

FORM PTO-1619A
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6-17-09

U.S. Department of Commerce
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PATENT

3-116,774

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Name (line 1) LUDLOW, J. Christopher

Execution Date
Month Day Year
04/17/2009

Name (line 2)

Second Party

Name (line 1) SPENIK, James L.

Execution Date
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04/17/2009

Name (line 2)

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Name (line 1) United States Department of Energy

Name (line 2)

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Address (line 1) GC-62, MS 6F-067 (FORSTL)

Address (line 2) 1000 Independence Avenue, S.W.

Address (line 3) Washington

D.C.

20585-0162

City

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U.S. Department of Commerce
Patent and Trademark Office
PATENT

Correspondent Name and Address

Area Code and Telephone Number

202-586-2810

Name Betty Winchester

Address (line 1) United States Department of Energy

Address (line 2) GC-62, MS 6F-067 (FORSTL)

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Patent Application Number(s)

12/430192

Patent Number(s)

If this document is being filed together with a new Patent Application, enter the date the patent application
was

Month Day Year

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1

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Katherine Baldwin

Signature

6-17-09

Date

PATENT

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Joint

U.S. Department of Energy
PATENT ASSIGNMENT FORM

12/430192

WHEREAS, we, J. Christopher Ludlow and James L. Spenik, citizens of the United States residing in Morgantown, County of Monongalia, State of WV; in Morgantown, County of Monongalia, State of WV; have invented certain new and useful improvements in Apparatus and Method for Determining Solids Circulation Rate, for which we are about to file an application for United States Letters Patent identified as S-116,774 and executed by us on the 11th day of April 20 09; and on the 17th day of April 20 09;

WHEREAS, the Government of the United States desires to acquire the entire right, title, and interest in and to said invention and in and to any Letters Patent wherever they may be issued thereon;

NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the sum of One Dollar to us in hand paid by the Government of the United States, and for other good and valuable consideration, the receipt of which is hereby acknowledged, we by these presents do sell, assign, and transfer unto the said Government of the United States, as represented by the United States Department of Energy, and/or its assigns, the entire right, title, and interest in and to the said invention and in and to any and all Letters Patent wherever they may be granted thereon as well as reissues and extensions of said Letters Patent are or may be granted, reissued, or extended, as fully and entirely as the same would have been held or enjoyed by us had this assignment not been made.

We agree to make, execute, and deliver unto the Government of the United States, or to the United States Department of Energy, any and all papers, documents, affidavits, renewal, divisional and reissue applications, statements, or other instruments in such usual or other forms, terms and contents as may be required by the United States Department of Energy, or its duly authorized representative, in or incident to the prosecution or conduct of any and all applications, before as well as after the issuance of any Letters thereon, or in the adjustment or settlement of any interferences or other actions or proceedings that said applications may encounter or in which they may become involved and we agree that we will encounter or in which they may become involved and we agree that we will aid the Government of the United States in every way in protecting the inventions as may be requested by the United States Department of Energy or its assigns, except that any expenses arising through extending such assistance will be paid for by proper arrangement with the Government of the United States.

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WITNESS:

Lisa A. Baker

(SEAL)

INVENTORS:

[Signature]

Date

4/17/2009

WITNESS:

Lisa A. Baker

(SEAL)

INVENTORS:

[Signature]

Date

4/17/2009

~~Approved and consented to this ____ day of ____, 20__.~~

ATTEST:

(SEAL)By ____Its ____

~~Accepted for the Benefit of the Government of the United States.~~

WITNESS:

Kather Baldini

UNITED STATES DEPARTMENT OF ENERGY

By [Signature]

Assistant General Counsel for Patents