prosecute the above-mentioned application;
And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent on the said application to the Assignees;
And I do hereby jointly and severally covenant for myself and for my legal representatives that I have granted no right or license to make, use, or sell said invention to anyone except the Assignees, that prior to the execution of this deed my right, title, and interest in and to said inventions or any of them or any part thereof has not been otherwise encumbered by me, and that I have not executed and will not execute any instrument in conflict herewith.
IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year hereinafter noted.
Inventor's signature Fengre Pai Date July , 30. 2015 Full name (typed or printed) Fengre Dai
Witness: Xiaohua Shi Witness: Xiaoging Zhang Date: July 130, W15 Date: July 150, No15

<u>ASSIGNMENT</u>
I, Shikun Zou of Beijing, China having invented certain inventions and improvements in METHOD AND APPARATUS FOR INJECTING WATER RESTRAINT LAYER OF LASER SHOCK PROCESSING BLADE and having executed an application for Letters Patent of the United States of America describing the same and based thereon on the 30th day of July , 20 15 (U.S. Patent Application Serial No. 14/765,538 , filed August 3, 2015), for good and valuable consideration, the receipt of which is hereby acknowledged from BEIJING AERONAUTICAL MANUFACTURING TECHNOLOGY RESEARCH INSTITUTE, a Chinese company having its principal place of business at Department of Science and Technology Development, Mailbox 340,Beijing 100024, China; SOUTHEAST UNIVERSITY, a Chinese University having its principal place of business at No. 2 Sipailou Road, Xuanwu District, Nanjing, Jiangsu 210096 China and JIANGSU UNIVERSITY a Chinese University having its principal place of business at No. 301 Xuefu Road, Zhenjiang, Jiangsu, 212013 China (hereinafter called the Assignees), do hereby sell, assig and transfer unto the Assignees, its successors, and assigns my entire right, title, and interest, in and to said invention in the United States of America, including all rights, title and interest in the above-mentioned application and any divisional, continuing or reissue application or application and any patent which may be issued on the said invention in the United States of America;
And for the same consideration I do agree that I will upon request execute any instrument which the Assignees may desire to carry this Assignment into effect and perfect the title transferred hereby or prosecute the above-mentioned application;
And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent on the said application to the Assignees;
And I do hereby jointly and severally covenant for myself and for my legal representatives that I have granted no right or license to make, use, or sell said invention to anyone except the Assignees, that prior to the execution of this deed my right, title, and interest in and to said inventions or any of them or any part thereof has not been otherwise encumbered by me, and that I have not executed and will not execute any instrument in conflict herewith.
IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year hereinafter noted.

Inventor's signature Shikun Zou Date July , 30. Dolf
Full name (typed or printed) Shikun Zou

Witness: Nin Yiang Witness: Jlayia. Chen
Date: July 130, Jalf Date: July 130, 2015

RECORDED: 08/13/2015

PATENT REEL: 036318 FRAME: 0451