

HUMBERTO RUBIO & CIA.

ABOGADOS

Cra. 7 # 74 – 64 Oficina 506
Tel: (571) 3132408 – 3132423 - 3132410 - 3131759
Fax: (571) 3131647 - 3132367
E-mail: mail@rubiolawyers.com
Apartado Aéreo 21848
Bogota, D.C. -Colombia

Doctor

José Luis SALAZAR LOPEZ

Jefe de la División de Nuevas Creaciones

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

E. _____ S. _____ D. _____

REF. Expediente No.:	15-269430
Patente de Invención:	“SURFACTANTES CATIONICOS Y MINERALES CARBONOSOS”
PCT:	PCT/EP2014/057932
Solicitante:	AKZO NOBEL CHEMICALS INTERNATIONAL B.V.

RESPUESTA A REQUERIMIENTO OFICIO NO. 8484 NOTIFICADO POR FIJACION EN LISTA DE 12 DE JUNIO DE 2017 Y CUYO VENCIMIENTO ES DE 12 DE SEPTIEMBRE DE 2017.

Humberto RUBIO CAMACHO, mayor de edad, domiciliado en Bogotá, identificado con la Cédula de Ciudadanía No.17'192.062 de Bogotá, Abogado en Ejercicio, portador de la Tarjeta Profesional No. 50.007 expedida por el Consejo Superior de la Judicatura, actuando en carácter de apoderado de la Sociedad **AKZO NOBEL CHEMICALS INTERNATIONAL B.V.** domiciliada en Velperweg 76 Arhem, Gelderland NL- 6824 BM, Países Bajos; conforme al poder que para todos los efectos relacionados con la Propiedad Industrial me fue conferido por la citada compañía, debidamente reconocido por su Despacho; encontrándome dentro del término legal para dar contestación al auto proferido por su Despacho mediante Oficio No. 8484, notificado por fijación en lista de 12 de junio de 2017 y cuyo vencimiento para dar respuesta es de 12 de septiembre de 2017, me permito:

Manifestar:

I. En el informe oficial emitido sobre la presente solicitud, se han emitido las objeciones que a continuación se resumen:

1. De la solicitud de Patente

Reivindicaciones (Art 30 D 486, Art 22 PCT)

- La reivindicación 1 tiene por objeto un método, sin embargo, aunque muestra la secuencia de etapas técnicas no enseña las etapas técnicas con sus

HUMBERTO RUBIO & CIA.

ABOGADOS

Pagina 2 de 7

Expediente No. 15-269430

Respuesta Acción Oficial Art 45

Septiembre 6, 2017

condiciones técnicas (temperaturas, flujos, presiones, etc.), por todo lo anterior estas reivindicaciones no son claras. Se sugiere realizar las aclaraciones.

- Las reivindicaciones no son claras porque presentan términos generales. Se sugiere sustituirlas por un término preciso o un rango concreto.
- La estructura de la reivindicación 1, tiene más de un enlace gramatical, se sugiere realizar las modificaciones del caso.
- En las reivindicaciones los términos “o más finas” y “uno o más”, son imprecisos y/o relativos. Se sugiere eliminarlos y sustituirlos por términos precisos o rangos concretos.

2. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de presentación de la solicitud de prioridad: 18 de abril de 2013, y se encontrar los siguientes documentos que anticipan el objeto de esta solicitud.

Ítem	Documento	Título	Fecha de Publicación
D1	US5061459	"Prevention of copper dissolution during cyanidation of gold ores"	29/octubre/1991
D2	Art 1*	"Surface chemistry of carbonaceous gold ores II. Effects of organic additives on gold adsorption from cyanide solution"	1987

* Surface chemistry of carbonaceous gold ores II. Effects of organic additives on gold adsorption from cyanide solution. Abotsi and K.Oseeo Asare. Department of materials science and engineering the Pennsylvania State University, University Park , Pa168706 (U.S.A) 4 January 1984. Pág. 225-239.

Nivel Inventivo (Art 16 D486)

La reivindicación 1 consiste en: “Un método para la recuperación de un metal a partir de un mineral o concentrado contenido material carbonoso por lixiviación de cianuración, el proceso comprende las etapas de. El documento D1 se considera el estado de la técnica más cercano a la invención definida en la reivindicación.

Asimismo, el documento D1 en opinión de la examinadora divulga las características de las reivindicaciones dependientes.

Por otra parte, las reivindicaciones 2 y 4 son afectadas con el conocimiento del técnico, “el experto medio deberá poseer experiencia y contar con un saber general en la materia y con una serie de conocimientos en el campo específico de la invención.

Puesto que las reivindicaciones dependientes 2 a 12 no mencionan alguna característica que haga nuevo el sistema de la reivindicación 1, por lo cual se considera que no son nuevas.

HUMBERTO RUBIO & CIA.

ABOGADOS

Pagina 3 de 7

Expediente No. 15-269430

Respuesta Acción Oficial Art 45

Septiembre 6, 2017

3. Conclusión

Los requisitos de patentabilidad de la presente solicitud se encuentran afectados así:

Ítem	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	US5061459	1 a 12	Nivel Inventivo
D2	Art 1*	1	

II. En contestación a las objeciones anteriores, manifestamos lo siguiente:

1. De las Reivindicaciones (Art 30 D486, Art. 22 PCT)

Modificación del pliego de reivindicaciones

Con el objeto de hacer más expedita la concesión de la solicitud, se acompaña nuevo pliego de reivindicaciones en el cual la nueva reivindicación 1 se ha enmendado de conformidad con la reivindicación 1 de la patente análoga recién aceptada por la Oficina de Patentes y Marcas de los Estados Unidos, USPTO (ver noticia de concesión adjunta).

Adicionalmente, para superar la objeción de la examinadora con respecto a la frase de transición “caracterizado porque” y el término “que comprende” y la clarificación de la materia para la que se busca protección, se ha cambiado la ubicación de dicha frase para distinguir el preámbulo del cuerpo de la reivindicación, este último que caracteriza los pasos necesarios para la infracción del método reivindicado, en tanto el término “donde” que reemplaza a “que comprende” se utiliza para describir las propiedades del surfactante catiónico que tiene que usarse (como una característica distintiva esencial de la invención), en el paso de tratamiento.

En cuanto a la objeción sobre la reivindicación 3, la expresión “más fina”, se ha eliminado para superarla, y en cuanto a la observación de la expresión “uno o más” de la reivindicación 11, ésta también se ha eliminado, pero se ha agregado la variante de que el surfactante a seleccionar incluye una mezcla de los previamente mencionados.

En cuanto a los comentarios de la examinadora sobre la falta de claridad de las reivindicaciones a las restantes objeciones mencionadas por la misma, respetuosamente discrepamos de las mismas por las siguientes razones:

- Muchos de los términos señalados como "poco claros" se definen en la presente solicitud. Por ejemplo, "etapa de tostado" se refiere a la etapa de tratar un mineral (o concentrado) a una temperatura elevada por encima de 1000°F (véase la página 1 de la solicitud como originalmente se

HUMBERTO RUBIO & CIA.

ABOGADOS

Pagina 4 de 7

Expediente No. 15-269430

Respuesta Acción Oficial Art 45

Septiembre 6, 2017

presentó). Otro ejemplo es el término "desespumador", el cual se describe en la página 7 también de la solicitud original.

- Otros términos, como "suspensión acuosa de mineral", parecen poseer solamente un significado lógico en el campo técnico particular (es decir, una mezcla fluida de un sólido (el mineral) y un líquido (agua). Estos términos son términos ampliamente conocidos por un experto en la materia, y a los cuales la examinadora debería darle la interpretación más amplia razonable, ya que como toda invención, la solución que se propone comprende elementos conocidos y otros novedosos, cuya definición puede encontrarse dentro del campo técnico particular, así como en la memoria descriptiva que sirve de sustento a la materia que se reivindica y no requieren modificaciones adicionales para hacerlos "suficientemente claros y concisos".

- El término "tensioactivo aniónico" es claramente entendido por personas con experiencia ordinaria en la técnica; la examinadora parece sugerir que el solicitante reivindique un subconjunto particular de tensioactivos aniónicos. El solicitante entiende, como ha observado la examinadora, que las palabras escogidas para redactar las reivindicaciones son muy importantes y es por ello que ha incluido la actual redacción de las reivindicaciones como cree que mejor representa su invención con el concepto inventivo más amplio que entiende que su protección legal merece.

- Por otra parte, discrepamos de la exigencia de la examinadora de que las etapas del método reivindicado tienen que incluir todas las condiciones técnicas incluidas en ellas. Con la actual redacción de la reivindicación independiente 1, queda claramente establecido por la colocación de frase de transición entre el preámbulo y el cuerpo de la reivindicación, las características técnicas (operaciones o etapas que incluye) que distinguen al método reivindicado de la técnica anterior, las cuales son específicamente tratar el mineral o concentrado que contiene material carbonoso con un surfactante catiónico que es una alquil amina saturada o insaturada o un derivado de la misma, donde la alquil amina es una alquil amina primaria, secundaria o terciaria o alquil poliamina, y donde la alquil amina tiene un alquilo de longitud de cadena de 14 a 40, con el objetivo de reducir o evitar la retención del metal o un complejo de cianuro del metal por el mineral o concentrado como resultado de la presencia del material carbonoso en el mineral o concentrado, el mineral o concentrado después del paso de tratamiento se designa "mineral o concentrado tratado", y posteriormente llevar a cabo una etapa de lixiviación de cianuración del mineral tratado o concentrado. Las especificaciones que se dan con esta redacción claramente distinguen la materia para la que se busca protección de manera amplia, no existiendo razón alguna, a

HUMBERTO RUBIO & CIA.

ABOGADOS

Pagina 5 de 7

Expediente No. 15-269430

Respuesta Acción Oficial Art 45

Septiembre 6, 2017

excepción que fuere relativa a la novedad de esta cláusula, para que la examinadora exija indebidamente su restricción como lo ha hecho.

- En línea con los argumentos anteriores manifestamos nuestra opinión de que la autoridad de examen no debería como práctica pedir la restricción del concepto inventivo detrás de la invención a realizaciones particulares o preferidas de la misma, alegando falta de claridad. El examinador debería interpretar las características técnicas de la invención, como experto medio que es en el campo técnico en cuestión, haciendo uso de las definiciones conocidas en dicho campo e interpretando las reivindicaciones sobre la base de lo divulgado en la descripción que acompaña a la solicitud de patente. El solicitante merece el reconocimiento de su invención con la amplitud que corresponde, la cual solo debería cuestionarse en vista de los antecedentes que formen parte del estado de la técnica relevante para los efectos de la evaluación de la novedad o el nivel inventivo, y no por interpretaciones restrictivas, indebidas y arbitrarias, que perjudican el valor comercial del privilegio que se solicita.

- Si la examinadora conoce una forma de superar las objeciones de claridad sin restringir excesivamente el alcance de la protección, solicitamos que amablemente proporcione la terminología que en su opinión debería usarse para cumplir con sus exigencias.

2. De la solicitud de Patente.

Examen de Patentabilidad

Nivel Inventivo (Art 16 D486)

La examinadora ha objetado las reivindicaciones porque considera están afectadas por los siguientes documentos:

D1 US5061459

D2 Art 1*

En el análisis de los requisitos de patentabilidad por parte de la examinadora se concluye que las actuales reivindicaciones carecen de nivel inventivo, sin embargo, las conclusiones son algo contradictorias porque también concluye que las reivindicaciones 2 a 12 no son nuevas. Puesto que la objeción a la patentabilidad de las reivindicaciones se ha basado en el análisis de la combinación de los documentos D1 y D2, asumimos que lo que se quiso objetar fue la actividad inventiva de la solución propuesta, y sobre esa base enfocamos las alegaciones que siguen.

HUMBERTO RUBIO & CIA.

ABOGADOS

Página 6 de 7

Expediente No. 15-269430

Respuesta Acción Oficial Art 45

Septiembre 6, 2017

Como se ha argumentado previamente por el solicitante, el documento D1 no describe la recuperación de un metal proveniente de un mineral que contiene material carbonoso. Por otra parte, el documento D2 describe el pretratamiento de minerales carbonosos con agentes tensioactivos que tienen longitudes de cadena alquílica de 8 a 10 ó 12 átomos de carbono. Sin embargo, en este documento no se anticipa que se realizó lixiviación de cianuración como en la presente invención.

Esto es lógico, ya que en el momento en que surgió la invención el estado de la técnica señalaba, y así se creía, que se producirían efectos perjudiciales en la recuperación de oro si se realizaba lixiviación de cianuración sobre el mineral carbonoso (véase la solicitud, página 2, segundo párrafo completo), por ejemplo, se produce “preg-robbing” mediante el cual el material carbonoso absorbe preferentemente los complejos de oro y de cianuro de oro y evita su posterior recuperación. Por lo tanto, una persona con conocimientos ordinarios en la técnica, en el momento de la invención, no habría estado motivada para combinar los agentes tensioactivos de longitud de cadena alquílica más larga divulgados en D1 y una etapa de lixiviación de cianuración basada en la descripción de D2, el cual menciona el pretratamiento de un mineral carbonoso con un agente tensoactivo que tiene una longitud de cadena alquilo más corta que la descrita en la reivindicación 1, y no describe en lo absoluto una etapa de lixiviación de cianuración.

Consecuentemente el solicitante tuvo que desarrollar un esfuerzo inventivo por sobre lo divulgado en la técnica anterior para llegar a la solución técnica que propone con su invención.

Teniendo en cuenta que las nuevas reivindicaciones presentadas con esta respuesta definen la materia que se desea proteger, siendo claras, concisas y debidamente sustentadas en la descripción original, consideramos que se han superado las objeciones válidas expuestas por la examinadora, por lo que respetuosamente consideramos el capítulo reivindicatorio cumple con los requisitos de patentabilidad.

Así también lo reconoció la Oficina Europea de Patentes, autoridad que también recientemente ha emitido el aviso de Intención de Concesión para la solicitud análoga presentada en esa jurisdicción (ver adjunto).

III. Anexo:

- i. Capítulo reivindicatorio modificado (1-12).

HUMBERTO RUBIO & CIA.

ABOGADOS

Pagina 7 de 7

Expediente No. 15-269430

Respuesta Acción Oficial Art 45

Septiembre 6, 2017

- ii. Noticia de Concesión para la solicitud de patente US 14/782,356, presentada en Estados Unidos de América y análoga a la solicitud CO-15-269430.
- iii. Noticia de Intención de Concesión para la solicitud de patente EP 14 718 122.6 presentada en el territorio europeo y análoga a la solicitud CO-15-269430.

IV. Petición:

Conforme a lo anterior, una vez atendidos los requerimientos y exigencias de la examinadora y al tener en cuenta el nuevo capítulo reivindicatorio presentado, solicito muy amablemente a su Despacho, llevar a cabo un nuevo estudio de patentabilidad teniendo en cuenta los argumentos aquí expuestos y sea concedido el privilegio de invención solicitado, y en caso contrario se hagan las correspondientes observaciones con el ánimo de hacer lo pertinente dentro del presente trámite.

Atentamente,



HUMBERTO RUBIO CAMACHO

C.C. 17'192.062 de Bogotá

T.P. 50.007 de Consejo Superior de la Judicatura.

COD. 4134



Akzo Nobel IP Department
Velperweg 76
6824 BM Arnhem
PAYS-BAS

Formalities Officer
Name: Zurkinden, Jolanda
Tel: +49 89 2399 - 4668
or call
+31 (0)70 340 45 00

Application No. 14 718 122.6 - 1362	Ref. ACA11448 EPP1	Date 19.05.2017
Applicant Akzo Nobel Chemicals International B.V.		

Communication under Rule 71(3) EPC

1. Intention to grant

You are informed that the examining division intends to grant a European patent on the basis of the above application, with the text and drawings and the related bibliographic data as indicated below.

A copy of the relevant documents is enclosed.

1.1 In the text for the Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT
RO RS SE SI SK SM TR

Description, Pages

1, 3-14 as published

2, 2a received on 12-12-2016 with letter of 09-12-2016

Claims, Numbers

1-13 as published

1.2 Bibliographic data

The title of the invention in the three official languages of the European Patent Office, the international patent classification, the designated contracting states, the registered name(s) of the applicant(s) and the other bibliographic data are shown on **EPO Form 2056** (enclosed).

2. Invitation

You are invited, **within a non-extendable period of four months** of notification of this communication,

2.1 to EITHER approve the text communicated above and verify the bibliographic data (Rule 71(5) EPC)

- (1) by filing a translation of the claim(s) in the other two official languages of the EPO

Fee code	EUR
-----------------	------------

- (2a) by paying the fee for grant including the fee for publication:
minus any amount already paid (Rule 71a(5) EPC):

007	925.00
	0.00

Total amount:	925.00
---------------	--------

- (3) by paying additional claims fees under Rule 71(4) EPC;
number of claims fees payable: 0
minus any amount already paid (Rule 71a(5) EPC):

016	0.00
	0.00

Total amount:	0.00
---------------	------

Important: If the translations of the claims and fees have already been filed and paid respectively in reply to a previous communication under Rule 71(3) EPC, e.g. in the case of resumption of examination after approval (see Guidelines C-V, 6), **agreement as to the text to be granted** (Rule 71a(1) EPC) must be expressed within the same time limit (e.g. by approving the text and verifying the bibliographic data, by confirming that grant proceedings can go ahead with the documents on file and/or by stating which translations of the claims already on file are to be used).

Note 1: See "Important notes concerning fee payments" below.

Note 2: Any overpaid "minus" amounts will be refunded when the decision to grant (EPO Form 2006A) has been issued.

Note 3: For the calculation of the grant fee under Article 2(2), No. 7, RFees (old fee structure), the number of pages is determined on the basis of a clean copy of the application documents, in which text deleted as a result of any amendments by the examining division is not shown. Such clean copy is made available via on-line file inspection only.

2.2 OR, in the case of disapproval, to request reasoned amendments or corrections to the text communicated above or keep to the latest text submitted by you (Rule 71(6) EPC).

In this case the translations of the claims and fee payments mentioned under point 2.1 above are NOT due.

The terms "amendment(s)" and "correction(s)" refer only to amendments or corrections of the application documents and not of other documents (e.g. bibliographic data, the designation of the inventor, etc.).

If filing amendments, you must identify them and indicate the basis for them in the application as filed. Failure to meet either requirement may lead to a communication from the examining division requesting that you correct this deficiency (Rule 137(4) EPC).

2.3 Bibliographic data

Where you request a change or correction of bibliographic data in response to the Rule 71(3) communication, this will **not** cause the sending of a further communication under Rule 71(3) EPC. You will still have to pay the fees and file translations in reply to the Rule 71(3) communication in the case of 2.1 above, unless you also file a reasoned request for amendments or corrections in response to the Rule 71(3) communication (see case 2.2 above).

3. Loss of rights

If neither of the two possible actions above (see points 2.1 or 2.2) is performed in due time, the European patent application will be deemed to be withdrawn (Rule 71(7) EPC).

4. Further procedure

4.1 In the case of point 2.1 above

- 4.1.1** The decision to grant the European patent will be issued, and the **mention of the grant** of the patent will be published in the European Patent Bulletin, if the requirements concerning the translation of the claims and the payment of all fees are fulfilled and there is agreement as to the text to be granted (Rule 71a(1) EPC).

Note on payment of the renewal fee:

If a renewal fee becomes due before the next possible date for publication of the mention of the grant of the European patent, publication will be effected only after the renewal fee and any additional fee have been paid (Rule 71a(4) EPC).

Under Article 86(2) EPC, the obligation to pay renewal fees to the European Patent Office terminates with the payment of the renewal fee due in respect of the year in which the mention of the grant of the European patent is published.

Note on payment of the designation fee(s):

If the designation fee(s) become(s) due after the communication under Rule 71(3) EPC, the mention of the grant of the European patent will not be published until these fees have been paid (Rule 71a(3) EPC).

- 4.1.2** After publication, the **European patent specification** can be downloaded free of charge from the EPO publication server <https://data.epo.org/publication-server> or ordered from the Vienna sub-office upon payment of a fee (OJ EPO 2005, 126).

4.1.3 Filing of translations in the contracting states

As regards translation requirements prescribed by the contracting states under Article 65(1) EPC, please consult the website of the European Patent Office

www.epo.org → Law & practice → Legal texts, National law relating to the EPC

www.epo.org → Law & practice → All Legal texts → London Agreement

In the case of a valid extension or validation

As regards translation requirements prescribed by the extension or validation states, please consult the website of the European Patent Office

www.epo.org → Law & practice → Legal texts, National law relating to the EPC

Failure to supply a prescribed translation in a contracting state, or in an extension or validation state may result in the patent being deemed to be void *ab initio* in the state concerned (Art. 65(3) EPC).

4.2 In the case of 2.2 above

If the present communication under Rule 71(3) EPC is based on an auxiliary request and, within the time limit, you maintain the main request or a higher ranking request which is not allowable, the application will be refused (Art. 97(2) EPC).

If the examining division gives its consent to the requested amendments or corrections, it will issue a new communication under Rule 71(3) EPC; otherwise, it shall resume the examination proceedings (Rule 71(6) EPC).

5. Filing of a divisional application

Any divisional application relating to this European patent application must be filed directly with the European Patent Office in Munich, The Hague or Berlin and will be in the language of the proceedings for the present application, or if the latter was not in an official language of the EPO, the divisional application may be filed in the language of the present application as filed (see Article 76(1) and Rule 36(2) EPC). Any such divisional application must be filed while the present application is still pending (Rule 36(1) EPC; Guidelines A-IV, 1.1.1).

6. Important notes concerning fee payments

6.1 For all payments, please refer to the relevant **fee code(s)**.

6.2 Automatic debiting procedure

The fee for grant, including the fee for publication, and any additional claims fees due under Rule 71(4) EPC will be debited automatically on the date of filing of the translations of the claims, or on the last day of the period of this communication. However, if the designation fee(s) become(s) due as set out in Rule 71a(3) EPC and/or a renewal fee becomes due as set out in Rule 71a(4) EPC, these should be paid separately by another permitted way of payment in order not to delay the publication of the mention of the grant. The same applies in these circumstances to the payment of extension and validation fees. For further details see the Arrangements for the automatic debiting procedure (AAD) and accompanying information from the EPO concerning the automatic debiting procedure (Annexes A.1 and A.2 to the Arrangements for deposit accounts (ADA) in Supplementary publication - OJ EPO 3/2015).

Note: If a waiver is expressed in response to a Rule 71(3) communication (see OJ EPO 2015, A52), the fee for grant, including the fee for publication/printing, and any additional claims fees will not be debited automatically. These fees must be paid separately by another means of payment allowed under the Rules relating to Fees.

6.3 Important information relating to fee amounts

Following any amendment to the Rules relating to Fees, the amount(s) mentioned in this communication may be different from the amount(s) **actually due on the date of payment**. The latest version of the Schedule of fees and expenses, published as a Supplement to the Official Journal of the EPO, is also available on the EPO website (www.epo.org) and can be found under www.epo.org/schedule-of-fees, which allows the viewing, downloading and searching for individual fee amounts, both current and previous.

Please note that procedural fees are usually adjusted every two years, on even years, with effect from 1 April.

Examining Division:

Chairman:	Baumgartner, Robin
2nd Examiner:	Handrea-Haller, M
1st Examiner:	Swiatek, Ryszard



Zurkinden, Jolanda
For the Examining Division
Tel. No.: +49 89 2399 - 4668

Enclosures: Text intended for grant

 EPO Form 2056



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

27624 7590 07/05/2017
AKZO NOBEL INC.
AkzoNobel Legal Group
525 W. Van Buren
Chicago, IL 60607

EXAMINER

MCGUTHRY BANKS, TIMA MICHELE

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 07/05/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

14/782,356

10/05/2015

Qiong Zhou

ACA11448-US-P1

7972

TITLE OF INVENTION: Use of Cationic Surfactants In the Cyanidation of Refractory Carbonaceous Ores for Recovery of Metals

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	10/05/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

27624 7590 07/05/2017
AKZO NOBEL INC.
AkzoNobel Legal Group
525 W. Van Buren
Chicago, IL 60607

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/782,356	10/05/2015	Qiong Zhou	ACA11448-US-P1	7972

TITLE OF INVENTION: Use of Cationic Surfactants In the Cyanidation of Refractory Carbonaceous Ores for Recovery of Metals

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	10/05/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
MCGUTHRY BANKS, TIMA MICHELE	1733	075-744000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/782,356	10/05/2015	Qiong Zhou	ACA11448-US-P1	7972
27624	7590	07/05/2017	EXAMINER	
AKZO NOBEL INC. AkzoNobel Legal Group 525 W. Van Buren Chicago, IL 60607			MCGUTHRY BANKS, TIMA MICHELE	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 07/05/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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.
2. 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.
3. 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).
5. 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.
6. 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.
9. 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.

Notice of Allowability	Application No. 14/782,356	Applicant(s) <Unknown>	
	Examiner TIMA MCGUTHRY-BANKS	Art Unit 1733	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the RCE and Amendment filed April 19, 2017.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-14. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some *c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. ☒ Notice of References Cited (PTO-892) | 5. ☐ Examiner's Amendment/Comment |
| 2. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____ | 6. ☒ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other ____. |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date ____. | |

--	--

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 19, 2017 has been entered. Claims 1-14 are pending and examined herein.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

In remarks filed with the present RCE, Applicant argues that neither Brison nor Bulatovic suggests that the addition of alkyl amines to ore or concentrate reduces or prevents retention of metal or metal-cyanide complexes in the presence of carbonaceous material. This argument is well taken. Further, no other prior art of record discloses or suggests that the application of amines or polyamines as defined in claims 1 or 14 prevents or reduces retention in carbonaceous material as claimed. Therefore, the claims are allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 1733

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMA M. MCGUTHRY BANKS whose telephone number is (571)272-2744. The examiner can normally be reached on M-F 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Wyszomierski/
Primary Examiner
Art Unit 1733

/T. M. M./
Examiner, Art Unit 1733
29 June 2017

REIVINDICACIONES

5

1. Un método para la recuperación de un metal a partir de un mineral o concentrado que contiene material carbonoso por lixiviación de cianuración, caracterizado porque el método incluye las etapas de:

10

a) tratar el mineral o concentrado que contiene material carbonoso con un surfactante catiónico con el objetivo de reducir o evitar la retención del metal o un complejo de cianuro del metal por el mineral o concentrado como resultado de la presencia del material carbonoso en el mineral o concentrado, el mineral o concentrado después del paso de tratamiento se designa "mineral o concentrado tratado", y

15

b) lixiviación de cianuración del mineral tratado o concentrado;
donde el surfactante catiónico es una alquil amina saturada o insaturada o un derivado de la misma, donde la alquil amina es una alquil amina primaria, secundaria o terciaria o alquil poliamina, y
donde la alquil amina tiene un alquilo de longitud de cadena de 14 a 40.

20

2. El método de acuerdo a la reivindicación 1, caracterizado porque además comprende la etapa de tostar el mineral o concentrado antes de la etapa de tratamiento.

25

3. El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque el mineral o concentrado es en forma de una suspensión mineral acuosa con tamaño de partícula de 80% pasando 30 malla y una densidad de pulpa de 5% a 80%.

30

4. El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque comprende la etapa de oxidar el mineral o concentrado antes de la etapa de tratamiento.

5. El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque la alquil amina es una alquil amina grasa que se deriva de coco, ricino, sebo, aceite de resina, soya, palma, maíz o colza.
- 5 6. El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque la alquil amina es alcoxilada, etoxilada o propoxilada.
- 10 7. El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque el surfactante catiónico es una sal de alquil amina o derivado de alquil amina.
- 15 8. El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque el surfactante catiónico es una sal de amonio cuaternario alquilo.
9. El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque el surfactante catiónico es un óxido de alquil amina.
- 20 10.El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque el surfactante catiónico es un alquil amida, amidoamina o imidazolina.
- 25 11.El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque el mineral o concentrado es tratado con el surfactante catiónico y un surfactante seleccionado del grupo consistente de un surfactante catiónico, un surfactante aniónico, un surfactante no iónico, y un surfactante anfótero o una mezcla de los mismos.
- 30 12.El método de acuerdo a cualquiera de las reivindicaciones anteriores, caracterizado porque además comprende la etapa de agregar un antiespumante al mineral o concentrado antes de la etapa de lixiviación de cianuración.