

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 13-300497- -2	FECHA: 2015-05-16 23:21:14
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 378 FASE NACIONAL INCLUIDO CAPITULO I
TRA: 11 PCT-PATENTE DE INVENCION CAPITULOS I Y II	FOLIOS: 7
ACT: 430 REQUERSOLICITA	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
JUAN PABLO CADENA SARMIENTO

Asunto: Radicación: 13-300497- -2
 Trámite: 11
 Evento: 378
 Actuación: 430
 Oficio: 5297
 Folios: 7

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/EP2012/062537				
Fecha de Presentación Internacional	28/06/2012				

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° 13-300497-00000-0000	26/Diciembre/2013
Reivindicaciones:	Rad. N° 13-300497-00000-0000	26/Diciembre/2013
Dibujos:	Rad. N° 13-300497-00000-0000	26/Diciembre/2013
Prioridad:	FR 11/55855	30/Junio/2011
	FR PCT/FR2011/052412	17/Octubre/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 estudiarán las reivindicaciones 1 a 8.

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Título de la solicitud: “Almidón para refuerzo del núcleo de las planchas de yeso” (Ver página 1 del radicado N° 13-300497-00000-0000).

El problema planteado en esta solicitud consiste en la necesidad de proporcionar un nuevo medio para reforzar el núcleo de las planchas de yeso, para mejorar la resistencia mecánica a la compresión.

Para resolver este problema técnico, la solicitud en estudio proporciona una composición que comprende sulfato de calcio semihidratado o anhidro, agua y almidón oxidado, dicho almidón oxidado con una viscosidad Brookfield inferior o igual a 2 cPs a una temperatura inferior o igual a 55°C, y un máximo de viscosidad Brookfield a una temperatura comprendida entre 65°C y 100°C y un máximo de viscosidad Brookfield comprendido entre 100 cPs y 3000 cPs.

El objeto de la presente solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): C 04 B 24/38 // 28/14 // 28/16.

4. Reivindicaciones relativas a un uso o a un segundo uso (Art 14 y 21 D 486)

La reivindicación 8 hace relación a un uso, dado que en el preámbulo que es el elemento que introduce al objeto a ser protegido refiere como sigue: “*Utilización de almidón oxidado para aumentar la resistencia mecánica del núcleo de las placas de yeso*”, lo cual no es patentable de acuerdo con el Art 14.

5. De la solicitud de patente

Título

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 que comprende sulfato de calcio semihidratado o anhidro, agua y almidón oxidado para refuerzo del núcleo de las planchas de yeso”.

Reivindicaciones (Art 30 D 486, Art 22 PCT)

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

- Las reivindicaciones 1, 2, 3 y 4, no son claras porque presentan términos indefinidos y/o imprecisos “*inferior o igual*”, “*máximo*”, “*parcialmente*”, utilizados para definir el rango de varias características de la composición 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.
- La reivindicación 1, no es clara por que la composición está caracterizada de forma muy general refiriendo únicamente sus componentes, “*sulfato de calcio semihidratado o anhidro*”, “*agua*”, “*almidón oxidado*”, la composición no está caracterizada por sus característica técnicas esenciales como la composición y sus rangos, lo cual no es posible, dado que un producto y/o composición se debe definir por la forma o constitución del mismo, las partes que lo componen.
- La reivindicación 1 no es clara porque la expresión “viscosidad”, es un parámetro de la composición reivindicada y no deberían caracterizar la composición solamente por sus parámetros, si es posible definirlo de otra manera. Se sugiere definirlo por sus características esenciales estructurales, como sus componentes

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y los rangos de estos.

- La reivindicación 6 no es clara porque presenta una falsa dependencia así “se fabrica utilizando una composición según una cualquier de las reivindicaciones 1 a 5”, y se incluyen características de proceso “se fabrica (...)”, es decir, estas reivindicaciones de producto también se encuentran definidas en términos del procedimiento de fabricación. Se sugiere definir el producto por sus características esenciales estructurales. Al respecto no debe olvidarse, que las reivindicaciones de producto y de proceso 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.

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, 30 de junio 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	FR 2,899,225	“Gypsum paste composition, useful to make gypsum board, comprises gypsum, water and starch, where starch has a specific Brookfield viscosity”	5/Octubre/2007

El documento D1² divulga una composición de pasta de yeso que comprende yeso, agua y almidón. El almidón tiene una viscosidad Brookfield de menos de 60 cPs a menos de 60 °C y una viscosidad Brookfield mayor que 10.000 cPs a 70 °C, para una placa de yeso que comprende un núcleo hecho de la pasta de yeso; y un proceso de preparación de la placa de yeso que comprende un núcleo de yeso y al menos un recubrimiento que comprende la preparación de la composición usando un mezclador, depositando la pasta preparada en el recubrimiento, seguido por la formación de una cinta con revestimiento opcional de la cara superior de la pega con una segunda cubierta, formando opcionalmente los bordes de la cinta de la junta obtenida anteriormente por la fundición de la cinta en la banda perfilada, estableciendo hidráulico de yeso en la línea de fabricación, mientras que la cinta de yeso se desplaza sobre una cinta de correr, cortar la cinta al final de la línea , a lo largo de las longitudes determinadas, y secar los tableros obtenidos (Resumen).

6. Examen de Patentabilidad (Art 14 D486)

El siguiente examen de patentabilidad se realizó teniendo en cuenta las objeciones señaladas en el numerales 4 y 5 de la presente comunicación.

Nivel inventivo (Art18 D486)

La reivindicación 1 consiste en “Composición que comprende sulfato de calcio

1 Proceso 129-IP-2007

2[http://worldwide.espacenet.com/publicationDetails/originalDocument?](http://worldwide.espacenet.com/publicationDetails/originalDocument?CC=FR&NR=2899225A1&KC=A1&FT=D&ND=3&date=20071005&DB=EPODOC&locale=en_EP)

CC=FR&NR=2899225A1&KC=A1&FT=D&ND=3&date=20071005&DB=EPODOC&locale=en_EP

semihidratado o anhidro, agua y almidón oxidado (...)” (Ver página 23 del radicado N° 13-300497-00000-0000).

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

Características esenciales	D1
Composición que comprende sulfato de calcio semihidratado o anhidro, agua y almidón oxidado, presentando dicho almidón oxidado:	Una composición de pasta de yeso que comprende yeso, agua y almidón (Resumen, Reivindicación 1).
Una viscosidad Brookfield inferior o igual a 2 cPs a una temperatura inferior o igual a 55°C, y	El almidón tiene una viscosidad Brookfield de menos de 60 cPs a menos de 60 °C (Resumen, Reivindicación 1).
Un máximo de viscosidad entre 65°C y 100°C; y	Y una viscosidad Brookfield mayor que 10.000 cPs a 70 °C (Resumen).
Un máximo de viscosidad Brookfield comprendido entre 100 cPs y 3000 cPs.	Y una viscosidad Brookfield mayor que 10.000 cPs a 70 °C (Resumen).
100 cPs y 3000 cPs.	No menciona.
Midiéndose la viscosidad Brookfield para una solución acuosa de almidón oxidado con una concentración de 8% porcentaje en peso.	El almidón se selecciona mediante la medición de la viscosidad Brookfield de una solución obtenida disolviendo 100 g de almidón en 600 ml de agua a una temperatura de 20 °C (Pág. 7, Líneas 30 a 32).

Los documentos D1 se consideran el estado de la técnica cercano a la invención definida en la reivindicación 1 porque divulgan una composición de pasta de yeso que comprende yeso, agua y almidón.

La diferencia entre la invención definida en la reivindicación 1 y la composición de D1 consiste en que este último no menciona que el máximo de viscosidad se encuentra entre 100 cPs y 3000 cPs.

No se evidencia un efecto técnico inesperado o sorprendente el hecho de que el almidón oxidado tenga un máximo de viscosidad Brookfield comprendido entre 100 cPs y 3000 cPs, entre 65°C y 100°C, por cuanto el documento D1 divulga una composición de pasta de yeso que comprende yeso, agua y almidón (Resumen, Reivindicación 1), donde , la adición en el medio de la placa de un cierto tipo de almidón puede aumentar la resistencia a la compresión de hasta 30% o incluso 50%, con el almidón que tiene un perfil reológico específico (Col. 4, Líneas 6 a 9), por tanto, el efecto sería el mismo y/o mejor, dado que es mayor el aumento en la resistencia a la compresión. La invención presenta un aumento de 14,3% (tabla 3), por su parte el documento D1, enseña un aumento en la resistencia a la compresión entre 10,8% y 28,7% (Ej. 1, Pág. 14).

Por lo tanto, el problema técnico objetivo que pretende resolver esta invención se puede formular así: ¿cómo modificar la composición conocido en D1 para tener otra alternativa de almidón para mejorar la resistencia mecánica a la compresión y reforzar el núcleo de las planchas de yeso?

Sin embargo, una persona normalmente versada en la materia con el saber general de la técnica (“*almidón oxidado viscosidad máxima (617 UB), viscosidad a 95°C (375 UB) (Tabla 3)*”³ (UB; Unidades Brabender; corresponde aproximadamente al centipoise (Pág. 4, líneas 20 y 21)⁴), y con una serie de conocimientos específicos de la invención, estaría motivada a realizar experimentación de rutina para obtener un almidón con un comportamiento reológico alternativo en la composición que se da a conocer en D1, para mejorar la resistencia mecánica a la compresión y reforzar el núcleo de las planchas de yeso, tal como se encuentra reclamado en la reivindicación 1 de la

3 http://www.alanrevista.org/ediciones/2007-3/acetilacion_oxidacion_almidon_semillas_fruto_pan.asp

4 http://www.oepm.es/pdf/ES/0000/000/02/17/93/ES-2179354_T3.pdf
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solicitud, motivo por el cual se considera obvia. Cabe decir, que la solución al anterior problema técnico objetivo se encuentra dentro de un diseño y optimización de procesos⁵, lo cual se encuentra dentro de la práctica habitual de la persona versada en la materia que trabaje en la fabricación de planchas de yeso.

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

- Reivindicación 2: El almidón tiene una viscosidad Brookfield de menos de 60 cPs a menos de 60 °C (Resumen, Reivindicación 1).
- Reivindicación 3, y una viscosidad Brookfield mayor que 10.000 cPs a 70 °C (Resumen).
- Reivindicación 5, El almidón es modificado por ejemplo, mediante ácido (Pág. 3, línea 24) hidroxialquilación o acetilación (Pág. 3, líneas 34 y 35).

Ahora bien, la reivindicación 4 consiste en “*Composición según una cualquiera de las reivindicaciones 1 a 3 (...)*” (Ver página 23 del radicado N° 13-300497-00000-0000).

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

Características esenciales	D1
Composición que comprende sulfato de calcio semihidratado o anhidro, agua y almidón oxidado, presentando dicho almidón oxidado:	Una composición de pasta de yeso que comprende yeso, agua y almidón (Resumen, Reivindicación 1).
Una viscosidad Brookfield inferior o igual a 2 cPs a una temperatura inferior o igual a 55°C, y	El almidón tiene una viscosidad Brookfield de menos de 60 cPs a menos de 60 °C (Resumen, Reivindicación 1).
Un máximo de viscosidad entre 65°C y 100°C; y	Y una viscosidad Brookfield mayor que 10.000 cPs a 70 °C (Resumen).
Un máximo de viscosidad Brookfield comprendido entre 100 cPs y 3000 cPs.	Y una viscosidad Brookfield mayor que 10.000 cPs a 70 °C (Resumen).
190 cPs y 1500 cPs.	No menciona.
Midiéndose la viscosidad Brookfield para una solución acuosa de almidón oxidado con una concentración de 8% porcentaje en peso.	El almidón se selecciona mediante la medición de la viscosidad Brookfield de una solución obtenida disolviendo 100 g de almidón en 600 ml de agua a una temperatura de 20 °C (Pág. 7, Líneas 30 a 32).

Los documentos D1 se consideran el estado de la técnica cercano a la invención definida en la reivindicación 4 porque divulgan una composición de pasta de yeso que comprende yeso, agua y almidón.

La diferencia entre la invención definida en la reivindicación 4 y la composición de D1 consiste en que este último no menciona que el máximo de viscosidad se encuentra entre 190 cPs y 1500 cPs.

No se evidencia un efecto técnico inesperado o sorprendente el hecho de que el almidón oxidado tenga un máximo de viscosidad Brookfield comprendido entre 190 cPs y 1500 cPs, entre 65°C y 100°C, por cuanto el documento D1 divulga una composición de pasta de yeso que comprende yeso, agua y almidón (Resumen, Reivindicación 1), donde, la adición en el medio de la placa de un cierto tipo de almidón puede aumentar la resistencia a la compresión de hasta 30% o incluso 50%, con el almidón que tiene un perfil reológico específico (Col. 4, Líneas 6 a 9), por tanto, el efecto sería el mismo y/o mejor, dado que es mayor el aumento en la resistencia a la compresión. La invención presenta un aumento de 14,3% (tabla 3), por su parte el documento D1, enseña un aumento en la resistencia a la compresión entre 10,8% y 28,7% (Ej. 1, Pág. 14).

Por lo tanto, el problema técnico objetivo que pretende resolver esta invención se puede

⁵ Perry Manual del Ingeniero Químico. Tomo I. Sección 2. Sexta edición. 1992. Págs. 2-81 a 2-85.
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formular así: ¿cómo modificar la composición conocido en D1 para tener otra alternativa de almidón para mejorar la resistencia mecánica a la compresión y reforzar el núcleo de las planchas de yeso?

Sin embargo, una persona normalmente versada en la materia con el saber general de la técnica (“*almidón oxidado viscosidad máxima (617 UB), viscosidad a 95°C (375 UB) (Tabla 3)*”⁶ (UB; Unidades Brabender; corresponde aproximadamente al centipoise (Pág. 4, líneas 20 y 21)⁷), y con una serie de conocimientos específicos de la invención, estaría motivada a realizar experimentación de rutina para obtener un almidón con un comportamiento reológico alternativo en la composición que se da a conocer en D1, para mejorar la resistencia mecánica a la compresión y reforzar el núcleo de las planchas de yeso, tal como se encuentra reclamado en la reivindicación 4 de la solicitud, motivo por el cual se considera obvia. Cabe decir, que la solución al anterior problema técnico objetivo se encuentra dentro de un diseño y optimización de procesos⁸, lo cual se encuentra dentro de la práctica habitual de la persona versada en la materia que trabaje en la fabricación de planchas de yeso.

Por su parte, las reivindicaciones independientes 6 y 7 no mencionan características técnicas tangibles adicionales que puedan brindarle nivel inventivo a la invención, puesto que estas se encuentran afectadas por claridad.

De igual manera, la reivindicación independiente 8 no menciona características técnicas tangibles adicionales que puedan brindarle nivel inventivo al objeto de la invención, puesto que esta se encuentra redactada en términos de usos o resultados.

7. Conclusión

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

Ítem	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	FR 2,899,225	1 a 8	Nivel Inventivo

6 http://www.alanrevista.org/ediciones/2007-3/acetilacion_oxidacion_almidon_semillas_fruto_pan.asp

7 http://www.oepm.es/pdf/ES/0000/000/02/17/93/ES-2179354_T3.pdf

8 Perry, Manual del Ingeniero Químico. Tomo I. Sección 2. Sexta edición. 1992. Págs. 2-81 a 2-85.
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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 2015-05-19

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

PatBase - Search results 24 April 2015

Search query (7): [SP]: revendications 1 - composition comprenant du sulfate de calcium semihydrate ou anhydre, de l'eau et de l'amidon oxyde, ledit amidon oxyde presentant: - une viscosite brookfield inferieure ou egale a 2 cps a une temperature inferieure ou egale a 55 degrees c et un maximum de viscosite brookfield a une temperature comprise de 65 degrees centigrade a 100 degrees c et un maximum de viscosite brookfield compris de 100 cps a 3000 cps la viscosite brookfield etant mesuree pour une solution aqueuse d'amidon oxyde a une concentration de 8 percent, pourcentage en masse. 2- composition selon la revendication 1, caracterisee en ce que l'amidon oxyde presente une viscosite brookfield inferieure ou egale a 15 cps a 64 degrees centigrade 3- composition selon la revendication 1 ou 2, caracterisee en ce que l'amidon oxyde presente son maximum de viscosite brookfield a une temperature comprise de 65 degrees centigrade a 85 degrees centigrade 4- composition selon l'une quelconque des revendications 1 a 3, caracterisee en ce que l'amidon oxyde presente un maximum de viscosite brookfield compris de 190 cps a 1500 cps. 5- composition selon l'une quelconque des revendications 1 a 4, caracterisee en ce que l'amidon est partiellement oxyde. 6- element pour le domaine de la construction, caracterise en ce qu'il est realise en utilisant une composition selon l'une quelconque des revendications 1 a 5. 7- element selon la revendication 6 caracterise en ce qu'il s'agit d'une plaque de platre. 8- utilisation d'amidon oxyde pour augmenter la resistance mecanique du cur des plaques de platre, l'amidon oxyde, ledit amidon presentant: - une viscosite brookfield inferieure ou egale a 2 cps a une temperature inferieure ou egale a 55 degrees c et lp1 1002 pct 1 un maximum de viscosite brookfield a une temperature comprise de 65 degrees centigrade a 100 degrees centigrade et un maximum de viscosite brookfield compris de 100 cps a 3000 cps la viscosite brookfield etant mesuree pour une solution aqueuse d'amidon oxyde une concentration de 8 percent, pourcentage en masse. lp1 1002 pct 1

Results: 540

yenny

Search history

- Search 1: TAC=(wall and chamfer and (lower or inferior or below)) (Results 2586)
- Search 2: TAC=((wall OR BLOCK) and sheet and piling) (Results 910)
- Search 3: TAC=((method or process) and termoformed and thread) (Results 0)
- Search 4: TAC=((method or process) and thermoformed and thread) (Results 61)
- Search 5: TAC=((method or process) and thermoformed and cap) (Results 195)
- Search 6: TAC=(hemihydrated or anhydrous calcium sulphate and water and oxidized starch) (Results 1)
- Search 7: [SP]: revendications 1 - composition comprenant du sulfate de calcium semihydrate ou anhydre, de l'eau et de l'amidon oxyde, ledit amidon oxyde presentant: - une viscosite brookfield inferieure ou egale a 2 cps a une temperature inferieure ou egale a 55 degrees c et un maximum de viscosite brookfield a une temperature comprise de 65 degrees centigrade a 100 degrees c et un maximum de viscosite brookfield compris de 100 cps a 3000 cps la viscosite brookfield etant mesuree pour une solution aqueuse d'amidon oxyde a une concentration de 8 percent, pourcentage en masse. 2- composition selon la revendication 1, caracterisee en ce que l'amidon oxyde presente une viscosite brookfield inferieure ou egale a 15 cps a 64 degrees centigrade 3- composition selon la revendication 1 ou 2, caracterisee en ce que l'amidon oxyde presente son maximum de viscosite brookfield a une temperature comprise de 65 degrees centigrade a 85 degrees centigrade 4- composition selon l'une quelconque des revendications 1 a 3, caracterisee en ce que l'amidon oxyde presente un maximum de viscosite brookfield compris de 190 cps a 1500 cps. 5- composition selon l'une quelconque des revendications 1 a 4, caracterisee en ce que l'amidon est partiellement oxyde. 6- element pour le domaine de la construction, caracterise en ce qu'il est realise en utilisant une composition selon l'une quelconque des revendications 1 a 5. 7- element selon la revendication 6 caracterise en ce qu'il s'agit d'une plaque de platre. 8- utilisation d'amidon oxyde pour augmenter la resistance mecanique du cur des plaques de platre, l'amidon oxyde, ledit amidon presentant: - une viscosite brookfield inferieure ou egale a 2 cps a une temperature inferieure ou egale a 55 degrees c et lp1 1002 pct 1 un maximum de viscosite brookfield a une temperature comprise de 65 degrees centigrade a 100 degrees centigrade et un maximum de viscosite brookfield compris de 100 cps a 3000 cps la viscosite brookfield etant mesuree pour une solution aqueuse d'amidon oxyde une concentration de 8 percent, pourcentage en masse. lp1 1002 pct 1 (Results 540)
- Search 8: [SP]: starch for reinforcing the core of plasterboards amidon pour le renfort du coeur des plaques de platre the present invention relates to a composition comprising hemihydrate or anhydrous calcium sulphate, water and oxidised starch, said oxidised starch having: a brookfield viscosity less than or equal to 2 cps at a temperature less than or equal to 55 degrees c and a maximum brookfield viscosity at a temperature between 65 degrees centigrade and 100 degrees c and a maximum brookfield viscosity between 100 cps and 3000 cps the brookfield viscosity being measured for an aqueous solution of oxidized starch at a concentration of 8 percent, as a percentage by weight. la presente invention se rapporte a unecomposition comprenant du sulfate de calcium semihydrate ou anhydre, de l'eau et de l'amidon oxyde, ledit amidon oxyde presentant: une viscosite brookfield inferieure ou egale a 2 cps a une temperature inferieure ou egale a 55 degrees c et un maximum de viscosite brookfield a une temperature comprise de 65 degrees centigrade a 100 degrees c et un maximum de viscosite brookfield compris de 100 cps a 3000 cps la viscosite brookfield etant mesuree pour une solution aqueuse d'amidon oxyde a une concentration de 8 percent, pourcentage en masse. (Results 538)
- Search 9: TAC=(hemihydrated or anhydrous calcium sulphate and water and oxidized starch and Brookfield viscosity) (Results 1)
- Search 10: TAC=(hemihydrated or anhydrous calcium sulphate and water and oxidized starch and viscosity) (Results 1)
- Search 11: TAC=(oxidized starch and viscosity) (Results 183)
- Search 12: TAC=(oxidized starch and viscosity) (Results 183)
- Search 13: TAC=(oxidized starch and viscosity) (Results 183)

Title: Printing master with base of ketene dimer sized paper

Abstract: Source: GB912827A 912,827. Sized and coated paper. WARREN CO., S. D. Aug. 15, 1960 [Aug. 28, 1959], No. 28188/60. Class 96. [Also in Group XVI] A sheet for use as a planographic master comprises a paper web sized with a dimer of an aliphatic ketene having from six to twenty carbon atoms in each molecule and coated with a planographic master coating material. In one example, a web of paper is made from a furnish comprising 100 parts by weight of long and short-fibred pulp mixed with 15 parts by weight of calcium carbonate filler, 1/3 part by weight of a mixture of the dimers of hexadecyl and tetradecyl ketene, and 0.15 part by weight of a mixture of galactomannan and modified starch. The web is then coated with an aqueous composition comprising 100 parts by weight of clay, 40 parts by weight of a partial hydroxyethyl ether of starch, 14 parts by weight of melamineformaldehyde resin, 40 parts by weight of zinc acetate, 3.5 parts by weight of monochloroacetic acid, and 30 parts by weight of propanol. Other suitable dimers are those of hexadecenyl ketene and dodecyl ketene. The coated web is passed quickly through an oven heated to 300? C., and then calendered. The web is then cut and the stacked sheets heated at 90? C. to age them. Each sheet is then typed with a greasy ribbon and used as a master on a rotary offset duplicator. The adhesive in the above coating may be replaced by oxidized or enzyme-converted starch, carboxyl methyl cellulose, polyvinyl alcohol, or carboxymethyl-hydroxyethyl cellulose. Specification 633,747 and U.S.A. Specification 2,555,057 are referred to.

Classifications:

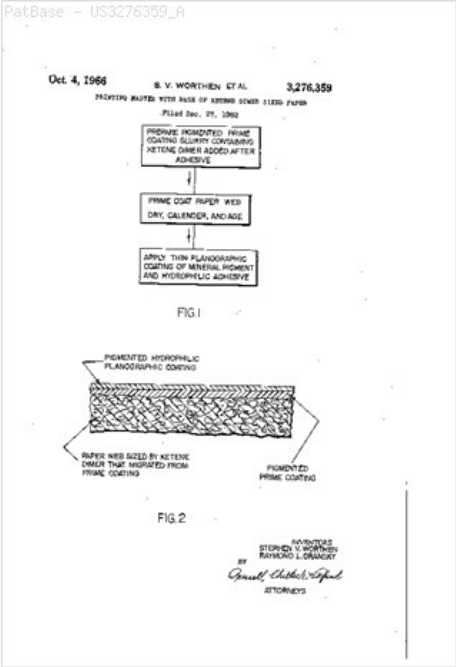
International (IPC 8-9): B41N1/14 D21H19/82 (Advanced/Invention); B41N1/12 D21H19/00 (Core/Invention)

International (IPC 1-7): B41M B41N1/12 B41N1/14 D21H3/08

CPC: B41N1/14 D21H19/822

European: B41N1/14 D21H19/82B

US: 101/460 101/461 101/462 101/466 162/137 162/168.1 427/144 427/411



Family:

Publication number	Publication date	Application number	Application date
BE594403 A1	19610227	BE19600594403	19600825
DE1197103 B	19650722	DE1960W028396	19600818
FR1265722 A	19610630	FR19600836459	19600822
GB912827 A	19621212	GB19600028188	19600815
NL130841 C	00000000		00000000
NL255260 A	00000000		00000000
US3276359 A	19661004	US19620247615	19621227

Priority:

US19590836598 19590828 FR19600836459 19600822 US19620247165 19621227
US19620247615 19621227

Assignee(s): (std): WARREN S D CO

Assignee(s): S D WARREN COMPANY

Inventor(s): (std): ORANSKY RAYMOND LEE ; ORANSKY RAYMOND L ; ORANSKY RAYMOND LEE ; WORTHEN STEPHAN VAIL ; WORTHEN STEPHEN V ; WORTHEN STEPHEN VAIL

Inventor(s): RAYMOND LEE ORANSKY ; STEPHEN VAIL WORTHEN

Title: Paper offset plate for photographic transfer and direct image printing

Abstract: Source: GB956376A A water-soluble cationic thermosetting resin is prepared by reacting a saturated aliphatic dicarboxylic acid with a polyalkylene polyamine, containing two primary amine groups and at least one secondary amine group, to form a long-chain water-soluble polyamide, and then reacting this polyamide with epichlorohydrin. Preferably one mole of acid containing 3 to 10 carbon atoms is reacted with 0.8 to 1.4 moles of polyalkylene polyamine, and the product reacted with 0.5 to 1.8 moles of epichlorohydrin per mole of secondary amine groups. A composition for coating paper or other bases (see Division B2) comprises the above resin, a hydrophilic colloid and a pigment. The hydrophilic colloid may be polyvinyl alcohol, starch, starch ether, sodium carboxymethyl - hydroxyethyl - cellulose, chlorinated starch, dextrin, sodium carboxymethylcellulose, methylol-polyacrylamide, and polyacrylamide. The pigment may be colloidal silica, calcium silicate, barium sulphate, titanium dioxide, clay or mixtures of these, with or without zinc oxide. The coating may also include an inorganic salt such as zinc acetate, zinc chloride, zinc phenolsulphonate, zinc sulphamate, zinc fluosilicate, alum or salts of lead, calcium, manganese, cerium or lanthanum. The plate may be made by coating a base surface with an aqueous coating composition comprising the pigment, the hydrophilic colloid and the water-soluble cationic resin, and reacting the hydrophilic colloid with the resin to form an insoluble coating. The inorganic salt, if used, may be incorporated in the coating composition, or applied to the coating before it is dried. Specification 667,154, U.S.A. Specifications 2,244,325, 2,597,872, 2,919,191 and 2,926,154 are referred to. ALSO: A planographic printing plate comprises a base, e.g. of paper, and an insolubilized coating thereon, which comprises a pigment and the reaction product of a hydrophilic colloid and a water-soluble cationic thermosetting resin. This resin is prepared by reacting a saturated aliphatic dicarboxylic acid with a polyalkylenepolyamine, containing two primary amine groups and at least one secondary amine group, to form a long-chain water-soluble polyamide, and then reacting this polyamide with epichlorohydrin. The hydrophilic colloid may be polyvinyl alcohol, starch, starch ether, sodium carboxymethyl-hydroxyethyl-cellulose, chlorinated starch, dextrin, sodium carboxymethylcellulose, methylol-polyacrylamide, and polyacrylamide. The pigment may be colloidal silica, calcium silicate, barium sulphate, titanium dioxide, clay or a mixtures of these, with or without zinc oxide. The coating may also include an inorganic salt such as zinc acetate, zinc chloride, zinc phenolsulphonate, zinc sulphamate, zinc fluosilicate, alum or salts of lead, calcium, manganese, cerium or lanthanum. The plate may be made by coating a base surface with an aqueous coating composition comprising the pigment, the hydrophilic colloid and the water-soluble cationic resin, and reacting the hydrophilic colloid the resin to form an insoluble coating. The inorganic salt, if used, may be incorporated in the coating composition, or applied to the coating before it is dried. Specification 667,154 and U.S.A. Specifications 2,244,325, 2,597,872, 2,919,191 and 2,926,154 are referred to.

Classifications:

International (IPC 8-9): B41N3/03 (Advanced/Invention);
B41N3/03 (Core/Invention)

International (IPC 1-7): B41N1/00 B41N1/14

CPC: B41N3/03

European: B41N3/03

US: 101/451 101/462

Family:

Publication number	Publication date	Application number	Application date
DE1216896 B	19660518	DE19610007847	19610202
FR1278588 A	19611208	FR19610851625	19610203
GB956376 A	19640429	GB19600036190	19601021
US3181460 A	19650504	US19600006839	19600205

Priority:

US19600006839 19600205 FR19610851625 19610203

Assignee(s): (std): OXFORD PAPER CO ; OXFORD PAPER COMPANY

Inventor(s): (std): MCFAIL LORING W ; MCFAIL LORING WRIGHT ; PERKINS GLENN H ; PERKINS GLENN HAROLD

Title: MIGRATION-RESISTANT FORMING SIZE COMPOSITIONS FOR FIBROUS GLASS

Abstract: Source: US4166872A This invention relates to coating materials for fibrous glass and particularly to non-migrating forming size compositions for glass fibers, namely an aqueous size composition comprising a starch solution containing swollen but unburst partially cooked starch granules made from an amylaceous material.

Classifications:
International (IPC 8-9): C03C25/32 C08B31/00 D06M13/148 D06M15/11 (Advanced/Invention); C03C25/24 C08B31/00 D06M13/00 D06M15/01 (Core/Invention)
International (IPC 1-7): C03C25/02 C03C25/32 C08B31/00 C08L3/02 C13L1/08 D06M13/148 D06M15/03 D06M15/11
CPC: C08B31/00 D06M13/148 D06M15/11 C03C25/321 Y10T428/1314 Y10T428/2938
European: C03C25/32B C08B31/00 D06M13/148 D06M15/11
US: 106/217.3 242/159 428/34.5 428/35 428/378

Family:

Publication number	Publication date	Application number	Application date
BE614438 A1	19620618	BE19620614438	19620227
BR6236496 A0	19730123	BR19620136496	19620219
CH405625 A	19660115	CH19620002532	19620301
DE1298682 B	19690703	DE19620008605	19620301
ES274869 A1	19620516	ES19620274869	19620223
FR1316288 A	19630125	FR19620889377	19620227
GB932685 A	19630731	GB19620007015	19620222
LU41313 A	19620428		19620228
NL110367 C	00000000		00000000
NL275227 A	00000000		00000000
US4166872 A	19790904	US19750541760	19750117

Priority:
US19610092745 19610302 FR19620889377 19620227 US19660523498 19660112
US19750541760 19750117 US19720285166 19720831

Assignee(s): (std): OWENS CORNING FIBERGLASS CORP

Assignee(s): WILMINGTON TRUST CO ; WADE WILLIAM J ; OWENS CORNING FIBERGLAS A CORP OF DE CORP ; OWENS CORNING FIBERGLAS CORP ; OWENS CORNING FIBERGLAS TECHNOLOGY INC

Inventor(s): (std): GRIFFITHS D ; GRIFFITHS DAVID H ; KARPIK R ; KARPIK RICHARD H ; RICHARD HENRY KARPIK ; H KARPIK H RICHARD ; H GRIFFITHS DAVID ; DAVID HAMILTON GRIFFITHS ; C STARR S

Inventor(s): DAVID H GRIFFITHS ; RICHARD H KARPIK ; HENRY KARPIK RICHARD ; HAMILTON GRIFFITHS DAVID

Title: PLANOGRAPHIC PRINTING PLATES

Abstract: Source: US3455241A ABSTRACT OF THE DISCLOSURE Planographic printing plates are prepared by coating a base with an aqueous coating composition having a pigment mixture containing colloidal silica having a particle size between about 7 and 45 millimicrons and an adhesive containing a major amount of hydrophilic component with a minor amount of an oleophilic component. This application is a continuation of my copending application Ser. No. 589,524, filed Oct. 26, 1966, now abandoned, which is in turn a continuation of my application Ser. No. 479,060, filed Aug. 25, 1965, now abandoned, which is in turn a continuation-in-part of my copending application Ser. No. 70,385, filed Nov. 21, 1960, now abandoned.

Classifications:**International (IPC 8-9):** B41N3/03 C08F20/56 (Advanced/Invention)**International (IPC 1-7):** B41N1/14 B41N3/00 C08F45/04 C09D11/10**CPC:** B41C1/1091 C08F20/56 B41N3/036**European:** B41C1/10T B41N3/03P C08F20/56 L41C1/10T**US:** 101/453 101/457 101/462 524/493**Family:**

Publication number	Publication date	Application number	Application date
DE1184782 B	19650107	DE1961O008299	19611010
FR1306482 A	19621013	FR19610879409	19611118
GB991369 A	19650505	GB19610034052	19610922
US3455241 A	19690715	US19670668207	19670915

Priority:

US19600070385 19601121 FR19610879409 19611118 US19670668207 19670915

Assignee(s): (std): OXFORD PAPER CO ; OXFORD PAPER COMPANY**Inventor(s):** (std): PERKINS GLENN H ; PERKINS GLENN HAROLD**Inventor(s):** GLENN H PERKINS

Title: Method of fractionating starch

Abstract: Source: GB1014105A In a process of fractionating starch to recover therefrom amylose and amylopectin, a cold aqueous solution containing 7-9 percent of starch (calculated as dry substance) is heated to form a starch gel, the gel is subjected to hydrodynamic forces by means of a centrifugal disperser and the resulting mixture is then cooled, so that amylose in the form of globules separates from a liquid phase containing amylopectin. The starch solution may be heated to 85 DEG C. and the centrifuged mixture may be cooled with or without agitation. The amylose may be separated from the liquid phase by filtration or centrifugation, and the amylopectin may be obtained as a concentrated aqueous solution or as a powder, by concentrating in vacuo the liquid containing it. Substances such as urea and formalin may be added to the solution to modify the viscosity thereof, or to modify the starch properties. Examples describe the fractionation of potato starch. Chemically modified starches, and also compounds of starch with metals, e.g. calcium, may also be fractionated. The centrifugal disperser may have rotating perforated or cam discs in which the liquid phase is subjected to high frequency hydrodynamic pressure waves or pulses (sound waves).

Classifications:
International (IPC 8-9): C08B30/20 (Advanced/Invention); C08B30/00 (Core/Invention)
International (IPC 1-7): B31F1/20 C13L1/00 C13L1/08
CPC: C08B30/20
European: C08B30/20
US: 106/206.1 127/23 127/69 127/71

Family:

Publication number	Publication date	Application number	Application date
DE1165510 B	19640312	DE1962H044850	19620212
GB1014105 A	19651222	GB19630004196	19630201
LU43039 A	19630318		19630118
US3307975 A	19670307	US19650468616	19650630

Priority:
DE1961H044850 19610212 DE1962H044850 19620212

Assignee(s): (std): HOFFMANN STAERKEFABRIKEN AG ; MATTHIAS SCHMIDT

Assignee(s): HOFFMANN S STAERKEFABRIKEN AG ; HOFFMANN S STAERKEFABRIKEN AKTIENGESELLSCHAFT ; HOFFMANN S STAERKEFABRIKEN A G

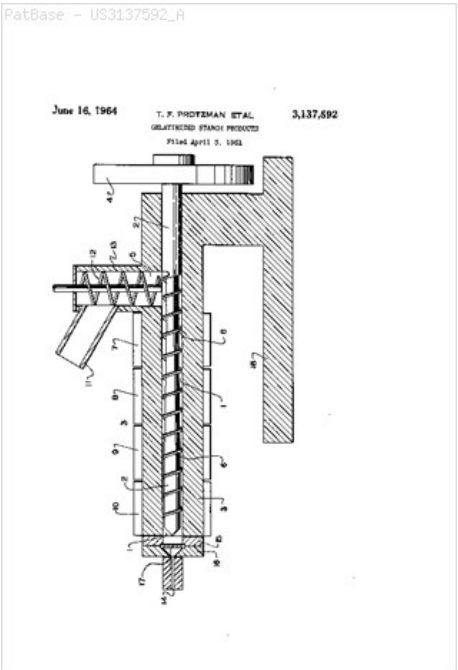
Inventor(s): (std): MATTHIAS SCHMIDT ; SCHMIDT DR PHIL MATTHIAS

Inventor(s): SCHMIDT MATTHIAS

Title: Gelatinized starch products

Abstract: Source: GB945207A A mixture of starch raw material and starch swelling agent is worked in a confining chamber at 125 DEG C. to 250 DEG C. for 0.5 to 5 minutes at a pressure substantially above the autogenous vapour pressure of the mixture at the reaction temperature to form a hot fluid homogenised mass, and immediately thereafter transferred into a region of substantially lower temperature and pressure. The proportion of starch swelling agent is 22% to 67% by weight of starch raw material dry substance, and the working is sufficient to provide an adiabatic temperature rise of at least 50 DEG C. in the worked mass. In a further embodiment, 0.01% to 50% by weight of starch dry substance, of a starch modifying agent may be present in the mixture. The starch raw material may be any native starch, a dextrin or thin-boiling starch, or a starch derivative such as starch acetate and propionate and starch ethers e.g. hydroxyethyl, carboxymethyl and cyanoethyl starch. The starch swelling agent or plasticizer is preferably water, but may be e.g. formamide, ethylene diamine dimethyl sulphoxide, pyrrolidine, urea, piperazine, glycerol, ethylene glycol, sorbitol, propylene glycol, chloral hydrate, dimethyl formamide and mixtures or solutions thereof. The starch modifying agent may be a hydrolytic or oxidising agent e.g. hydrochloric, sulphuric phosphoric, acetic, oxalic, benzoic, and levulinic acids; sodium and calcium hypochlorite, potassium permanganate, potassium persulphate, sodium perborate, hydrogen peroxide, benzoyl peroxide and hypochlorous acid; or may be a starch-derivatizing reagent such as anhydrides of acetic, n-butyric, succinic, isatoic, quinolinic and phthalic acids; n-butyryl chloride, benzene sulphonyl chloride, phosphorus oxychloride, beta-propiolactone, phenylisocyanate, vinyl acetate, vinyl n-butyrate, ketene, monochloroacetic acid, alpha-bromopropionic acid, ethylene chlorohydrin, propylene chlorohydrin, glyceryl alpha-chlorohydrin, ethylene oxide, propylene oxide, 3-diethylamino -1, 2-epoxypropane, 3-dibutylamino 1, 2-epoxypropane, N-(2, 3-epoxypropyl)- piperidine, N,N-(2,3-epoxypropyl) methylaniline, cyclohexane oxide, styrene oxide, methyl chloride, ethyl chloride, beta-diethylamino ethyl chloride, betadimethylamino ethyl chloride, beta-methylamino isopropyl chloride, dimethyl sulphate, diethyl sulphate, triisopropyl borate, tributyl phosphate, tetraethyl orthosilicate, triethyl phosphite, ethylene imine, propylene imine, methacrylamide, acrolein, ethyl acrylate, methyl acrylate, n-butyl acrylate, epichlorohydrin, ethylene dibromide, and butadiene diepoxide. The mixture may also include a catalyst such as sodium and calcium hydroxides, potassium carbonate, sodium silicate, sodium aluminate, sulphuric acid, sodium chloride, or a tertiary amine or quaternary ammonium hydroxides. The hot fluid mass is preferably transferred to the zone of lower pressure through an orifice or die which shapes the mass into thin strands, filaments or ribbons. A suitable form of apparatus for carrying out the process is a conventional screw-type plastics extruder, through the barrel of which the mixture is forced while maintaining the required temperature and pressure. The pressure in the zone of lower pressure is preferably atmospheric and the temperature therein preferably no greater than that provided by the flashing of plasticizer from the extruded material. If water or other low-boiling plasticizer is used, sufficient is flashed off from the mixture in the lower pressure zone to provide a porous, friable solid which may be easily ground. If a high-boiling plasticizer is used, the extruded plastic material may be vacuum-dried or extracted with a solvent such as methanol or acetone. Preferably, the final product contains 10-15% by weight of plasticizer. The combination of intense shearing in the working zone, and elevated temperature and pressure accelerates the gelatinisation and also the reaction of the starch with the modifying agent when used. If the adiabatic rise in temperature is greater than required, the apparatus may be externally cooled. U.S.A. Specifications 2,516,633 and 2,516,634 are referred to.

Classifications:
International (IPC 8-9): C08B30/12 C08B30/16 C08B31/00 (Advanced/Invention); C08B30/00 C08B31/00 (Core/Invention)
International (IPC 1-7): A23L1/195 C08B31/00 C08L3/00 C13L1/08
CPC: C08B30/12 C08B30/16 C08B31/00
European: 89K3 C08B30/12 C08B30/16 C08B31/00
US: 106/125.1 106/206.1 127/23 127/28 127/32 127/71 264/186 264/211 536/102



Family:

Publication number	Publication date	Application number	Application date
BE615950 A	00000000		00000000
DE1303005 B	00000000		00000000
FR1321699 A	19630322	FR19620892996	19620402
GB945207 A	19631223	GB19620012259	19620330
NL276742 A	00000000		00000000
US3137592 A	19640616	US19610100354	19610403
USRE26256 E	00000000		00000000

Priority:
US19610100354 19610403 FR19620892996 19620402

Assignee(s): (std): STALEY MFG CO A E

Assignee(s): A E STALEY MANUFACTURING CO ; A E STALEY MANUFACTURING COMPANY

Inventor(s): (std): WAGONER JOHN A ; PROTZMAN THOMAS F

Title: Apparatus for manufacture of starch decomposition products

Abstract: Source: GB1028211A In a process for making glucose or maltose from starch, an aqueous suspension of starch is mixed with a - amylase in tank 1, Fig. 1 (not shown), and subjected to gelatinization and liquefaction in vessel 4, wherein it is heated to 95 DEG C. by mixing with steam from pipe 5 and subjected to impacting and/or shearing forces (see Specification 995,660). The resulting starch paste is then passed selectively to reaction vessels 61 or 62, which contain screens 7-74 or O flow-steadying member 8, and thence via cooler 15 to reaction vessel 10 wherein it is diluted by a suspension of BETA-amylase or a -glucodiase from 12. The reaction mixture is then subjected to further impacting and/or shearing forces in 17, and passed through vessel 16 where degradation continues. The enzyme in the reaction mixture is then deactivated by steam or chemical means in vessel 18 (similar to 4) and in heater 20. The product, consisting of an aqueous solution of mainly glucose and maltose, is discharged into expansion chamberALSO:In a continuous process for the manufacture of starch decomposition products, a chemically and/or biologically active substance is added to a starch suspension, the mixture is passed continuously through a reaction vessel with temporary acceleration of flow followed by direct mixing with steam, the added substance becoming active during and directly after the steam passage in a field of action of high imposed stress by impacting and/or shearing forces and the resulting primarily liquified starch paste is conducted through at least one additional reaction vessel for the purpose of continuing the degradation reaction and adjusting required chemical or physical properties, the free cross-sectional area of the additional reaction vessel being larger than that of the pipe conduits before and after the first-mentioned vessel. The active substance may be an enzyme, reducing agent, oxidizing agent, acid, alkali or salt. After flowing through the additional reaction vessel, a further active substance may be introduced, suitably as a solution or suspension in water used for cooling the starch product. The active substances may be deactivated by steam or by chemical means. In a process for making dextrin, an aqueous starch suspension, mixed with a -amylase in tank 1 (Fig. 2, not shown), is continuously passed through reaction vessel 4 (see Specification 995,660) where it is mixed with steam from pipe 5 and subjected to impacting and/or shearing forces, producing a primary gelatinization and liquifaction. Degradation is continued in additional vessel 63 or 64, which are of variable effective volume. The solution then passes through device 18, which may be the same as 4, wherein the enzyme is deactivated by feeding in steam from pipe 19, or by chemical means. Deactivation is completed in pipe 20, and the product passes through throttle member 21 and expansion chamber 22. Additional tank 11 may be provided for adding enzyme or other additive to be mixed with the starch suspension. The quality of the product may be regulated by viscometer 32 which is connected via transmitter 33 to members 23 nd 29, which adjust the volume of 63 and 64 and hence the residence time of the starch therein. Viscometer 32 may also be connected, via transmitters 34, 38 to valve 35 in steam pipe 5, and valve 36, this regulating the reaction temperature in 4 and the quantity of secondary additive. In an example, a 30 percent aqueous suspension of maize starch is converted to limit dextrans and maltose, using amylase stabilized with calcium phosphate or phytate.ALSO:In apparatus for making degradation products of starch, by treatment with steam and enzymes, a variable volume reaction vessel 63 (Fig. 2, not shown) contains a displacement member 23 consisting of two sleeves 231 and 232 closed at one end and engaging telescopically one within the other at their open ends while sealing off their internal space from the free space of vessel 63. Sleeve 231 is secured by tubes 24 to the wall of vessel 63, while sleeve 232 is freely movable axially and is guided by a rod 25 extending through the base of vessel 63. The internal volume of the displacement member, and thus the free volume of vessel 63, is varied by moving rod 25 from outside, or by admitting gas into, or withdrawing gas from the internal space of displacement member 23 by means of tubes 24. An elastically deformable displacement p member may be used instead of a telescopically adjustable one. A further variable volume reaction vessel 64 comprises a hemispherical based tube down which a piston-like closure member 28 moves. The piston 28 is displaced up or down by rod 29, and has a flexible pipe connection 31 to allow egress of reaction product. The course of the starch degradation process may be controlled by the viscosity of the reaction product, as measured by viscometer 32. A regulating impulse produced in the viscometer (e.g. by a difference in pressure across a diaphragm) may be transmitted by suitable devices 33 to rod 25 of displacement member 23 or to rod 29 of piston 28, thus causing a change in effective volume of vessels 63 and 64 respectively. The regulating impulse produced in viscometer 32 may also be transmitted via 34 to valve 35 in steam pipe 5, or via 38 to valve 36 controlling reactant feed.

Classifications:

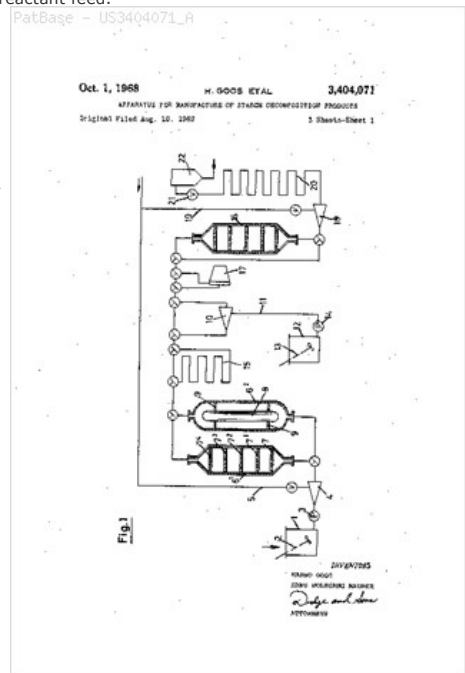
International (IPC 8-9): B01F5/04 C08B30/16 C08B31/00 C08B31/16 C12P19/14 C13K1/06 (Advanced/Invention); B01F5/04 C08B30/00 C08B31/00 C12P19/00 C13K1/00 (Core/Invention)

International (IPC 1-7): C08B19/04 C12C7/00 C13K1/06 C13L1/08

CPC: B01F5/0485 B01F5/04 Y10S261/10 Y10S366/601 Y10S435/813 C13K1/06 B01F5/0475 C08B30/16 C08B31/00 C08B31/16 C12M45/06 C12P19/14

European: B01F5/04C14C B01F5/04C14C10 C08B30/16 C08B31/00 C08B31/16 C12P19/14 C13K1/06

US: 106/206.1 127/1 127/28 127/36 127/71 239/426 239/61 261/116 261/76 261/DIG.1 261/DIG.10 366/148 366/337 366/601 435/286.5 435/294.1 435/3 435/813 435/99 536/102 536/103



Family:

Publication number	Publication date	Application number	Application date
AT252153 B	19670210	AT19620006377	19620807
AT254808 B	19670612	AT19620007432	19620919
CH399372 A	19650915	CH19620009394	19620807
CH440176 A	19670715	CH19620011327	19620926
DE1172620 B	19640618	DE1961E021558	19610819
DE1189030 B	19650311	DE1962E023148	19620705
DE1190890 B	19650408	DE1961E021843	19611021
DE1567367 A1	19700702	DE19621567367	19620705
FR1331163 A	19630628	FR19620907023	19620816
GB1028211 A	19660504	GB19620039969	19621022
GB995660 A	19650623	GB19620031885	19620820
NL283530 A	00000000		00000000
NL7313559 A	19740125	NL19730013559	19731002
US3219483 A	19651123	US19620212898	19620727
US3308037 A	19670307	US19620216105	19620810
US3404071 A	19681001	US19650515797	19651105

Priority:

DE1961E021558 19610819 DE1961E021843 19611021 DE1962E023149 19620705
DE1962E023148 19620705 US19650515797 19651105 US19620216105 19620810
FR19620907023 19620816

Assignee(s): (std): ESCHER WYSS AG ; ESCHER WYSS GMBH ; WEST VIRGINIA PULP AND PAPER CO

Assignee(s): WEST VIRGINIA PULP AND PAPER COMPANY ; ESCHER WYSS AKTIENGESELLSCHAFT ; ESCHER WYSS G M B H
Inventor(s): (std): GOOS HANNO ; GOOS HANNO DIPL ING ; HANNO GOOS ; HANS WOLFGANG MAURER ; KURZ ANTON W ; MAURER HANS WOLFGANG ; ANTON W KURZ ; GOOS DIPL ING HANNO ; WOLFGANG MAURER HANS
Inventor(s): GOOS DIPL INGHANNO ; W KURZ ANTON

Title: Degraded starch polyoxyalkylene ether compositions and process for producing the same

Abstract: Source: GB1006516A A degraded starch glycoside polyxyalkylene ether is made by reacting starch with ethylene glycol, propylene glycol or glycerol at 120-140 DEG C. in the presence of an acid catalyst, followed by etherification with ethylene oxide, propylene oxide or a mixture thereof. The process is particularly applicable to granular starches. Glycosidation may be effected in presence of excess polyol, the mixture then being further heated to remove unreacted polyol. Etherification may be carried out under acid or alkaline conditions at 130-180 DEG C. until at least 4 molar equivalents of alkylene oxide have reacted The product of etherification may be reacted with polyisocyanates to form polyurethane foams.

Classifications:

International (IPC 8-9): C07H15/08 C08B31/00 C08G18/48 (Advanced/Invention);

C07H15/00 C08B31/00 C08G18/00 (Core/Invention)

International (IPC 1-7): C07C47/18 C08B31/00 C08G18/48 C08G22/44

CPC: C07H15/08 C08B31/00 C08G18/4883

European: C07H15/08 C08B31/00 C08G18/48P7

US: 521/175 528/73 536/111 536/120 536/18.3 536/18.6

Family:

Publication number	Publication date	Application number	Application date
BE628841 A	00000000		00000000
DE1295811 B	19690522	DE1963M055906	19630226
FR1352345 A	19640214	FR19630926072	19630226
GB1006516 A	19651006	GB19630006998	19630221
NL140266 B	19731115	NL19630289520	19630227
NL289520 A	00000000		00000000
US3165508 A	19650112	US19620187443	19620413

Priority:

US19620176155 19620227 US19620187443 19620413 FR19630926072 19630226

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Title: Process for the manufacture of coldwater dispersible adhesives

Abstract: Source: GB992213A A dry, cold-water soluble amylaceous adhesive is made by acid hydrolysing, in presence of 0.1 to 3 percent by weight of terpeneol, based on the weight of starch dry substance, an aqueous dispersion of a starch mixture containing not less than 5 percent by weight, on a dry solids basis, of an oxidized starch, to obtain a hydrolysed product having a Brookfield viscosity at 85 DEG F. and 20 r.p.m. of 50 to 20,000 c.p.s. measured in water at a solids content of 26 percent, adding to the hydrolysed product 7 to 25 percent by weight of borax based on the weight of the starch dry substance, cooling the resulting mixture from the hydrolysing temperature to less than 150 DEG F., adjusting the pH to 8.5 to 9.8 by adding an alkali metal hydroxide or alkaline earth metal hydroxide, and drying the resulting composition. The starch may be derived from e.g. corn, potato, waxy corn, tapioca or arrowroot. The mixture preferably contains 10-15 percent of oxidized starch, the remainder being raw or modified starches. The hydrolysis may be carried out at, e.g., 200-270 DEG F., under pressure. Specified acid catalysts are hydrochloric, sulphuric, acetic and phosphoric acids. The solids content of the starch dispersion is preferably 25 to 30 percent. The borax, which prevents further hydrolysis, may be added immediately to the hot hydrolysed product or after hydrolysis has been slowed by cooling. The composition may be dried by, e.g., spray- or roll-drying, and is then preferably ground. The composition may contain bleaches, e.g. sodium bisulphite and hydrogen peroxide, preservatives, e.g. copper sulphate, formaldehyde, zinc sulphate, and the sodium salts of o-phenylphenol and pentachlorophenol, and defoaming agents, e.g. tributyl phosphate, tributyl citrate, heptanol, oleic acid and stearic acid. ALSO: A dry, cold-water soluble amylaceous adhesive is made by acid hydrolysing, in presence of 0.1 to 3 percent by weight of terpeneol, based on the weight of starch dry substance, an aqueous dispersion of a starch mixture containing not less than 5 percent by weight, on a dry solids basis, of an oxidized starch, to obtain a hydrolysed product having a Brookfield viscosity at 85 DEG F. and 20 r.p.m. of 50 to 20,000 c.p.s. measured in water at a solids content of 26 percent, adding to the hydrolysed product 7 to 25 percent by weight of borax based on the weight of the starch, dry substance, cooling the resulting mixture from the hydrolysing temperature to less than 150 F., adjusting the pH to 8.5 to 9.8 by adding an alkali metal hydroxide or alkaline earth metal hydroxide, and drying the resulting composition. The starch may be derived from, e.g. corn, potato, waxy corn, tapioca or arrowroot. The mixture preferably contains 10-15 percent of oxidized starch, the remainder being raw or modified starches. The hydrolysis may be carried out at e.g. 200 DEG -270 DEG F., under pressure. Specified acid catalysts are hydrochloric, sulphuric, acetic and phosphoric acids. The solids content of the starch dispersion is preferably 25 to 30 percent. The borax, which prevents further hydrolysis, may be added immediately to the hot hydrolysed product or after hydrolysis has been slowed by cooling. The composition may be dried by, e.g. spray- or roll-drying, and is then preferably ground. The composition may contain bleaches, e.g. sodium bisulphite and hydrogen peroxide, preservatives, e.g. copper sulphate, formaldehyde, zinc sulphate, and the sodium salts of o-phenylphenol and pentachlorophenol, and defoaming agents, e.g. tributyl phosphate, tributyl citrate, heptanol, oleic acid and stearic acid.

Classifications:

International (IPC 8-9): C08B31/18 C09J103/02 (Advanced/Invention)

International (IPC 1-7): C09J3/06 C13L1/08

CPC: C08B31/18 C09J103/02

European: C08B31/18 C09J103/02

US: 106/208.3 106/211.1 127/33

Family:

Publication number	Publication date	Application number	Application date
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DE1567390 A1	19710304	DE19641567390	19640418
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GB992213 A	19650519	GB19640013192	19640331
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US3284221 A	19661108	US19630274931	19630423

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US19630274931 19630423 FR19640972069 19640423

Assignee(s): (std): STALEY MFG CO A E

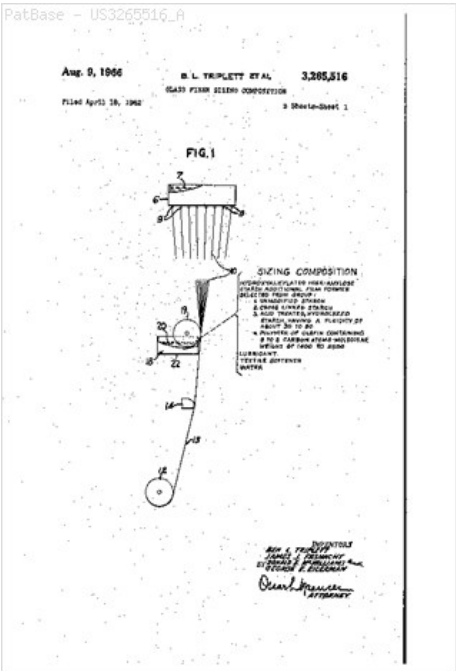
Assignee(s): A E STALEY MANUFACTURING CO ; A E STALEY MANUFACTURING COMPANY

Inventor(s): (std): HUEBSCHMANN JOHN W ; HYETT WRIGHTSMAN JOHN ; WILLIAM HUEBSCHMANN JOHN ; WRIGHTSMAN JOHN H

Title: GLASS FIBER SIZING COMPOSITION

Abstract: Source: GB997397A An aqueous composition for sizing glass fibres comprises, as film forming agent, 2-4 percent of hydroxyethyl or hydroxypropyl amylose in the form of a derivative of an amylose-containing starch having an amylose content of 50-100 percent, said derivative containing 0.1-30.0 hydroxyalkyl groups per 100 d-glucopyranose units of the amylose portion of the starch. The high amylose-containing starch is obtained by the fractionation of ordinary starch or from hybrid maize, wheat, potato, tapioca, sago, or rice; and is solubilized by heating in water, e.g. at 180 DEG F. The composition may include, as additional film forming agent, ordinary starch, partially cross-bonded or acid treated starch, or emulsified low molecular weight polyethylene or polypropylene. The composition may also contain hydrogenated cotton seed oil or a copolymer of ethylene and propylene oxide (as lubricant), the alkyl imidazoline reaction product of tetraethylene pentamine, stearic acid and acetic acid (as textile softener), formaldehyde (as bactericide), and a cationic or non-ionic wetting agent. The composition may have a total solid content of 2-8 percent, a viscosity of 1-100 centipoises at 20 DEG C. and a pH of 5.0-5.4. The size may be applied at 125-135 DEG F. to glass fibres during formation into strands. The sized strands may be dried at 70 DEG F. at a relative humidity of 70 percent. The fibres may be coated with 0.7-2.0 percent of size solids.

Classifications:
International (IPC 8-9): C03C25/32 D06M15/11 (Advanced/Invention); C03C25/24 D06M15/01 (Core/Invention)
International (IPC 1-7): C03C25/00 C03C25/02 D21H5/18
CPC: C03C25/321 Y10T428/2938 D06M15/11
European: C03C25/32B D06M15/11
US: 139/420C 428/378



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FR1363976 A	19640619	FR19630931658	19630416
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NL291319 A	00000000		00000000
US3265516 A	19660809	US19620188359	19620418

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US19620188359 19620418 FR19630931658 19630416

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