506306996 10/16/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6353745

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JAE HOON KIM	09/08/2020
DA HOON AHN	10/14/2020

RECEIVING PARTY DATA

Name:	KOREA RAILROAD RESEARCH INSTITUTE		
Street Address:	(WORAM-DONG) 176, CHEOLDOBANGMULGWAN-RO		
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State/Country:	KOREA, REPUBLIC OF		
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PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	17042524	

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	MSF0071US
NAME OF SUBMITTER:	JAEGYOO JANG
SIGNATURE:	/Jaegyoo Jang/
DATE SIGNED:	10/16/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 5

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PATENT 506306996 REEL: 054102 FRAME: 0243

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> PATENT REEL: 054102 FRAME: 0244

DECLARATION AND ASSIGNMENT

Title of Invention: ENERGY HARVESTER AND ENGINE MONITORING SYSTEM USING SAME

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 application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.

Whereas, each undersigned inventor has made certain inventions, improvements, and discoveries (herein referred to as the "INVENTION") disclosed in the above-identified patent application (herein referred to as the ("APPLICATION");

Whereas, KOREA RAILROAD RESEARCH INSTITUTE, a corporation of Republic of Korea having a place of business at (Woram-dong) 176, Cheoldobangmulgwan-ro, Uiwang-si, Gyeonggi-do 16105 Republic of Korea (herein referred to as "ASSIGNEE"), desires to acquire, and each undersigned inventor desires to grant to ASSIGNEE, the entire worldwide right, title, and interest in and to the INVENTION and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor (herein referred to ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to the ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the INVENTION, the APPLICATION, and any and all other patent applications and patents for the INVENTION which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, continuations-in-part, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the INVENTION, to ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by ASSIGNEE, its successors, legal representatives, and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned

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MSF0071US

had this Assignment not been made; and each undersigned inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the INVENTION, the APPLICATION, and all related patents and applications, in ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by ASSIGNEE, its successors, legal representatives, and assigns.

I hereby acknowledge 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.

Legal Name of Inventor: KIM, Jae Hoon Signature:	Date: 8.540.202
Legal Name of Inventor: AHN, Da Hoon	
Signature:	Date:

Doc code: Oath

Document Description: Oath or declaration filed

PTO(A)A/02 (07-13)

Approved for use through 11/30/2020. OMB 0881-0032 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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SUBSTITUTE STATEMENT IN LIEU OF AN OATH OR DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (35 U.S.C. 115(d) AND 37 CFR 1.64)

Title of Invention				
The all	ent is directed to: ached application, States application or PCT i	PCT/KR	2018/003692	
LEGAL NA	ME of inventor to who	m this substitute statement applies	×	
(<i>E.g.</i> , Given		any)) and Family Name or Surname)		
Residence (i	except for a deceased or le	egally incapacitated inventor):		
_{cilv} Suvi	/on-si	Gyeonggi-do G	Republic of Korea	
	And the second s	egally incapacitated inventor): I Jugong Apt.) 814-1504, 35, Ch	eoncheon-ro 74beon-gil, Jangan-gu	
_{ciiy} Suw	/on-si	_{State} Gyeonggi-do	16327 Republic of Korea	
I believe the above-named inventor or joint inventor to be the original inventor or an original joint inventor of a claimed invention in the application. The above-identified application was made or authorized to be made by me. I hereby acknowledge that any willful false statement made in this statement is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.				
Le M As D Pe	gal Representative (for de isignee, erson to whom the inventor	this substitute statement applies: ceased or legally incapacitated inventor o ris under an obligation to assign, s a sufficient proprietary interest in the ma	nly), tier (petition under 37 CFR 1.46 is required), or	

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 116 and 37 CFR 1.53. The information is required to obtain or ratein a benefit by the public which is to file (and by the USPTO to process) an application. Confidentially is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1458, Alexandria, VA 22313-1459.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2

PATENT REEL: 054102 FRAME: 0247

PTO/SB/AIA02 (07-13)

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Circumstances permitting execu	illon of this substitute stat	ement:		
Inventor is deceased;				
Jefentor is under legal incapacity.				
inventor cannot be fou	Inventor cannot be found or reached after diligent effort, or			
Inventor has refused to	execute the oath or decl	aration under 37 CF	R 1.63.	
If there are joint inventors, plea	se check the appropriate (	oox below:		
An application data sh or is currently submitte	An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) naming the entire inventive entity has been or is currently submitted.			
OR				
An application data sh Statement Supplemen information is attached	tal Sheet (PTO/AIA/11 or	TO/AIA/14 or equive equivalent) naming	alent) has not been s the entire inventive s	submitted. Thus, a Substitute entity and providing inventor
	3318	RNING:		
Petitioner/applicant is cautioned to contribute to identity theft. Person (other than a check or credit card to support a petition or an applica petitioners/applicants should cons USPTO. Petitioner/applicant is a application (unless a non-publicat patent. Furthermore, the record for referenced in a published applica PTO-2038 submitted for payment.	nel information such as so authorization form PTO-2 tion. If this type of person sider redecting such perso dvised that the record of a dion request in compliance from an abandoned applic tion or an issued patent (s	icial security numbe 038 submitted for pa ial information is incomal information from patent application in with 37 CFR 1.213 ation may also be at ise 37 CFR 1.14).	is, bank account nur ayment purposes) is luded in documents if the documents befine a available to the pu (a) is made in the ap vailable to the public checks and credit ca	mbers, or credit card numbers in ever required by the USPTO submitted to the USPTO, ore submitting them to the blic after publication of the application or issuance of a critical forms.
PERSON EXECUTING THIS SUI	STITUTE STATEMENT:			
_{Name:} Eun OK LE	E			70 / 4. Date (Optional)
Signature 이 운옥				
APPLICANT NAME AND TITLE If the applicant is a juristic entity,	<del>Makanananananananananananananananananana</del>		<del>aran in anti-anti-anti-anti-anti-anti-anti-anti-</del>	
	ILROAD RESEAR			
Tide of Person Executing This Substitute Statement:	enfor Admi	ni Strator		
The signer, whose title is supplied above, is authorized to act on behalf of the applicant. Residence of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent);				
_{civ} Uiwang-si	State	Syeonggi-do	_{Country} Repu	blic of Korea
Mailing Address of the signer (uniess provided in an application data sheet, PTO/AIA/14 or equivalent)				
(Woram-dong) 176, Cheoldobangmulgwan-ro				
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# Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a), Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.

 A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to

opposing counsel in the course of settlement negotiations.

 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

 A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

 A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to

the Atomic Energy Act (42 U.S.C. 218(c)).

- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about Individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.

 A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

> PATENT REEL: 054102 FRAME: 0249

**RECORDED: 10/16/2020**