**FORM PTO-1595** 1-31-92

03-10-2005



U.S. Department of Commerce Patent and Trademark Office Attorney Docket No. 08350.4331 Attorney Customer Number: 22,852

1	Director of the U.S.		102956735 ments or copy thereof.			Mail Stop A	ssignment R	ecordat	ion Servi	ces
1.	Name of conveying			2.	N	lame and addre	ss of receiving	party(ie	s):	
	Yung T. Bui Balamurugesh Thii Subodh Chandra E			Nai	me:	Caterpillar Inc	<b>:</b> .		3. PTC 174	
Additio	onal name(s) of conve	eying party(ies) a	ttached? ☐ Yes ⊠ No	Inte	rnal Ac	idress:			99	280g
3.	Nature of conveya	nce:		Stre	et Add	lress: 100	N.E. Adams S	treet	1326	
Ø	Assignment	☐ Merge	er	City	/: P	eoria			-	
	Security Agreement	☐ Chan	ge of Name	Sta	te:	IL	Zip Code:	61629	-6490	
	Other:			Add	ditional	name(s) & Addı	ess(es) attacl	ned?		
Execu	tion Date: Februa 24, 200		ruary 25, 2005 and February	_	_	] Yes	⊠ No			
4.			mber(s): If this document is in February 25, 2005 and Feb				application, t	he exec	ution date	of
Α.	Patent Application	Number(s):		В.	P	atent Number(s	):			
		Addit	ional numbers attached?	ים'	es	□ No				
5.	Name and address concerning docum		m correspondence ailed:	6.		otal number of a	applications a	nd regist	rations	
Name:				7.	Т	otal fee (37 CFI	R 3.41): \$40			
					$\boxtimes$	Enclosed (Pi	lease charge	deficienc	y to depo	sit
						Authorized t	to be charged	to depos	sit accoun	ıt
	& DUNI	NER, L.L.P.	SON, FARABOW, GARRETT	_						
Street	Address: 1300 I S	Street, N.W.								
City:	Washingto	n, D.C.								
State:		Zip:	20005-3315	8.	C	eposit Account	No.: <u>06-0916</u>			
9.	Statement and sign	nature.							· · · · · · · · · · · · · · · · · · ·	
To the docum		e and belief, the	foregoing information is true	and co	orrect a	and any attached	d copy is a true	е сору о	f the origi	nal
			Dans	20	•		2/28	105		
	Darren M. Jiron Reg. No. 45,777		Sig	nature			D	ate	<del></del>	
		otal number of p	pages including cover sheet,	attach	ments a	and documents:	10			

03/02/2005 JBALINAN 00000017 11066474

05 FC:8021

40.00 OP

**PATENT** 

**REEL: 016368 FRAME: 0389** 

## ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

EXHAUST GAS MIXING SYSTEM
for which I/We executed an application for United States Letters Patent concurrently herewith or filed an application for United States Letters Patent on, 20 (Serial No); and
WHEREAS, Caterpillar Inc., a corporation of Delaware whose post office address is Intellectual Property Department, 100 N.E. Adams Street, Peoria, Illinois 61629-6490 (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;
NOW THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) in hand paid and other good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, provisional application Serial No, filled (if any), and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of the above provisional application (if any), as well as all rights to claim priority on the basis of this application, and all applications for Letters Patent which may hereafter be filled for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and
I/We hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any toreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

1. FULL NAME OF SOLE OR FIRST ASSIGNOR Yung T. But	ASSIGNOR'S SIGNATURE	0ATE 7/2 <b>9</b> /05
ADDRESS 5723 W. Rachael Ct., Peoria, IIIInole 61615		CITIZENSHIP United States

Listing of Inventors Continued on Page 2 hereof Yes No

Page 1 of 3

1. WITNESS NAME Zhiyong Wei	WITNESS SIGNATURE CHE ZWY	DATE 2/25/05
	Dr, #3128, Peoria, IL 61614	CITIZENSHIP
		China
	<u> </u>	
2. WITNESS NAME PRASHANTH HANUMANTHAS A	WITNESS SIGNATURES - DISCONTINUO	DATE 2/25/05
SIQ WICKESTWOOD DR	# 303 PEDRIA IL-61614	CITIZENSHIP
		JNDIA
2. FULL NAME OF SECOND ASSIGNOR, IF ANY Balamurugesh Thirunevukarasu	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 5421 Haymeadow Place, #2D, Peorta, Illinois 61615		CITIZENSHIP India
1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

Listing of Inventors Continued on Page 3 hereof Yes No

Page 2 of 3

3. FULL NAME OF THIRD ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE	DATE
Subodh Chandra Biswas		CITIZENSHIP
ADDRESS 227 Brookfield Drive, Lafayetta, Indiana 47905		United States
1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CUIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

Listing of Inventors Continued on Page 4 hereof Tyes & No.

## **ASSIGNMENT**

	WHEREAS I/We, the below named inventor(s),	[hereinafter refer	red to as	Assignor(s)],	have made an	invention
entitled:						

enutied:		}	
EXH	IAUST GAS MIXING SYS	STEM	
for which I/We executed an application for Unite United States Letters Patent on, 20	d States Letters Patent c (Serial No); ar	oncurrently herewith or f	iled an application for
WHEREAS, Caterpillar Inc., a corporation Department, 100 N.E. Adams Street, Peoria, Illin securing the entire right, title, and interest in and application for United States Letters Patent on the	nois 61629-6490 (hereind I to this invention in all co	fter referred to as Assignuntries throughout the w	nee), is desirous of
NOW THEREFORE, be it known that for other good and valuable consideration the receip have sold, assigned, transferred, and set over, a lawful successors and assigns, my/our entire rig No, filed (if any), and this application, and United States which may be granted thereon, an above provisional application (if any), as well as applications for Letters Patent which may hereaf which may be granted on this invention in any for I/We hereby authorize and request the Commiss any foreign country whose duty it is to issue pate invention to Assignee, its successors and assign	ot of which from Assigned and do hereby sell, assigned the title, and interest in a sell all divisions, and continued all reissues thereof, and all reissues thereof, and all reissues thereof, and all reign country, and all extends on applications as determined as the control of the title and the country, and all extends on applications as determined as the country, and all extends on applications as determined as the country and all extends on applications as determined as the country and all extends on applications as determined as the country and all extends on applications as determined as the country and all extends on applications as determined as the country and all extends on applications as the country and all extends on applications as the country and all extends on a country and a coun	is hereby acknowledge, transfer, and set over used to this invention, provipations thereof, and all L d all rights to claim priorion the basis of this appliance in any foreign countressions, renewals, and rescribed above, to issue terms of this Assignment	d, I/We, as Assignor(s), unto the Assignee, its sional application Serial etters Patent of the ity on the basis of the ication, and all y and all Letters Patent eissues thereof; and tates and any official of all Letters Patent for this nt;
AND, I/WE HEREBY covenant that I/We and I/We have not executed and will not execute	have the full right to con- any agreement in confile	vey the interest assigned at with this Assignment;	d by this Assignment,
AND, I/WE HEREBY further covenant ar Assignee, its successors and assigns, any facts proceeding, sign all lawful papers when called up necessary or desirable to perfect the title to this i divisional, continuation, and reissue applications, Assignee, its successors and assigns, to obtain a and any foreign country, it being understood that the Assignee, its successors and assigns.	known to me/us respection to do so, execute and nvention in said Assigned, make all rightful oaths and enforce proper paten	ng this invention, and test d deliver any and all pape in its successors or assig and generally do everything t protection for this inven-	itify in any legal ers that may be gns, execute all ng possible to aid ition in the United States
IN TESTIMONY WHEREOF, I/We have I	hereunto set our hands		
FULL NAME OF SOLE OR FIRST ASSIGNOR     Yung T. Bul	ASSIGNOR'S SIGNATURE		DATE
ADDRESS \$723 W. Rachael Ct., Peoris, Illinois 61615			CITIZENSHIP United States
	Zy II a		
Listing of Inventors Continued on Page 2 hereof SYes D No			

Page 1 of 3

1. WITNESS NAME	WITNESS SIGNATURE		DATE
ADDRESS			CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE		DATE
ADDRESS			CITIZENSHIP
2. FULL NAME OF SECOND ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE	b 1 0	DATE
Balamurugesh Thirunavukarasu		T. Balan	02 25 05
ADDRESS		le de la companya de	CITIZENSHIP
5421 Haymeadow Place, #2D, Peorla, Illinois 61615			III III III III III III III III III II
1. WITNESS NAME P. ABRAHAM	WITHESS SIGNATURE D	Abraham	DATE 02/25/2005
ADDRESS 1501 EAST GARDNER LAN	E, #908		CITIZENSHIP THOIA
PEORIA HEIGHTY, IC			1
			<del></del>
2. WITNESS NAME Ming Zhomg	WITNESS SIGNATURE	ang, Ming	DATE 02/25/05
ADDRESS 11221 N. Juson Dr. Dus	nlap, 11 615	725	CH IN A
		V	

Listing of Inventors Continued on Page 3 hereof 129 Yes I No

Page 2 of 3

3. FULL NAME OF THIRD ASSIGNOR, IF ANY Subodh Chandra Biswas	ASSIGNOR'S SIGNATURE		DATE
ADDRESS			CITIZENSHIP
227 Brookfield Drive, Lafayette, Indiana 47905			United States
		<u> </u>	<del></del>
1. WITNESS NAME	WITNESS SIGNATURE		DATE
ADDRESS			CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE		DATE
ADDRESS		CITIZENSHIP	

Listing of Inventors Continued on Page 4 hereof □Yes ☒ No

Page 3 of 3

## ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

## **EXHAUST GAS MIXING SYSTEM**

for which I/We executed an application for United States Letters Patent concurrently herewith or filed an application for United States Letters Patent on, 20 (Serial No); and
WHEREAS, Caterpillar Inc., a corporation of Delaware whose post office address is Intellectual Property Department, 100 N.E. Adams Street, Peoria, Illinois 61629-6490 (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) in hand paid and other good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, provisional application Serial No. \_\_\_\_, filed \_\_\_ (if any), and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of the above provisional application (if any), as well as all rights to claim priority on the basis of this application, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, IWe have hereunto set our hands.

FULL NAME OF SOLE OR FIRST ASSIGNOR     Yung T. Bui	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 5723 W. Rachael CL, Peoria, Illinois 61615	ADDRESS	

Listing of Inventors Continued on Page 2 hereof XIYes I No.

Page 1 of 3

# 2/ 5

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 09350.4331 Client Ref. No. 04-331

	CITIZENSHIP
	•
WITNESS SIGNATURE	DATE
	CITIZENSHIP
ASSIGNOR'S SIGNATURE	DATE
	CITIZENSHIP India
WITNESS SIGNATURE	DATE
	CITIZENSHIP
WITNESS BIGNATURE	DATE
	CITIZENSKIP
	ASSIGNOR'S SIGNATURE  WITNESS SIGNATURE

Page 2 of 3

3. FULL NAME OF THIRD ASSIGNOR, IF ANY Subodh Chandra Blawas	Suball Chanter Risin	DATE 03/24/2005
ADDRESS 227 Brookfield Orive, La/ayette, Indiana 47905		CITIZENSHIP United States
1. WITNESS NAME ,	WITNESS SIGNATURE ( )	DATE .
PRASAD CHIDAVARON	WITNESS SIGNATURE Pras	2/24/2005
ADDRESS  3351 CRAWFORD STRFE		CITIZENSHIP  SI ~D IAN
west lalayete, IN 47906		
2. WITNESS NAME Steve Burch	WITNESS AGNATURE	2/24/ZXX
		CITIZENSHIP W
206 Brookfield Dr Lafayetk, IN 47905		

Listing of inventors Continued on Page 4 hereof III Yes. 20 No.

**RECORDED: 02/28/2005** 

Page 3 of 3