

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 14-62856- -4	FECHA: 2015-07-17 14:03:07
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 378 FASE NACIONAL INCLUIDO CAPITULO I
TRA: 11 PCT-PATENTE DE INVENCION CAPITULOS I Y II	FOLIOS: 8
ACT: 519 TRASLADOINFORME	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
SILVANA MARÍA LÓPEZ DÍAZ

Asunto: Radicación: 14-62856- -4
Trámite: 11
Evento: 378
Actuación: 519
Oficio: 8377
Folios: 8

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional					
Vía PCT (Fase Nacional)	X	Capítulo I	X	Capítulo II	
No. Solicitud Internacional	PCT/EP2012/068592				
Fecha de Presentación Internacional	21/09/2012				

Como resultado del examen de fondo realizado, con fundamento en el Artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se comunica:

1. Documentos estudiados

Descripción:	Rad. N° 14-062856-00000-0000	25/Marzo/2014
Reivindicaciones:	Rad. N° 14-062856-00000-0000	25/Marzo/2014
Prioridad:	US 61/538,265	23/Septiembre/2011

2. Análisis de la Prioridad

Se acepta la reivindicación de prioridad porque ésta solicitud fue presentada dentro del plazo establecido (Art. 9 D 486) y su contenido técnico corresponde con el de la prioridad reivindicada.

3. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto, se estudiaran las reivindicaciones 1 a 16.

Título de la solicitud: “Proceso y composición para la eliminación de sulfuro de hidrógeno procedente de fluidos de procesos industriales” (Ver página 1 del radicado N° 14-062856-00000-0000).

El problema planteado en esta solicitud consiste en la necesidad de mejorar métodos para la captación de H_2S y de compuestos de sulfhidrilo en sistemas de procesos industriales de manera que se tenga un método de reacción rápido para reducir el sulfuro de hidrógeno, mitigar las fuentes de sulfuro de hidrógeno, tales como fuentes microbiológicas, y eliminar los productos de corrosión del sulfuro de hidrógeno, tales como el sulfuro de hidrógeno.

Para resolver este problema técnico, la solicitud en estudio proporciona un método para prevenir la generación y/o eliminar el sulfuro de hidrógeno y/o compuestos de sulfhidrilo y sus productos de corrosión en un fluido o sistema de un proceso industrial, que comprende la adición del fluido o sistema de una cantidad eficaz de una composición que comprende al menos un aldehído o un donador de aldehído que no es una triacina, el producto de reacción de un compuesto de hidroximetil fosfina o hidroximetilfosfinio y un aminoácido y opcionalmente un compuesto de amonio cuaternario o de N-hidrógeno o una de sus mezclas.

El objeto de la presente solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): C 02 F 1/50.

4. De la solicitud de patente

Titulo

El título no permite distinguir el objeto a proteger, por lo tanto es necesario cambiar el título, siendo este coincidente con el preámbulo de las reivindicaciones, por ejemplo el título podría ser “Composición para la eliminación de sulfuro de hidrógeno procedente de fluidos de procesos industriales”.

Reivindicaciones (Art 30 D 486, Art 22 PCT)

Durante la evaluación de claridad y concisión de las reivindicaciones, esta Oficina encontró que:

- La reivindicación 1 tiene por objeto un método, sin embargo no muestra la secuencia de etapas técnicas por medio de las cuales se transforme una materia en un producto o se obtenga un resultado. Es así como los “pasos” se limitan a suministrar una serie de elementos (materias primas, equipos, etc.) pero no enseña las etapas técnicas con sus condiciones técnicas (temperaturas, flujos, presiones, etc.), por todo lo anterior esta reivindicación no es clara. Se sugiere realizar las aclaraciones respectivas o definir la invención por sus características esenciales y estructurales, teniendo en cuenta de no modificar o ampliar la material ya divulgada. Cabe decir que dadas las características técnicas lo que se busca proteger es una composición y no un método, por lo cual, no es claro el objeto que se busca proteger.
- Las reivindicaciones 1, 2, 4 y 14 no son claras porque presentan términos indefinidos y/o imprecisos “cantidad eficaz”, “al menos”, “opcionalmente”, “más preferentemente”, “preferentemente”, utilizados para definir el rango de varias características del método deben eliminarse. Estos términos no permiten establecer un intervalo puntual para cada una de las características técnicas, no siendo estas precisas y por lo tanto no claras, ya que no permiten una comparación con el estado de la técnica. Se sugiere sustituirlas por un término preciso o un rango concreto.
- Las reivindicaciones 1, 2 y 4 no son claras porque presentan términos generales “aldehído”, “donador de aldehído”, “aminoácido”, “amonio cuaternario”, “N-

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hidrógeno”, lo cuales, aunque corresponden a términos conocidos, abarcan una extensa gama de posibilidades, de tal manera que sugieren de forma imprecisa que la protección se extiende a otras posibles variaciones o modificaciones. Se sugiere sustituirlas por un término preciso o un rango concreto.

- Las reivindicaciones 9 a 12 referidas a un método no son claras dado que refieren un sistema en el método, es decir, no se define correctamente como una etapa o condición particular del método a proteger. Dichas reivindicaciones buscan caracterizar el método en términos de las características técnicas del sistema(s) en el cual(es) tendría aplicación la composición, lo cual no es aceptable. Por lo tanto se requiere retirarla del pliego reivindicatorio. Al respecto no debe olvidarse, que las reivindicaciones de producto (sistema) y de procedimiento (método) son diferentes y, por ello, deben redactarse de manera independiente en el pliego reivindicatorio. Sobre las mismas, el Tribunal Andino de Justicia ha dicho lo siguiente:

“El objeto de la invención de producto está constituido por un cuerpo cierto destinado a llenar una necesidad industrial que el estado de la técnica aún no ha satisfecho. En cambio, el objeto de la invención de procedimiento se encuentra conformado por “una serie o sucesión de operaciones que inciden sobre una materia (sólida, líquida o gaseosa) que se encamina a la obtención de una cosa o un resultado”. (Otero Lastres, José Manuel. Ob. Cit)¹.

5. 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, es decir, 23 de septiembre de 2011.

Consultadas las fuentes de información con que se cuenta, se encontraron los siguientes documentos que anticipan el objeto de esta solicitud:

Ítem	Documento	Título	Fecha de Publicación
D1	WO 2010105872	“Stabilized biocida composition”	23/Septiembre/2010
D2	US 2013/0062316	“Method and composition to decrease iron sulfide deposits in pipe lines”	3/Abril/2003

El documento D1² divulga un procedimiento para estabilizar una composición acuosa de compuesto que contiene fósforo, que comprende la etapa de añadir a dicha composición una cantidad estabilizante eficaz de arsénico de un compuesto seleccionado del grupo que consiste en amoníaco, sal de amonio, ácido amino orgánico, péptido y polipéptido; aplicación de la composición estabilizada para el tratamiento de un sistema acuoso que contiene opcionalmente o en contacto con la escala de sulfuro de metal, el cual método comprende la adición a dicho sistema, juntos o por separado, una cantidad anti-escala eficiente de una composición acuosa estabilizada o para el tratamiento de un sistema de agua para matar o inhibir el crecimiento de microorganismos que comprende aplicar a la misma o formar in situ una cantidad inhibidora eficaz de la composición acuosa estabilizada (Resumen).

El documento D2³ divulga los niveles de sulfuro de hierro presente en un conducto, como una tubería, se reducen en contacto con el conducto, en una superficie interior, con una composición obtenida a partir de una solución acuosa que contiene al menos un compuesto de Fórmula (I) y al menos una amina o correspondiente derivado de amonio en presencia de un disolvente, en el que X es un anión de valencia n.

1 Proceso 129-IP-2007

2[https://patentscope.wipo.int/search/en/detailPdf.jsf?](https://patentscope.wipo.int/search/en/detailPdf.jsf?ia=EP2010051194&docIdPdf=id00000011717244&parSeparator1=&name=WO2010105872STABILIZED+BIOCIDAL+COMPOSITION&parSeparator2=&woNum=WO2010105872&prevRecNum=1&nextRecNum=2&recNum=1&queryString=&office=&sortOption=&prevFilter=&maxRec=)

[ia=EP2010051194&docIdPdf=id00000011717244&parSeparator1=&name=WO2010105872STABILIZED+BIOCIDAL+COMPOSITION&parSeparator2=&woNum=WO2010105872&prevRecNum=1&nextRecNum=2&recNum=1&queryString=&office=&sortOption=&prevFilter=&maxRec=](https://patentscope.wipo.int/search/en/detailPdf.jsf?ia=EP2010051194&docIdPdf=id00000011717244&parSeparator1=&name=WO2010105872STABILIZED+BIOCIDAL+COMPOSITION&parSeparator2=&woNum=WO2010105872&prevRecNum=1&nextRecNum=2&recNum=1&queryString=&office=&sortOption=&prevFilter=&maxRec=)

3[http://worldwide.espacenet.com/publicationDetails/originalDocument?](http://worldwide.espacenet.com/publicationDetails/originalDocument?CC=US&NR=2003062316A1&KC=A1&FT=D&ND=&date=20030403&DB=&&locale=en_EP)

[CC=US&NR=2003062316A1&KC=A1&FT=D&ND=&date=20030403&DB=&&locale=en_EP](http://worldwide.espacenet.com/publicationDetails/originalDocument?CC=US&NR=2003062316A1&KC=A1&FT=D&ND=&date=20030403&DB=&&locale=en_EP)

Preferiblemente, el pH de la solución es aproximadamente 8. Alternativamente, el método emplea una composición que comprende tris (hidroximetil) fosfina (TRIS) y al menos una amina o derivado de amonio correspondiente. La amina es preferiblemente amoniaco o una alquilamina primaria. Las composiciones fácilmente compleja y con ello disolver los depósitos de hierro (II) de sulfuro, sacándolos de conducto (Resumen).

6. Examen de Patentabilidad (Art 14 D486)

El siguiente examen de patentabilidad se realizó teniendo en cuenta las objeciones señaladas en el numeral 4 de la presente comunicación.

Nivel inventivo (Art18 D486)

La reivindicación 1 consiste en “*Un método para prevenir la generación y/o eliminar el sulfuro de hidrógeno y/o compuestos de sulfhidrilo y sus productos de corrosión en un fluido o sistema de un proceso industrial (...)*” (Ver página 11 del radicado N° 14-062856-00000-0000).

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Características esenciales	D1	D2
Un método para prevenir la generación y/o eliminar el sulfuro de hidrógeno y/o compuestos de sulfhidrilo y sus productos de corrosión en un fluido o sistema de un proceso industrial, que comprende:	Proceso para la preparación de un compuesto que contiene fósforo, especialmente una sal de fosfonio de tri(hidroximetil)fosfina y su uso para el tratamiento de un sistema de agua para exterminar o inhibir el crecimiento de microorganismos e impedir o aliviar los problemas que están asociados comúnmente con depósitos de sulfuro de metal tales como sulfuro de hierro (Pág. 1, Líneas 1 a 9), que comprende:	Un método para disminuir el nivel de sulfuro de hierro en un conducto, que comprende.: (Reivindicación 25).
La adición al fluido o sistema de una cantidad eficaz de una composición que comprende:	La composición acuosa estabilizada del compuesto de fosfonio puede ser usada como tratamiento continuo a un sistema de agua o dosificada por lotes como se requiera. Alternativamente puede ser diluida a una concentración de 0,01 a 10%, preferiblemente 0,01 a 0,1% en peso antes de la aplicación (Pág. 5, líneas 10 a 13).	
i) Al menos un aldehído o un donador de aldehído que no es una triacina.	La formulación puede contener adicionalmente biocidas (por ejemplo formaldehído o glutaraldehído) (Pág. 4, Línea 34 a Pág. 5 línea 1 y Pág. 5, Líneas 24 a 27).	Las composiciones de la presente invención comprenden opcionalmente uno o más aditivos, que hacen que las composiciones aplicables a una amplia gama de conductos en el que los depósitos de sulfuro de hierro presentan un problema. Los aditivos incluyen agentes tensoactivos; biocidas, tales como glutaraldehído (Párr. 39).
El producto de reacción de un compuesto de hidroximetilfosfina o hidroximetilfosfonio y un	El compuesto de fosfonio es sulfato de tetrakis(hidroximetil)fosfonio	Una composición que comprende tris (hidroximetil) fosfina (TRIS) (Reivindicación

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hidrogeno procedente de fluidos de procesos industriales para hacerlo más eficiente?

Sin embargo, la utilización de un compuesto de amonio cuaternario o de N-hidrógeno o una de sus mezclas como inhibidores de corrosión, ya están divulgados en el documento D2 que se refiere a un método para disminuir el nivel de sulfuro de hierro en un conducto que comprende poner en contacto dicho conducto con una composición que comprende tris (hidroximetil) fosfina (TRIS), al menos una amina o amonio derivado de la misma, y un disolvente lo que se obtiene una segunda composición; y eliminar de dicho conducto de dicha segunda composición (Reivindicación 25). La composición incluye inhibidores de corrosión como aminas y resinas de compuestos de amonio cuaternario (Párr. 56).

En consecuencia, la persona del oficio normalmente versada en la materia, incluiría un compuesto de amonio cuaternario o de N-hidrógeno o una de sus mezclas del documento D2 en el método divulgado en el documento D1 para llegar así al objeto de la reivindicación 1 de la solicitud. Por lo cual se considera obvia. Cabe mencionar que el documento D1 enseña que la formulación utilizada para impedir o aliviar los problemas que están asociados comúnmente con depósitos de sulfuro puede contener adicionalmente biocidas, (por ejemplo, formaldehído o glutaraldehído) dispersantes, desemulsionantes, antiespumantes, disolventes, inhibidores de incrustaciones, inhibidores de la corrosión, inhibidores de hidratos de gas, los inhibidores de asfalteno, inhibidores de naftenato, eliminadores de oxígeno y / o floculantes (Pág. 5, líneas 24 a 27), por su parte, el documento D2 enseña que el método para disminuir el nivel de sulfuro de hierro en un conducto, aplica una composición que incluye inhibidores de corrosión como aminas y resinas de compuestos de amonio cuaternario (Párr. 56), por lo cual, la persona versada en la materia estaría motivada a incluir un compuesto de amonio cuaternario o de N-hidrógeno o una de sus mezclas como inhibidores de corrosión.

Ahora bien, el documento D1 divulga las características de las reivindicaciones dependientes así:

- Reivindicación 6: la formulación puede contener adicionalmente biocidas (por ejemplo formaldehído o glutaraldehído) (Pág. 4, Línea 34 a Pág. 5 línea 1 y Pág. 5, Líneas 24 a 27).
- Reivindicación 7: el compuesto de fosfonio es sulfato de tetrakis(hidroximetil)fosfonio mencionado posteriormente en la presente como THPS (...) alternatively, el compuesto de fosfonio puede ser, por ejemplo, un cloruro de tetrakis(hidroximetil)fosfonio, bromuro de tetrakis(hidroximetil)fosfonio, fosfato de tetrakis(hidroximetil)fosfonio, acetato de tetrakis(hidroximetil)fosfonio u oxalato de tetrakis-(hidroximetil)fosfonio u oxalato de tetrakis-(hidroximetil)fosfonio (Pág. 3, Líneas 6 a 13).
- Reivindicación 8: el compuesto de fosfonio es sulfato de tetrakis(hidroximetil)fosfonio mencionado posteriormente en la presente como THPS (...) alternatively, el compuesto de fosfonio puede ser, por ejemplo, un cloruro de tetrakis(hidroximetil)fosfonio, bromuro de tetrakis(hidroximetil)fosfonio, fosfato de tetrakis(hidroximetil)fosfonio, acetato de tetrakis(hidroximetil)fosfonio u oxalato de tetrakis-(hidroximetil)fosfonio u oxalato de tetrakis-(hidroximetil)fosfonio (Pág. 3, Líneas 6 a 13) y un aminoácido, como aminoácido orgánico, es recomendado usar alanina, beta-alanina, cistationina, cistina, histidina, glicina, leucina, isoleucina, histidina, lisina, metionina, prolina, sarcosina, serina, tironina, tirosina y valina (Pág. 4, Líneas 4 a 6, Ejs. 1 y 2).
- Reivindicación 14 a 16: método para el tratamiento de un sistema acuoso que contiene o está en contacto con incrustación de sulfuro de metal, tal método comprende agregar a dicho sistema, separada o conjuntamente, una cantidad anti-incrustación eficiente de una composición estabilizada de la presente invención, poner en contacto la incrustación con la composición acuosa, disolviendo mediante esto por lo menos parte de la incrustación en la composición acuosa y extracción de

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la incrustación disuelta del sistema. En aquella aplicación, específica, a la composición acuosa estabilizada del compuesto de fosfonio puede ser usada como tratamiento continuo a un sistema de agua o dosificada por lotes como se requiera. Alternativamente puede ser diluida a una concentración de 0,01 a 10%, preferiblemente 0,01 a 0,1% en peso antes de la aplicación (Pág. 5, líneas 4 a 13).

Asimismo, el documento D2 divulga las características de las reivindicaciones dependientes así:

- Reivindicación 5: dicha amina o amonio derivado se selecciona del grupo que consiste en amoníaco, alquilaminas, dialquilaminas, alquilendiaminas, cicloalquilaminas, y los ácidos conjugados de los mismos (Reivindicación 30). dicha amina o derivado de amonio se selecciona del grupo que consiste de amoníaco, metilamina, y cloruro de amonio (Reivindicación 32). dicha amina o derivado de amonio se selecciona del grupo que consiste en metilamina, etilamina, propilamina, isopropilamina, butilamina, tertbutilamina, 1,2-diaminoetano, 1,3-diaminopropano, ciclopropilamina, ciclobutilamina, ciclopentilamina, ciclohexilamina, y los ácidos conjugados de los mismos (Reivindicación 33).
- Reivindicación 13: la composición se puede implementar en una variedad de conductos de fluidos procesados (Párr. 13, Reivindicación 3), como hidrocarburos (Párr. 3).

De igual manera, las reivindicaciones dependientes 9 a 12 no mencionan características técnicas tangibles adicionales que puedan brindarle nivel inventivo al objeto de la reivindicación 1, puesto que estas se encuentran afectadas por claridad, dado que refieren un sistema en el método, es decir, no se define correctamente como una etapa o condición particular del método a proteger.

Puesto que las reivindicaciones dependientes 5 a 16 no mencionan características inventivas adicionales tampoco se pueden considerar inventivas.

7. Conclusión

Los requisitos de Patentabilidad de la presente solicitud están afectados así:

Item	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	WO 2010105872	1, 6 a 12, 14 a 16	Nivel Inventivo
D2	US 2013/0062316	1, 5 y 13	Nivel inventivo

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-07-21

Elaboró: Yenny Marcela Campos Borda
Revisó: Olga Ximena Benavides Salazar

Search query (2): [SP]: 1. a method for preventing the generation of, and/or removing hydrogen sulfide and/or sulphydryl compounds and their corrosion products in an industrial process fluid or system, which comprises adding to the fluid or system an effective amount of a composition comprising: (i) at least one aldehyde or aldehyde donor that is not a triazine (ii) the reaction product of a hydroxymethylphosphine or hydroxymethylphosphonium compound and an amino acid and, optionally, (iii) a quaternary ammonium or n-hydrogen compound or mixture thereof. 2. the method of claim 1, wherein the molar ratio of the aldehyde or aldehyde donor to the reaction product of a hydroxymethylphosphine or hydroxymethylphosphonium compound and an amino acid is from 0.02:1 to 100:1. 3. the method of claim 1, wherein the quaternary ammonium compound has the formula (r1r2r3r4n+)nxn- wherein r1, r2, r3, and r4 are each independently an alkyl group having from 1 to 30 carbon atoms or an arylalkyl group having from 7 to 30 carbon atoms, and xn- is a mono- or polyvalent anion selected from the group consisting of a halide, a c2-20 mono- or dicarboxylate, a borate, nitrate, bicarbonate, carbonate, sulfamate, a sulfonate, sulfate, and a phosphate. 4. the method of claim 1, wherein the molar ratio of the aldehyde or aldehyde donor to quaternary ammonium or n-hydrogen compound or mixture thereof is from 0.1:1 to 100:1. 5. the method of claim 1, wherein the n-hydrogen compound is selected from the group consisting of p-toluenesulfonamide, 5,5-dialkylhydantoins, methanesulfonamide, barbituric acid, 5-methyluracil, imidazoline, pyrrolidone, morpholine, ethanolamine, acetanilide, acetamide, n-ethylacetamide, phthalimide, benzamide, succinimide, n-methylurea, n-acetylurea, methyl allophanate, methyl carbamate, phthalohydrazide, pyrrole, indole, formamide, n-methylformamide, dicyanodiamide, ethyl carbamate, 1,3-dimethylbiuret, methylphenylbiuret, 4,4-dimethyl-2-oxazolidinone, 6-methyluracil, 2-imidazolidinone, ethyleneurea, 2-pyrimidone, azetidin-2-one, 2-pyrrolidone, caprolactam, phenylsulfonimide, phenylsulfonimidylamide, diarylsulfonimides, dialkylsulfonimides, isothiazoline-1,1-dioxide, hydantoin, glycinamide, creatine, glycoluril, c1-20 alkylamines, (c1-20 alkyl)alkylenediamines, and (c1-20 alkyl)alkylenetriamines. 6. the method of claim 1, wherein the at least one aldehyde or aldehyde donor is selected from the group consisting of hydroxymethylhydantoins, bis(hydroxymethyl)hydantoins, imidazolidinyl urea, glyoxal, formaldehyde, glutaraldehyde, n-methylolurea, and acrolein. 7. the method of claim 1, wherein the hydroxymethylphosphine or hydroxymethylphosphonium compound is selected from the group consisting of tris-(hydroxymethyl)phosphine, tetrakis(hydroxymethyl)phosphonium chloride bis-[tetrakis(hydroxymethyl)phosphonium] sulfate, 1,2-bis[bis(hydroxymethyl)-phosphino]benzene, 1,7-bis[bis(hydroxymethyl)phosphino]alkylenes wherein the alkylene is a c1-6 methylene chain, tris(hydroxymethyl)(c1-20 alkyl)phosphonium halides, and tris(hydroxymethyl)(aryl-c1-20 alkyl)phosphonium halides. 8. the method of claim 1, wherein the amino acid is selected from the group consisting of glycine, lysine, alanine, histidine, aspartic acid, glutamic acid, serine, threonine, asparagine, glutamine, cysteine, proline, valine, isoleucine, leucine, methionine, phenylalanine, tyrosine, tryptophan, 12-aminolauric acid, and mixtures thereof. 9. the method of claim 1, wherein the industrial process system is selected from the group consisting of an oil and gas production system, a produced water storage tank, an oil storage tank, an oil or gas transmission pipeline, ballast water tank, or oil transportation tank. 10. the method of claim 1, wherein the industrial process system is a cooling tower. 11. the method of any of claims 1 to 8, wherein the industrial process system is a fuel storage tank. 12. the method of claim 1, wherein the industrial process system is an oil storage tank or transport system. 13. the method of claim 1, wherein the industrial process fluid is a fracturing fluid or a drilling mud. 14. the method of claim 1, wherein the aldehyde or aldehyde donor, the reaction product of the hydroxymethylphosphine or hydroxymethylphosphonium compound and amino acid, and, optionally, the quaternary ammonium compound or n-hydrogen compound, are combined prior to addition to the system. 15. the method of claim 1, wherein the aldehyde or aldehyde donor and the reaction product of the hydroxymethylphosphine or hydroxymethylphosphonium compound and amino acid are combined prior to addition to the system and the quaternary ammonium compound or n-hydrogen compound is added separately to the system. 16. the method of claim 1, wherein the aldehyde or aldehyde donor and the quaternary ammonium compound or n-hydrogen compound are combined separately from the reaction product of the hydroxymethylphosphine or hydroxymethylphosphonium compound and amino acid and each combined product is added separately to the system. 17. the method of claim 2, wherein the molar ratio of the aldehyde or aldehyde donor to the reaction product of a hydroxymethylphosphine or hydroxymethylphosphonium compound and an amino acid is from 0.1:1 to 20:1. 18. the method of claim 2, wherein the molar ratio of the aldehyde or aldehyde donor to the reaction product of a hydroxymethylphosphine or hydroxymethylphosphonium compound and an amino acid is from 0.5:1 to 4:1. 19. the method of claim 4, wherein the molar ratio of the aldehyde or aldehyde donor to quaternary ammonium or n-hydrogen compound or mixture thereof is from 0.2:1 to 20:1. 20. the method of claim 4, wherein the molar ratio of the aldehyde or aldehyde donor to quaternary ammonium or n-hydrogen compound or mixture thereof is from 0.5:1 to 6:1.

Results: 15

Yenny Campos

Search history

Search 1: TAC=(removal of H2S and iron sulfide and hydroxymethylphosphine and N-hydrogen compounds and quaternary ammonium) (Results 1)

Search 2: [SP]: 1. a method for preventing the generation of, and/or removing hydrogen sulfide and/or sulphydryl compounds and their corrosion products in an industrial process fluid or system, which comprises adding to the fluid or system an effective amount of a composition comprising: (i) at least one aldehyde or aldehyde donor that is not a triazine (ii) the reaction product of a hydroxymethylphosphine or hydroxymethylphosphonium compound and an amino acid and, optionally, (iii) a quaternary ammonium or n-hydrogen compound or mixture thereof. 2. the method of claim 1, wherein the molar ratio of the aldehyde or aldehyde donor to the reaction product of a hydroxymethylphosphine or hydroxymethylphosphonium compound and an amino acid is from 0.02:1 to 100:1. 3. the method of claim 1, wherein the quaternary ammonium compound has the formula (r1r2r3r4n+)nxn- wherein r1, r2, r3, and r4 are each independently an alkyl group having from 1 to 30 carbon atoms or an arylalkyl group having from 7 to 30 carbon atoms, and xn- is a mono- or polyvalent anion selected from the group consisting of a halide, a c2-20 mono- or dicarboxylate, a borate, nitrate, bicarbonate, carbonate, sulfamate, a sulfonate, sulfate, and a phosphate. 4. the method of claim 1, wherein the molar ratio of the aldehyde or aldehyde donor to quaternary ammonium or n-hydrogen compound or mixture thereof is from 0.1:1 to 100:1. 5. the method of claim 1, wherein the n-hydrogen compound is selected from the group consisting of p-toluenesulfonamide, 5,5-dialkylhydantoins, methanesulfonamide, barbituric acid, 5-methyluracil, imidazoline, pyrrolidone, morpholine, ethanolamine, acetanilide, acetamide, n-ethylacetamide, phthalimide, benzamide, succinimide, n-methylurea, n-acetylurea, methyl allophanate, methyl carbamate, phthalohydrazide, pyrrole, indole, formamide, n-methylformamide, dicyanodiamide, ethyl carbamate, 1,3-dimethylbiuret, methylphenylbiuret, 4,4-dimethyl-2-oxazolidinone, 6-methyluracil, 2-imidazolidinone, ethyleneurea, 2-pyrimidone, azetidin-2-one, 2-pyrrolidone, caprolactam, phenylsulfonimide, phenylsulfonimidylamide, diarylsulfonimides, dialkylsulfonimides, isothiazoline-1,1-dioxide, hydantoin, glycinamide, creatine, glycoluril, c1-20 alkylamines, (c1-20 alkyl)alkylenediamines, and (c1-20 alkyl)alkylenetriamines. 6. the method of claim 1, wherein the at least one aldehyde or aldehyde donor is selected from the group consisting of hydroxymethylhydantoins, bis(hydroxymethyl)hydantoins, imidazolidinyl urea, glyoxal, formaldehyde, glutaraldehyde, n-methylolurea, and acrolein. 7. the method of claim 1, wherein the hydroxymethylphosphine or hydroxymethylphosphonium compound is selected from the group consisting of tris-(hydroxymethyl)phosphine, tetrakis(hydroxymethyl)phosphonium chloride bis-[tetrakis(hydroxymethyl)phosphonium] sulfate, 1,2-bis[bis(hydroxymethyl)-phosphino]benzene, 1,7-bis[bis(hydroxymethyl)phosphino]alkylenes wherein the alkylene is a c1-6 methylene chain, tris(hydroxymethyl)(c1-20 alkyl)phosphonium halides, and tris(hydroxymethyl)(aryl-c1-20 alkyl)phosphonium halides. 8. the method of claim 1, wherein the amino acid is selected from the group consisting of glycine, lysine, alanine, histidine, aspartic acid, glutamic acid, serine, threonine, asparagine, glutamine, cysteine, proline, valine, isoleucine, leucine, methionine, phenylalanine, tyrosine, tryptophan, 12-aminolauric acid, and mixtures thereof. 9. the method of claim 1, wherein the industrial process system is selected from the group consisting of an oil and gas production system, a produced water storage tank, an oil storage tank, an oil or gas transmission pipeline, ballast water tank, or oil transportation tank. 10. the method of claim 1, wherein the industrial process system is a cooling tower. 11. the method of any of claims 1 to 8, wherein the industrial process system is a fuel storage tank. 12. the method of claim 1, wherein the industrial process system is an oil storage tank or transport system. 13. the method of claim 1, wherein the industrial process fluid is a fracturing fluid or a drilling mud. 14. the method of claim 1, wherein the aldehyde or aldehyde donor, the reaction product of the hydroxymethylphosphine or hydroxymethylphosphonium compound and amino acid, and, optionally, the quaternary ammonium compound or n-hydrogen compound, are combined prior to addition to the system. 15. the method of claim 1, wherein the aldehyde or aldehyde donor and the reaction product of the hydroxymethylphosphine or hydroxymethylphosphonium compound and amino acid are combined prior to addition to the system and the quaternary ammonium compound or n-hydrogen compound is added separately to the system. 16. the method of claim 1, wherein the aldehyde or aldehyde donor and the quaternary ammonium compound or n-hydrogen compound are combined separately from the reaction product of the hydroxymethylphosphine or hydroxymethylphosphonium compound and amino acid and each combined product is added separately to the system. 17. the method of claim 2, wherein the molar ratio of the aldehyde or aldehyde donor to the reaction product of a hydroxymethylphosphine or hydroxymethylphosphonium compound and an amino acid is from 0.1:1 to 20:1. 18. the method of claim 2, wherein the molar ratio of the aldehyde or aldehyde donor to the reaction product of a hydroxymethylphosphine or hydroxymethylphosphonium compound and an amino acid is from 0.5:1 to 4:1. 19. the method of claim 4, wherein the molar ratio of the aldehyde or aldehyde donor to quaternary ammonium or n-hydrogen compound or mixture thereof is from 0.2:1 to 20:1. 20. the method of claim 4, wherein the molar ratio of the aldehyde or aldehyde donor to quaternary ammonium or n-hydrogen compound or mixture thereof is from 0.5:1 to 6:1. (Results 15)

Title: ALDEHYDE-HYDROGEN SULPHIDE REACTION PRODUCT

Abstract: Source: US1991765A 1. The method which comprises reacting hydrogen sulphide and an aldehyde In an aqueous solution, having a pl-I between 2 and 12, at a temperature between substantially 20 degrees C. and substantially 100 degrees C.

Classifications:

International (IPC 8-9): C08G75/16 (Advanced/Invention);
C08G75/00 (Core/Invention)

International (IPC 1-7): C07C149/18 C08G75/16

CPC: C08G75/16

European: C07C319/00 C08G75/16

US: 528/265 568/20 568/75

Family:

Publication number	Publication date	Application number	Application date
US1991765 A	19350219	US19320588488	19320123

Priority:

US19320588488 19320123

Probable Assignee: DUPONT VISCOLOID CO

Assignee(s): (std): DUPONT VISCOLOID CO ; DUPONT VISCOLOID COMPANY

Inventor(s): (std): MARKS BARNARD M

Title: INHIBITING CORROSION

Abstract: Source: US2426318A I claim: 1. In the art of inhibiting corrosive attack on metals, the step which comprises mixing with a fluid containing a sulfide and normally having a. corrosive action upon metals, a small proportion of an organic compound at least partially soluble in said fluid and containing the characteristic aldehyde group, -CHO. 2. In the art of inhibiting corrosive attack'on metals, the step which comprises mixing with a ,fluid containing hydrogen sulfide and normally having a corrosive action upon metals, a small proportion of an organic compound at least partially soluble in said fluid and containing the characteristic aldehyde group, -CHO. 3; In the art of inhibiting corrosive attack on metals, the step which comprises mixing with a sulnde-containing fluid normally having a corrosive action upon metals, a small proportion of an aliphatic aldehyde containing not more than four carbon atoms to the molecule. 4. In the art of inhibiting corrosive attack on metals, the step which comprises mixing with e. hydrocarbon fluid containing a. sumde and normally having a corrosive action upon metals, a small proportion of formaldehyde. 5. In the art of inhibiting corrosive attack on ferrous metals, the step which comprises mixing a small proportion of an aldehyde in a liquid containing a sulnde and normally having a corrosive action upon said metals, said aldehyde being at least partially soluble in said liquid. 6. In the art of inhibiting corrosive attack on ferrous metals, the step which comprises mixing a small proportion of an aliphatic aldehyde in a. liquid containing a sulfide and normally having a corrosive action upon said metals, said aldehyde being at least partially soluble in said liquid. 7. In the art of inhibiting the corrosion of ferrous metal by a liquid comprising hydrogen sulfide and water, the step which comprises commingling with said liquid a small proportion of an organic compound containing an aldehyde group capable of reacting with hydrogen sulnde. 8. The method of inhibiting the normal tendency of a sulfide-containing mixture of aqueous and non-aqueous iluids to attack ferrous metals which comprises the step of adding to said mixture a small proportion of an organic compound containing the characteristic aldehyde group, -CHO, said organic compound being at least partially soluble in said mixture, 9. The method of inhibiting the normal tendency of sulnde-containing aqueous liquids to attack ferrous metals which comprises the step of adding to said liquids a small proportion of a Water-soluble aldehyde. 10. The method of inhibiting corrosion of ferrous metals by naturally occurring iiluids containing water and a water-soluble sulfide which comprises dispersing in said fluids a small proportion of a water-soluble organic compound containing the characteristic aldehyde group, -C1-10. 11. The method of treating sulnde-containing well fluids to inhibit the tendency of such Well fluids to cause corrosion of metals in the presence of water which comprises the step of dispersing in the well fluids within a well a small proportion of an organic compound containing the characteristic aldehyde group, -CHO, and which is at least partially water-soluble. 12. The method of inhibiting corrosion of ferrous metals by well fluids containing ,.a. watersoluble sulfur compound and water which com» prises supplying to the well iiluds within a producing Well a small proportion of a. water-soluble aldehyde. - 13. In the art of inhibiting the attack of ferrcus metals by liquids comprising a. corrosive suliide and water, the step which comprises mixing with said liquids formaldehyde in amount of the order of about 50 to about 100 parts of formaldehyde per million parts of Water in said liquids, 14. The method of inhibiting corrosive attack of ferrous metals within a Well bore by well iluids containing hydrocarbons and sulnde brine which comprises dispersing in the fluids within a well bore water-soluble aliphatic aldehyde to the extent of at least ten parts of aldehyde per million parts of said brine produced with said well fluids. 15. The method of inhibiting corrosive attack of ferrous metals within a well by well fluids containing hydrocarbons, brine and hydrogen sulfide which comprises dispersing in said fluids within the well a small amount of formaldehyde. 16. In the art of inhibiting the corrosion of metals by a fluid containing a sulfide, the step which comprises admixing with said iilud a small proportion of an aldehyde-liberating substance, the liberated aldehyde being at least partially soluble in said iilud.

Classifications:
International (IPC 8-9): C10L1/185 C23F11/12 (Advanced/Invention); C10L1/10 C23F11/10 (Core/Invention)
International (IPC 1-7): C10G1/00 C10L1/18 C23F11/12
CPC: C10L1/1857 C23F11/122 Y10S507/932 Y10S507/939
European: C10L1/185C C23F11/12A
US: 166/310 422/12 422/13 507/268 507/932 507/939

Family:

Publication number	Publication date	Application number	Application date
US2426318 A	19470826	US19450628678	19451115

Priority:
US19450628678 19451115

Probable Assignee: STANOLIND OIL AND GAS CO
Assignee(s): (std): STANOLIND OIL AND GAS CO
Assignee(s): STANOLIND OIL AND GAS COMPANY
Inventor(s): (std): MENAUL PAUL L

Title: DEODORIZING TREATMENT OF AQUEOUS SOLUTIONS

Abstract: Source: US3459852A ABSTRACT OF THE DISCLOSURE There is provided a process for deodorizing and reducing the biochemical demand of an aqueous solution which contains at least one compound of hydrogen sulphide and compounds containing the —SH group. The process comprises mixing with the solution a sulphide-active alpha, beta unsaturated aldehyde or ketone in an amount sufficient to form sulphur-containing reaction product of the sulphide active aldehyde or ketone. This is a continuation-in-part of my copending application, Ser. No. 507,250, filed Nov. 10, 1965.

Classifications:

International (IPC 8-9): C02F1/50 (Advanced/Invention);
C02F1/50 (Core/Invention)

International (IPC 1-7): C02C1/40 C02C5/02

CPC: C02F1/50

European: C02F1/50

US: 210/758 424/76 424/76.2 424/76.6 514/461 514/675 514/703

Family:

Publication number	Publication date	Application number	Application date
US3459852 A	19690805	US19660538952	19660331

Priority:

US19660538952 19660331

Probable Assignee: DAN CHRISTIAN ROEHM

Assignee(s): (std): DAN CHRISTIAN ROEHM

Inventor(s): (std): ROEHM DAN CHRISTIAN

Inventor(s): DAN CHRISTIAN ROEHM

Title: METHOD OF SCAVENGING HYDROGEN SULFIDE

Abstract: Source: US4680127A The present invention is directed to methods of reducing the amount of hydrogen sulfide in hydrogen sulfide-containing aqueous or wet gaseous mediums without solids formation. This invention comprises adding an effective amount for the purpose of glyoxal or glyoxal in combination with formaldehyde or glutaraldehyde to the desired hydrogen sulfide-containing medium.

Classifications:

International (IPC 8-9): B01D53/52 C02F1/20 C02F1/52 C02F1/68 (Advanced/Invention);
B01D53/48 C02F1/20 (Core/Invention)

International (IPC 1-7): C02F1/00 C02F1/52 C02F1/68

CPC: Y10S210/916 B01D53/52 C02F1/20

European: B01D53/52 C02F1/20

US: 210/749 210/916 422/5 423/226 423/242.2 423/243

Family:

Publication number	Publication date	Application number	Application date
CA1282504 A1	19910402	CA19860523361	19861119
US4680127 A	19870714	US19850808590	19851213

Priority:

US19850808590 19851213 CA19860523361 19861119

Probable Assignee: BETZ LABORATORIES INC

Assignee(s): (std): BETZ LABORATORIES

Assignee(s): BETZ LABORATORIES INC ; BETZDEARBORN INC ; EDMONDSON JAMES G

Inventor(s): (std): EDMONDSON JAMES G

Title: COMPOSITION AND METHOD FOR SWEETENING HYDROCARBONS

Abstract: Source: US4978512A Methods are disclosed for selectively reducing the levels of hydrogen sulfide and oragnic sulfides from gaseous and/or liquid hydrocarbon streams, particularly natural gas streams, comprising contacting the streams with a composition comprising the reaction product of (i) a lower alkanolamine with (ii) a lower aldehyde.

Classifications:

International (IPC 8-9): A61L11/00 A61L9/00 A61L9/01 B01D53/14 B01D53/34 B01D53/38 B01D53/48 B01D53/52 B01D53/77 C01B17/16 C07C7/00 C09K8/532 C10G21/20 C10L3/10 (Advanced/Invention);

A61L9/00 B01D53/38 B01D53/77 (Advanced/Non-invention);

A61L9/00 A61L9/01 B01D53/14 B01D53/34 B01D53/38 B01D53/48 B01D53/77 C07C7/00 C09K8/52 C10G21/00 C10L3/00 (Core/Invention)

International (IPC 1-7): A61L11/00 A61L9/00 B01D53/14 B01D53/18 B01D53/34 B01D53/48 B01D53/52 C01B17/04 C01B17/05 C01B17/16 C02F1/20 C07C7/00 C07C7/10 C07C7/11 C07D253/07 C10G21/20 C10G29/20 C10L3/10

CP: A61L9/01 B01D53/485 B01D53/52 Y10S507/932 B01D53/1493 C09K8/532 C09K2208/20 C10G21/20 C10G2300/207 C10L3/10

European: A61L9/01 B01D53/14M B01D53/48B B01D53/52 C09K8/532 C10G21/20 C10L3/10 M09K208/20 M10G300/20A6

US: 208/189 423/226 423/228 423/229 507/244 507/268 507/932

PatBase - C10G2300_207

**SUBSTITUTE
REPLACEMENT**

SECTION is not Present

Cette Section est Absente

Family:

Publication number	Publication date	Application number	Application date
AT126092 E	19950815	AT19890901444T	19891221
AT176759 E	19990315	AT19910914985T	19910724
AU199048221 A1	19900801	AU19900048221	19891221
AU199184314 A1	19920218	AU19910084314	19910724
AU619375 B2	19920123	AU19900048221	19891221
AU654966 B2	19941201	AU19910084314	19910724
CA2005946 AA	19900623	CA19892005946	19891219
CA2005946 C	19950207	CA19892005946	19891219
CA2087166 AA	19930112	CA19912087166	19910724
DE68923793 D1	19950914	DE19896023793	19891221
DE68923793 T2	19960404	DE19896023793T	19891221
DE69130903 D1	19990325	DE19916030903	19910724
EP0408700 A1	19910123	EP19900901444	19891221
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EP0540666 B1	19990217	EP19910914985	19910724
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RU2080909 C1	19970610	SU19894830969	19891221
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Priority:

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US19950371667	19950112	US19940200857	19940222	US19920837554	19920214
WO1991US05232	19910724				

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): QUAKER CHEM CORP ; PETROLITE CORP ; PETROLITE HOLDINGS INC ; BAKER HUGHES INC ; QUAKER CHEMICAL CORP A DELAWAR

Assignee(s): QUAKER CHEMICAL CORP ; QUAKER CHEMICAL DELAWARE CORP ; BAKER HUGHES INC HOUSTON TEX US ; BAKER PETROLITE CORP ; DILLON EDWARD THOMAS ; QUAKER CHEMICAL A DELAWARE CORPORATIO CORP ; PETROLITE KHOLDINGZ INK ; QUAKER CHEMICAL CONSHOHOCKEN CORP ; QUAKER CHEMICAL 300 DELAWARE AVE WILMINGTON DE 198 ; QUAKER CHEMICAL A PA CORP CORP ; QUAKER CHEMICAL A DELAWARE CORP ; PETROLITE HOLDINGS INC WILMINGTON DEL US ; QUAKER CHEMICAL 300 DELAWARE AVE WILMINGTON DE 19899 ACORP OF DE CORP

Inventor(s): (std): DILLON EDWARD ; DILLON EDWARD T ; DILLON EDWARD THOMAS ; EDWARD T DILLON

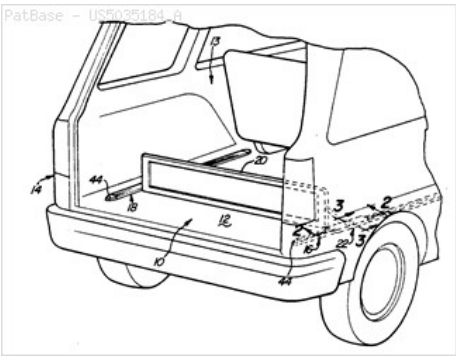
Inventor(s): EDWARD THOMAS DILLON ; EHDVARD TOMAS DILLON[US] ; DILLON EDWARD THOMAS PASADENA TX 77502 US ; EDVARD
TOMAS DILLON

Designated states: AT AU BE CA CH DE DK ES FR GB GR IT JP LI LU NL NO RO SE SU

Title: Cargo restraint system

Abstract: Source: US5035184A A cargo restraint system for vehicles is disclosed. The cargo restraining device includes a mechanism secured to a vehicle surface to enable selectable positioning of the cargo restraint system. Also, a member for restraining cargo on the vehicle surface is associated with the selectable positioning mechanism secured to the vehicle surface. The restraining member is movable from a first position, substantially parallel with and adjacent to the vehicle surface, to a second operable position. In the operable second position, the restraining member is substantially orthogonal to the vehicle surface.

Classifications:
International (IPC 8-9): B01D53/48 B01D53/52 B60P7/135 B60P7/14 B60R21/02 B60R7/02 C07C215/00 C08G12/06 (Advanced/Invention)
International (IPC 1-7): B01D53/34 B60P7/135 C01B17/05 C07C215/00 C07C45/00 C07H1/00 C07H5/04 C07H5/06 C08G12/06
CPC: B01D53/485 B01D53/52 B60P7/135 B60P7/14 B60R7/02 B60R21/026 C07C215/00 B01J20/3251
European: B01D53/48B B01D53/52 B01J20/32F8B4F4 B60P7/135 B60P7/14 B60R21/02B B60R7/02 C07C215/00
US: 104/121 224/42.33 410/121 410/130 536/1.11 536/18.7 536/55.2 564/471 564/472 564/483



Family:

Publication number	Publication date	Application number	Application date
AU199223195 A1	19930211	AU19920023195	19920710
CA1305207 A1	19920714	CA19880556405	19880113
GB2274651 A1	19940803	GB19940000340	19920710
GB2274651 B2	19951206	GB19940000340	19920710
GB9400340 A0	19940316	GB19940000340	19920710
US5035184 A	19910730	US19900496115	19900319
US5167479 A	19921201	US19910728552	19910711
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US5498707 A	19960312	US19940239370	19940506
WO9301126 A1	19930121	WO1992US05821	19920710

Priority:
US19870021778 19870304 CA19880556405 19880113 US19910728552 19910711
US19880251033 19880926 US19900496115 19900319 US19910728522 19910711
US19940239370 19940506 WO1992US05821 19920710 US19950441354 19950515
US19930051185 19930422 US19940247149 19940520

Probable Assignee: CLEARWATER INT LLC

Assignee(s): (std): BOTT JOHN ANTHONY ; GATLIN LARRY W

Assignee(s): CLEARWATER INT LLC ; JAC PRODUCTS INC ; CLEARWATER INT ; LARRY W GATLIN ; CHEMICAL BANK ; CLEARWATER INC ; ALPHA INTERMEDIATES CORP ; BOTT JOHN A

Inventor(s): (std): BOTT JOHN A ; GATLIN LARRY W

Inventor(s): LARRY W GATLIN

Designated states: AT AU BE BG BR CA CH DE DK ES FR GB GR IT JP KR LU MC NL SE

Title: Biocidal compositions and treatments

Abstract: Source: US6784168B A synergistic biocide comprises a tris(hydroxymethyl)phosphine or a tetrakis (hydroxymethyl)phosphonium salt and at least one non-surfactant biopenetrant, such as a polymer or copolymer having a plurality of quaternary ammonium groups, a hydrotrope or a syntan, together optionally with a surfactant.

Classifications:
International (IPC 8-9): A01N25/02 A01N25/10 A01N25/30 A01N57/18 A01N57/34 A01P3/00 C02F1/50 (Advanced/Invention); A01N25/02 A01N25/10 (Advanced/Non-invention); A01N25/02 A01N25/10 A01N57/00 C02F1/50 (Core/Invention)
International (IPC 1-7): A01N25/02 A01N25/10 A01N25/30 A01N57/00 A01N57/18 A01N57/26 A01N57/34 C02F1/50
CPC: A01N57/34 C02F1/50 C02F2103/023
European: A01N57/34 C02F1/50 M02F103/02B
US: 514/104 514/107 514/108 514/114 514/136 514/76

Family:

Publication number	Publication date	Application number	Application date
AT226393 E	20021115	AT19980966392T	19981221
AU199922753 A1	19990719	AU19990022753	19981221
AU736266 B2	20010726	AU19990022753	19981221
CA2316363 AA	20000622	CA19982316363	19981221
CA2316363 C	20041221	CA19982316363	19981221
DE69808968 D1	20021128	DE19986008968	19981221
DE69808968 T2	20030911	DE19986008968T	19981221
DK1041885 T3	20030217	DK19980966392T	19981221
EP1041885 A1	20001011	EP19980966392	19981221
EP1041885 B1	20021023	EP19980966392	19981221
ES2186252 T3	20030501	ES19980966392T	19981221
GB9727006 A0	19980218	GB19970027006	19971223
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GB9811778 A0	19980729	GB19980011778	19980603
GB9820255 A0	19981111	GB19980020255	19980918
JP2001527028 T2	20011225	JP20000526119T	19981221
JP4814425 B2	20111116	JP20000526119T	19981221
NO20003267 A	20000802	NO20000003267	20000622
NO20003267 A0	20000622	NO20000003267	20000622
NO323014 B1	20061227	NO20000003267	20000622
NZ505301 A	20020531	NZ19980505301	19981221
PT1041885 T	20030331	PT19980966392T	19981221
TW492840 B	20020701	TW19980121718	19981228
US6784168 BA	20040831	US20000582152	20000905
WO9933345 A1	19990708	WO1998EP08394	19981221

Priority:
GB19970027006 19971223 GB19980005407 19980314 GB19980005746 19980319
GB19980011778 19980630 GB19980011778 19980603 GB19980020255 19980918
WO1998EP08394 19981221

Probable Assignee: RHODIA CONSUMER SPECIALTIES LTD

Assignee(s): (std): RHODIA CONS SPEC LTD ; ALBRIGHT AND WILSON UK LTD ; JONES CHRISTOPHER RAYMOND ; ALBRIGHT AND AMP WILSON UK LTD ; ALBRIGHT AND WILSON ; RHODIA CONSUMER SPECIALTIES LTD ; TALBOT ROBERT ERIC

Assignee(s): RHODIA CONSUMER SPECIALTIES LTD OLDBURY ; WILSON UK LTD ; ALBRIGHT AND ; RHODIA CONSUMER SPECIA LTIES LIMITED ; RHODIA CONSUMER SPECIA LTIES LTD ; ALBRIGHT AND WILSON LIMITED ; ALBRIGHT AND WILSON UK LIMITED ; RHODIA CONSUMER SPECIALTIES LIMITED

Inventor(s): (std): CHRISTOPHER RAYMOND JONES ; JONES CHRISTOPHER RAYMOND ; JONES RAYMOND ; ROBERT ERIC TALBOT ; TALBOT ERIC ; TALBOT ROBERT ERIC ; HAY

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

Title: Treatment of iron sulphide deposits

Abstract: Source: US2003226808A Treating a water system containing or in contact with a metal sulphide scale to inhibit, prevent, reduce, dissolve or disperse iron sulphide deposits. A solution of tris(hydroxyorgano)phosphines (THP) and tetrakis(hydroxyorgano)phosphonium salts (THP salts) and sufficient of a chelant (amino-carboxylates or amino-phosphonates) to provide a solution containing from 0.1 to 50 percent by weight of said THP or THP salt and from 0.1 to 50 percent by weight of said chelant, is contacted with the metal sulphide scale thereby to dissolve at least part of said scale in said solution.

Classifications:
International (IPC 8-9): C01G21/21 C01G49/12 C01G9/08 C02F11/14 C02F5/14 C23F11/167 C23F14/02 (Advanced/Invention); C01G21/21 C01G49/12 C01G9/08 C02F1/50 C02F1/52 C02F1/68 (Advanced/Non-invention); C02F11/14 C02F5/10 C23F11/10 C23F14/00 (Core/Invention); C01G21/00 C01G49/12 C01G9/00 C02F1/50 C02F1/52 C02F1/68 (Core/Non-invention)
International (IPC 1-7): C02F C02F1/68 C02F5/14
CPC: C02F1/50 C02F1/52 C02F1/683 C02F5/14 C23F11/167 C23F11/1676 C23F14/02
European: C02F5/14 C23F11/167 C23F11/167D C23F14/02 M02F1/50 M02F1/52 M02F1/68K
US: 134/3 134/41 166/244.1 210/699 210/700 210/749 252/180 252/181 422/15

Family:

Publication number	Publication date	Application number	Application date
AU2001270801 AA	20020205	AU20010270801	20010710
AU2001270801 BB	20051103	AU20010270801	20010710
AU2001270801 BH	20060330	AU20010270801	20010710
AU200170801 A5	20020205	AU20010070801	20010710
BRPI0112574 A	20050201	BR2001PI12574	20010710
BRPI0112574 B1	20130521	BR2001PI12574	20010710
CA2416465 AA	20030117	CA20012416465	20010710
CA2416465 C	20090915	CA20012416465	20010710
CN1301919 C	20070228	CN20018015797	20010710
CN1458907 A	20031126	CN20018015797	20010710
DK176837 B1	20091123	DK20030000053	20030120
DK200300053 A5	20030313	DK20030000053	20030120
ECSP034441 A	20030725	EC2003SP04441	20030120
GB200017675 A0	20000906	GB20000017675	20000720
GB200301295 A0	20030219	GB20030001295	20010710
GB2379440 A1	20030312	GB20030001295	20010710
GB2379440 B2	20031015	GB20030001295	20010710
MXPA03000570 A1	20040405	MX2003PA00570	20030120
NO20030230 A	20030312	NO20030000230	20030117
NO20030230 A0	20030117	NO20030000230	20030117
NO324367 B1	20071001	NO20030000230	20030117
RU2003104975 A	20040627	RU20030104975	20010710
RU2281919 C2	20060820	RU20030104975	20010710
US2003226808 AA	20031211	US20030345720	20030116
US6926836 BB	20050809	US20030345720	20030116
WO0208127 A1	20020131	WO2001GB03139	20010710

Priority:
GB20000017675 20000720 WO2001GB03139 20010710

Probable Assignee: RHODIA CONSUMER SPECIALTIES LTD

Assignee(s): (std): FIDOE STEPHEN DAVID ; GABRIEL ROBERT ; JONES CHRISTOPHER RAYMOND ; RHODIA CONSUMER SPECIALTIES LT ; RHODIA CONS SPEC LTD ; TALBOT ROBERT ERIC ; RODIA KONZ JUMER SPESHIALTIZ L ; RHODIA CONSUMER SPECIALTIES LIMITED ; RHODIA CONSUMERS SPECIALTIES LTD

Assignee(s): RODIA KONZ JUMER SPESHIALTIZ LIMITED ; RHODIA CONSUMERS SPECIALTIES LIMITED ; RODIA KONZ JUMER SPESHIALTIZ LTD ; RHODIA CONSUMER SPECIALTIES LTD ; RHODIA COMSUMER SPECIALTIES LIMITED

Inventor(s): (std): DAVID FIDOE STEPHEN ; DZHOUNS KRISTOFER REHJMOND ; ERIC TALBOT ROBERT ; FIDOE S D ; FIDOE STEFEN DEHVID ; FIDOE STEPHEN DAVID ; GABRIEL ROBERT ; GEHBRIEHL ROBERT ; JONES C R ; JONES CHRISTOPHER RAYMOND ; RAYMOND JONES CHRISTOPHER ; TALBOT R E ; TALBOT ROBERT ERIC ; TEHLBOT ROBERT EHRIK ; STEPHEN DAVID FIDOE ; ROBERT ERIC TALBOT ; CHRISTOPHER RAYMOND JONES ; JONES S D FIDOE R E TALBOT C R ; ROBERT GABRIEL

Inventor(s): SD FIDOE ; CR JONES ; S D FIDOE ; R E TALBOT ; C R JONES ; S D FIDOE R E TALBOT C R JONES ; RE TALBOT

Agent(s): FRISHAUF HOLTZ GOODMAN AND CHICK PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Title: METHOD AND COMPOSITION TO DECREASE IRON SULFIDE DEPOSITS IN PIPE LINES

Abstract: Source: US2003062316A The levels of iron sulfide present in a conduit, such as a pipeline, are reduced by contacting the conduit, on an inner surface, with a composition obtained from an aqueous solution containing at least one compound of Formula (I) and at least one amine or corresponding ammonium derivative in the presence of a solvent, wherein X is an anion of valency n. Preferably, the pH of the solution is about 8. Alternatively, the method employs a composition comprising tris(hydroxymethyl)phosphine (TRIS) and at least one amine or corresponding ammonium derivative. The amine preferably is ammonia or a primary alkylamine. The compositions readily complex and thereby dissolve deposits of iron(II) sulfide, removing them from the conduit.

Classifications:

International (IPC 8-9): B08B17/00 B08B3/00 B08B3/08 B08B3/14 B08B7/00 B08B9/00 B08B9/02 B08B9/027 C02F5/14 C07F9/54 C09B65/00 C09K13/00 C09K13/02 C09K15/32 C09K3/00 C09K7/06 C09K8/528 C10G75/04 C11D11/00 C11D7/06 C11D7/36 C23G1/167 C23F14/02 C23G1/18 C23G1/24 C23G1/26 E21B37/06 F16L55/24 F16L58/00 F16L58/10 (Advanced/Invention); C02F5/14 (Advanced/Non-invention)

International (IPC 1-7): A61K31/66 B08B3/00 B08B3/14 B08B7/00 B08B9/00 B08B9/027 B08B9/093 C02F1/00 C02F5/08 C02F5/14 C03C23/00 C07F9/50 C08K3/32 C08K5/17 C08K5/53 C09K13/00 C09K13/02 C09K3/00 C11D1/00 C23G1/00 C23G1/14 C23G1/24 F16L58/00

CPC: Y10S210/912 B08B9/032 C09K8/528 C09K2208/20 C10G75/04 C11D7/06 C11D7/36 C11D11/0041 C23F14/02 C23G1/18 C23G1/24 C23G1/26 F16L58/1009 Y10T137/0391

European: B08B9/032 C09K8/528 C10G75/04 C11D11/00B2D6 C11D7/06 C11D7/36 C23F14/02 C23G1/18 C23G1/24 C23G1/26 F16L58/10B M09K208/20

US: 134/2 134/22.11 134/22.13 134/22.14 134/22.140S 134/22.16 134/2S 134/34 134/34S 134/42 134/42S 137/13 210/235 210/236 210/634 210/638 210/700 210/700P 210/709 210/712 210/724 210/748 210/912 252/175 252/175P 252/79.1 252/79.100S 252/79.5 252/79.500S 422/9 422/9P 423/150.1 510/363 510/363S 510/467 510/467S 514/129 514/129S 585/818



Family:

Publication number	Publication date	Application number	Application date
AU2002337645 AA	20030303	AU20020337645	20020814
AU2002337645 BB	20070621	AU20020337645	20020814
BRPI0211802 A	20040831	BR2002PI11802	20020814
BRPI0211802 B1	20130924	BR2002PI11802	20020814
CA2398420 AA	20030215	CA20022398420	20020814
CA2398420 C	20091222	CA20022398420	20020814
CN100510000 C	20090708	CN20028015979	20020814
CN1543494 A	20041103	CN20028015979	20020814
CO5560621 A2	20050930	CO20040012425	20040213
EP1423491 A1	20040602	EP20020773149	20020814
EP1423491 A4	20111102	EP20020773149	20020814
HK1067656 A3	20050415	HK20040109534	20041202
IN00077MN2004 A	20050429	IN2004MN00077	20040203
JP2005523378 T2	20050804	JP20030521742T	20020814
MXPA04001376 A1	20050606	MX2004PA01376	20040213
NO20041055 A	20040312	NO20040001055	20040312
NO335593 B1	20150112	NO20040001055	20040312
RU2004107844 A	20050510	RU20040107844	20020814
RU2315799 C2	20080127	RU20040107844	20020814
US2003062316 AA	20030403	US20020218905	20020815
US2003133827 AA	20030717	US20020044767	20020110
US2005263739 AA	20051201	US20050180910	20050714
US6866048 BB	20050315	US20020044767	20020110
US6986358 BB	20060117	US20020218905	20020815
VN8842 A1	20101227	VN20040000209	20020814
WO03016432 A1	20030227	WO2002US21328	20020814

Priority:

US20010373381P 20010417	US20010312647P 20010815	US20020373381P 20020417
US20020044767 20020110	WO2002US21328 20020814	CA20022398420 20020814
US20020218905 20020815	US20050180910 20050714	

Probable Assignee: GREENE S ENERGY GROUP LLC

Assignee(s): (std): MAMRE LLC ; SYNERGY CHEMICAL INC ; VALENTE EDWARD J ; SYNERGY CHEMICALS INC ; SYNERGY INC ; MATTOX MARK ANDREW

Assignee(s): PNC BANK NATIONAL ASSOCIATION ; SYNERGY CHEMICAL INC200 WEST ORANGE AVENUEFOLEYAL36535US ; MAMRE LLC10815 ST. JOHN'S LANEFOLEYAL36535US ; GREENE S ENERGY GROUP LLC ; GREENE S ENERGY GROUP LLC300 - 11757 KATY FREEWAYHOUSTONTX77079US ; GREENE'S ENERGY GROUP LLC

Inventor(s): (std): ANDREW MATTOX MARK ; EDWARD J VALENTE ; MARK ANDREW MATTOX ; MATTOX MARK A ; MATTOX MARK ANDREW ; VALENTE EDWARD J

Inventor(s): VALENTE EDWARD JUS ; VEJLENT EHDVARD DZH. ; MATTOX MARK ANDREWUS ; MEHTTOKS MARK EHND RJU

Agent(s): FOLEY AND LARDNER, SUITE 500; FOLEY AND LARDNER LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Title: METHOD OF PREVENTING HYDROGEN SULFIDE ODOR GENERATION IN AN AQUEOUS MEDIUM

Abstract: Source: US2006006120A The present invention relates to a fast acting chemical treatment for preventing the generation of hydrogen sulfide odor by the microbial metabolic activities of sulfate reducing bacteria. Specifically, the invention relates to a method for preventing hydrogen sulfide odor generation in a sulfur species-containing aqueous medium, which includes adding to the aqueous medium an effective amount for the purpose of a sulfide scavenger treatment selected from the group consisting of glyoxal, triazine, n-chlorosuccinimide, and mixtures thereof.

Classifications:

International (IPC 8-9): B01D53/48 B01D53/52 C02F1/20 C02F1/58 C23F11/08 C23F11/10 C23F11/12 C23F11/14 (Advanced/Invention); B01D53/48 C02F1/20 C02F1/58 C23F11/08 C23F11/10 (Core/Invention)

CPC: Y10S210/916 C02F1/72 C02F2303/02 C02F2305/06 C23F11/08 C23F11/122

European: C02F1/72 C23F11/08 C23F11/12A M02F303/02 M02F305/06

US: 210/749 210/750 210/916 422/5 423/226

Family:

Publication number	Publication date	Application number	Application date
EP1624089 A1	20060208	EP20050254297	20050708
US2006006120 AA	20060112	US20040887045	20040708
US7255796 BB	20070814	US20040887045	20040708

Priority:

US20040887045 20040708

Probable Assignee: GENERAL ELECTRIC CO

Assignee(s): (std): CHEN ZHUO ; GEN ELECTRIC ; RITZ DAVID B ; SEGAL WENDY ; WHITEKETTLE WILSON K

Assignee(s): GENERAL ELECTRIC CO ; GENERAL ELECTRIC COMPANY

Inventor(s): (std): WHITEKETTLE WILSON K ; SEGAL WENDY ; RITZ DAVID B ; CHEN ZHUO

Inventor(s): RITZ DAVID ; WHITEKETTLE WILSON

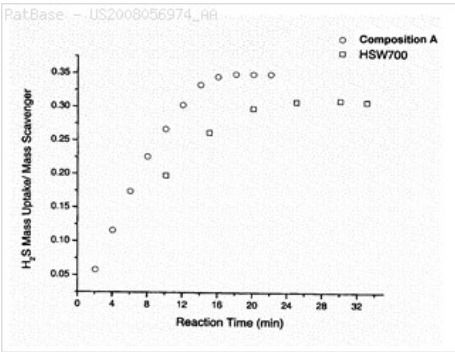
Agent(s): DUANE MORRIS LLP, IP DEPARTMENT; DUANE MORRIS LLP IP DEPARTMENT; DUANE MORRIS LLP

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Title: FAST, HIGH CAPACITY HYDROGEN SULFIDE SCAVENGERS

Abstract: Source: US2008056974A Selective, irreversible removal of hydrogen sulfide (H₂S) and other sulfhydryl compounds from a gas stream, such as sour natural gas and sour hydrocarbon liquids is achieved with a scavenging agent having hydroxyalkyl functionality and alkylamine functionality. This scavenger possesses a higher capacity for H₂S removal compared with a scavenger having only hydroxyalkyl functionality. The scavenging agent is made by reacting at least one alkanolamine and at least one alkyl amine with an aldehyde, such as formaldehyde.

Classifications:
International (IPC 8-9): B01D53/14 B01D53/50 C02F1/20 C02F1/28 C02F1/58 C02F1/68 C07D251/00 C10G21/20 C10G29/00 C10G29/20 C10L3/10 (Advanced/Invention); C07D251/04 (Advanced/Non-invention); B01D53/14 B01D53/50 C02F1/20 C02F1/28 C02F1/58 C02F1/68 C07D251/00 C10G21/00 C10G29/00 C10L3/00 (Core/Invention); C07D251/00 (Core/Non-invention)
CPC: Y10S210/916 C07D251/04 C02F1/683 C02F2101/101 C02F2103/18 C02F2103/365 C10G29/20
European: C02F1/68K C07D251/04 C10G29/20 M02F101/10A M02F103/18 M02F103/36P
US: 208/14 208/208R 208/236 210/749 210/750 210/916 423/220 423/242.7 423/243.01 48/127.3 48/127.5



Family:

Publication number	Publication date	Application number	Application date
BRPI0716377 A2	20130924	BR2007PI16377	20070814
CA2661124 AA	20090218	CA20072661124	20070814
CA2661124 C	20130108	CA20072661124	20070814
US2008056974 AA	20080306	US20060514594	20060901
US7438877 BB	20081021	US20060514594	20060901
WO08027721 A1	20080306	WO2007US75896	20070814

Priority:
US20060514594 20060901 WO2007US75896 20070814

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES INC

Assignee(s): LAMBERT ALEXANDER A III ; RIVERS GORDON T ; SALMA TAUSEEF

Inventor(s): (std): LAMBERT ALEXANDER A ; LAMBERT ALEXANDER A III ; LAMBERT III ALEXANDER A ; LAMBERTM ALEXANDER A ; RIVERS GORDON T ; SALMA TAUSEEF

Inventor(s): TAUSEEF SALMA ; ALEXANDER A LAMBERTM ; GORDON T RIVERS

Agent(s): MADAN MOSSMAN AND SRIRAM PC; LITTLEFIELD STEPHEN A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: METHOD AND COMPOSITION TO REMOVE IRON AND IRON SULFIDE COMPOUNDS FROM PIPELINE NETWORKS

Abstract: Source: US2010099596A The present invention comprises an iron complexing mixture and method of using same wherein beneficial performance and natural gas pipeline cleaning methods are employed. The synergistic improvement of combining two water-soluble metal complexing agents, THPS and IDS, prove to offer advantages in performance over the individual use of either chemical.

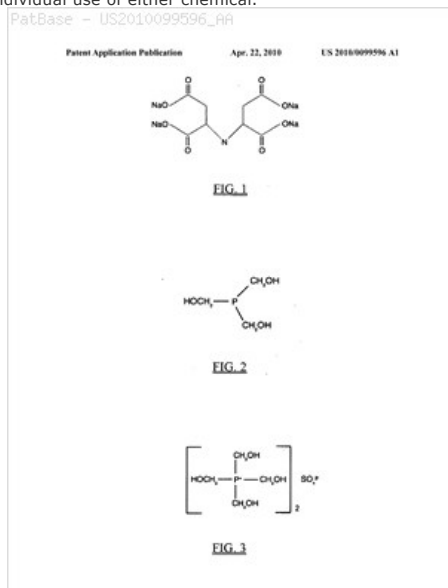
Classifications:

International (IPC 8-9): C11D3/30 C11D3/60 C11D7/36
C11D7/60 (Advanced/Invention)

CPC: C11D7/06 C11D7/3245 C11D7/36 C11D11/0041 C23F14/02 C23G1/26

European: C11D11/00B2D6 C11D7/06 C11D7/32E C11D7/36 C23F14/02 C23G1/26

US: 510/188 510/222 510/228 510/247 510/288 510/363 510/401 510/431 510/435
510/436 510/467 510/480



Family:

Publication number	Publication date	Application number	Application date
US2010099596 AA	20100422	US20080288149	20081016
US2011152153 AA	20110623	US20100928777	20101217
US7855171 BB	20101221	US20080288149	20081016
US8673834 BB	20140318	US20100928777	20101217

Priority:

US20080288149 20081016 US20100928777 20101217

Probable Assignee: TRAHAN DAVID O

Assignee(s): (std): TRAHAN DAVID O

Inventor(s): (std): TRAHAN DAVID O

Agent(s): THE MATTHEWS FIRM; MATTHEWS FIRM

Title: STABILIZED BIOCIDAL COMPOSITION

Abstract: Source: US2012046248A The current invention relates to a process for stabilising a phosphorus-containing compound aqueous composition, comprising the step of adding to said composition an efficient arsenic stabilizing amount of a compound selected from the group consisting of ammonia, ammonium salt, organic amino acid, peptide and polypeptide; application of the stabilized composition for treating an aqueous system optionally containing or in contact with metal sulphide scale, which method comprises adding to said system, separately or together, an efficient anti-scale amount of a stabilized aqueous composition or for treating a water system to kill or inhibit the growth of micro organisms comprising applying thereto or forming in situ an efficient inhibiting amount of the stabilized aqueous composition.

Classifications:
International (IPC 8-9): A01N25/00 A01N25/02 A01N25/22 A01N33/12 A01N37/44 A01N37/46 A01N57/00 A01N57/18 A01N57/20 A01N57/34 A01P1/00 A01P3/00 C02F1/50 C02F3/00 C02F5/00 C02F5/08 C02F5/12 C02F5/14 C09K15/00 (Advanced/Invention)
International (IPC 1-7): A01N25/22 A01N57/20
CPC: C02F1/50 A01N57/20 A01N57/34 C02F5/10 C02F2103/365 C02F2303/04
European: A01N57/20 A01N57/34 C02F1/50 M02F103/36P M02F303/04 M02F5/10
US: 210/601 210/601S 514/126 514/129 514/129S

Family:

Publication number	Publication date	Application number	Application date
AR075823 AA	20110427	AR2010P100772	20100312
AU2010225088 AA	20100923	AU20100225088	20100201
AU2010225088 BB	20140911	AU20100225088	20100201
CA2754126 AA	20100923	CA20102754126	20100201
CN102368907 A	20120307	CN201080012502	20100201
CO6450671 A2	20120531	CO20110120351	20110916
ECSP11011351 A	20111130	EC2011SP11351	20110923
EP2408308 A2	20120125	EP20100702121	20100201
IN06662CN2011 A	20130419	IN2011CN06662	20110916
JP2012520336 T2	20120906	JP20120500162T	20100201
KR20110132377 A	20111207	KR20117021504	20100201
MX2011009607 A1	20111004	MX20110009607	20110913
RU2011141868 A	20130427	RU20110141868	20100201
RU2522137 C2	20140710	RU20110141868	20100201
US2012046248 AA	20120223	US20100257174	20100201
WO10105872 A2	20100923	WO2010EP51194	20100201
WO10105872 A3	20111124	WO2010EP51194	20100201

Priority:
US20090160540P 20090316 WO2010EP51194 20100201 US20100257174 20100201

Probable Assignee: RHODIA OPERATIONS

Assignee(s): (std): EDMUNDS STEPHANIE ; FELLOWS ALAN ; JONES CHRIS ; RHODIA OPERATIONS ; RODHIA OPERATIONS ; RODIA OPERAS ON

Inventor(s): (std): ALAN FELLOWS ; CHRIS JONES ; DZHOUNZ KRIS ; EDMUNDS STEPHANIE ; EHDMUNDS STEFANI ; FELLOUZ ALAN ; FELLOWS ALAN ; FELOWS ALAN ; JONES CHRIS ; STEPHANIE EDMUNDS

Agent(s): CORDIER PASCAL CHRISTIAN; SEUGNET JEAN LOUIS ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: CORROSION INHIBITOR COMPOSITIONS COMPRISING AN ALDEHYDE AND A THIOL AND/OR AN AMINE FUNCTIONALIZED RING STRUCTURE AND ASSOCIATED METHODS

Abstract: Source: US2010261623A Provided herein are methods and compositions that include a method comprising contacting a metal surface with an acidic fluid comprising a corrosion inhibitor that comprises a reaction product formed from a direct or an indirect reaction of an aldehyde with a thiol and/or an amine functionalized ring structure. A composition provided includes an acidic treatment fluid that comprises an aqueous-base fluid, and acid, and a corrosion inhibitor that comprises a reaction product formed from a direct or an indirect reaction of an aldehyde with a thiol and/or an amine functionalized ring structure.

Classifications:
International (IPC 8-9): C07C233/77 C07C327/06 C07D213/00 C09K8/54 C09K8/60 C09K8/74 C23F11/04 C23F11/10 C23F11/14 C23F11/16 E21B43/00 (Advanced/Invention)
CPC: C09K8/74 C09K2208/32 C23F11/04 C23F11/10 C23F11/14I C23F11/149 C23F11/165
European: C09K8/74 C23F11/04 C23F11/10 C23F11/14A C23F11/14H C23F11/16H M09K208/32
US: 507/237 507/243 507/243P 507/256 507/256S 507/263 507/266 507/267 507/268 507/90 546/308 546/308S 558/255 558/255S 564/182 564/182S

Family:

Publication number	Publication date	Application number	Application date
AU2009344667 AA	20101021	AU20090344667	20091216
AU2009344667 BB	20130509	AU20090344667	20091216
CA2757709 AA	20101021	CA20092757709	20091216
CA2757709 C	20150203	CA20092757709	20091216
EP2419549 A1	20120222	EP20090796416	20091216
MX2011010677 A1	20111024	MX20110010677	20111010
US2010261623 AA	20101014	US20090386094	20090414
US7994099 BB	20110809	US20090386094	20090414
WO10119235 A1	20101021	WO2009GB02889	20091216

Priority:
US20090386094 20090414 WO2009GB02889 20091216

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: PROCESS AND COMPOSITION FOR THE REMOVAL OF HYDROGEN SULFIDE FROM INDUSTRIAL PROCESS FLUIDS

Abstract: Source: US2014224743A The invention relates to a method for the prevention and removal of H2S and/or other sulfhydryl compounds and iron sulfide deposits from gas and/or liquid streams in industrial process systems. Formulations comprising aldehydes, aldehyde donors, and/or aldehyde stabilizers, excluding triazines, in combination with the reaction product of an amino acid and a hydroxymethylphosphine or hydroxymethylphos-phonium salt, and optionally a quaternary ammonium compound and/or one or more N-hydrogen compounds such as 5,5-dialkylhydantoin or amines, are rapidly and sustainedly scavenging H2S originating from process and/or microbial sources. The formulations possess high capacities for H2S removal and are relatively pH-insensitive.

Classifications:

International (IPC 8-9): C02F1/50 C02F1/68 (Advanced/Invention)

CPC: C02F2303/02 C02F2303/08 C02F1/683 C02F1/50 C02F2101/101 C02F2103/008 C02F2103/023 C02F2103/34 C02F2305/00

US: 210/700

Family:

Publication number	Publication date	Application number	Application date
AU2012311460 AA	20130328	AU20120311460	20120921
CA2849344 AA	20140320	CA20122849344	20120921
CO6970584 A2	20140613	CO20140062856	20140325
EA201490680 A1	20140730	EA20140090680	20120921
EP2758347 A1	20140730	EP20120762582	20120921
MX2014003481 A1	20140722	MX20140003481	20140321
US2014224743 AA	20140814	US20120345825	20120921
WO13041654 A1	20130328	WO2012EP68592	20120921

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