

METHOD FOR PREPARING PULP FOR CHEMICAL FABRICS

Patent number: CN101418470 (A)

Date of publication: 2009-04-29

SHANDONG HELON CO LTD [CN] + (SHANDONG HELON CO., LTD)

The invention discloses a method for preparing chemical fiber pulp. The method adopts ionic liquid to dissolve cellulose in plant straw, and prepares the chemical fiber pulp through a regenerating-cleaning mode of regenerating the dissolved cellulose to be cellulose and then clean the cellulose. The method comprises the following: a step of preparing materials, which is to grind and dry the materials; a step of dissolving, which is to mix raw materials with ionic liquid and dip the raw materials in the ionic liquid; a step of regenerating and cleaning the cellulose washed with soft water; a step of bleaching sizing agents; and a steps of pulping. The method changes high temperature, high pressure and drastic chemical changes in the prior digesting-pulping art into a moderate physical dissolution, thereby greatly reducing energy consumption and ensuring that a whole production process is more friendly to environment, safe and controllable. In addition, as drastic digesting reaction does not exist in the method, the generation of black liquor is thoroughly avoided, thereby ensuring that the production which is green, friendly to environment and sustainable becomes possible

SOY PROTEIN NANO-FIBRE AND PRODUCTION METHOD THEREOF

Patent number: CN101435118 (A)

Date of publication: 2009-05-20

HAISHAN ZHU [CN] + (ZHU HAISHAN)

The invention provides a soybean protein nanofiber and a production method thereof. A nanometer material is added when preparing soybean protein stock solution and fully ripened in a reaction kettle, and then blending and copolymerization are carried out under the action of certain temperature, a surfactant and stirring. The spinning solution is produced by using a wet spinning process (a conventional wet spinning process by using chemical fiber), and the fiber density is in the range of 0.7-7.0dtex. Due to the addition of the nanometer material, the spun fiber is knitted or woven into fabrics to make clothing with the functions of sterilization, anti-bacteria, health care, prolonging the life and anti-ultraviolet. Underwear made by the fabrics can promote the blood microcirculation, and improve and assistantly treat various diseases and skin diseases. The invention has abundant raw materials with low price, is green and environment protective, achieves sustainable development, and has unlimited market prospect.

VEGETABLE SEED PROTEIN SYNTHETIC FIBER AND PRODUCTION METHOD THEREOF

Patent number: CN101435117 (A)

Date of publication: 2009-05-20

HAISHAN ZHU [CN] + (ZHU HAISHAN)

The invention provides a production method of a rapeseed protein synthetic fiber. A reaction auxiliary agent is added when preparing rapeseed protein stock solution, and under the action of certain temperature, pressure and stirring, polymer material polyvinyl alcohol carries out blending and copolymerization to produce spinning solution. The rapeseed protein synthetic fiber is spun by using a wet spinning process (a conventional wet spinning process by using chemical fiber). The fiber density is in the range of 0.7-6.8dtex. The spun fiber can be knitted or woven into fabrics. The rapeseed protein comes from rapeseed dregs which are scraps in the oil manufacture. The production method has abundant raw materials with low price, changes wastes into valuables, is green and environment protective and achieves

PatentAlert 03-2010
Ecomaterials for textile production

sustainable development, thus belonging to a 'three-high' science and technology project with high technology, high added value, and high profit and tax, and having wide market prospect.

METHOD FOR PRODUCING PURE WOOL CREASE-SHEDDING FACING MATERIAL

Patent number: CN101270528 (A)

Date of publication: 2008-09-24

NINGBO YOUNGOR WOOL TEXTILE DY [CN] + (NINGBO YOUNGOR WOOL TEXTILE DYEING & FINISHING CO., LTD)

The invention relates to a manufacture method for a pure wool anti-crease fabric which includes the following steps of: preparing wool top-top dyeing-double combing-spinning-weaving-grey fabric-subsequent finishing-finished product. The components of the wool top material are 98.2 to 100 percent of pure wool as well as 0 to 1.8 percent of terylene. The top dyeing adopts a lanasol active dye lower temperature colorizing technique; the subsequent finishing includes the steps of: crude finishing-clearing up-singeing-open washing and continuous steaming-washing-open washing and continuous steaming-drying-middle checking-cooked finishing-brushing and cutting hair-elastic finishing-scalding-pot steaming-pre-shrinking. The western-style clothes fabric manufactured by the method has the advantages of elegant quality, smooth hand feeling, comfortable wearing, stiffness and elasticity, breaks through the defect of noble wearing and hard nursing of the clothes of wool cloth, in particular to the difficulties of easy creasing and insufficient shape retention of the high-count thin fabric currently popularizing in the market and promotes the sustainable development of woolen fabrics.

LONG ACTING COOLING COMPOSITE POWDER, COOLING FIBER AND METHOD FOR PRODUCING THE SAME

Patent number: CN101451307 (A)

Date of publication: 2009-06-10

HUA MAO BIOTECH CO LTD [CN] + (HUA MAO BIOTECH CO., LTD)

The invention discloses long-acting cooling composite powder, long-acting cooling fibers and a manufacturing method thereof. A mesoporous material with nanometer high-porosity is taken as a parent material, a phase change material is dispersed and then is filled into pores of the parent material, then the parent material with the phase change material is subjected to micronization treatment and then is mixed with a polyporous high specific heat material with pores absorbing or containing the moisture to obtain the cooling composite powder, and the cooling composite powder is added into various fibers according to the proportion to form the cooling fibers; when the heat of a human body is conducted to the cooling fibers, the micronized phase change material on the surfaces of the cooling fibers can absorb the heat to perform quick and intact phase change to reduce the temperature, and the heat can also ensure that the absorbed moisture in the high specific heat material is vaporized to take away the heat at the same time to reduce the temperature and the humidity of body surface of the human body again; when the body temperature is reduced to certain degree, the phase change material can be restored to an original state through the phase change further to produce the sustainable and regenerated cooling effect further to achieve the long-acting cooling effect.

JAPANESE BANANA FIBER AND ITS PREPARATION METHOD AND USES

Patent number: CN101187068 (A)

Date of publication: 2008-05-28

WU SUMING YU CHONGWEN WANG CHU [CN] + (WU SUMING, YU CHONGWEN, WANG CHUN)

PatentAlert 03-2010
Ecomaterials for textile production

The invention relates to a musa fiber, which is prepared from stems of musa plants, which are used as raw materials, wherein the musa fiber comprises the following components: cellulose is 81-95 percent, hemicellulose is 1.0-5.0 percent, lignin is 1.0-2.8 percent, other components are pectin water soluble matter and is based on the dry weight of the musa fiber. The above musa fiber is prepared through the mechanical treatment, acid preimpregnation, washing, soda boil, washing, dehydration and oil supply, the above musa fiber is used to be spun into 10-60 single yarn, the process has low cost, compared with ancient process, the strength and the fineness of the made fiber are improved, and the process of preparing the musa fiber of the invention is also capable of being used to made mulberry fiber. The invention opens a new way for the development and utilization of phloem resources, has an important significance at the present that a part of prior fiber resources are run out, and accords with strategic demands of sustainable development.

ONE KIND BASED ON THE PARTITION CIRCULATION'S CHINA GRASS TEXTILE FIBER PRODUCTION METHOD

Patent number: CN101624727

Date of publication: 20100113

HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

One kind based on the partition circulation's China grass textile fiber production method, belongs to the textile fiber production method, the solution existing method waste water quantity big, the pollution serious, governs difficultly, the cost high question. This invention including the baste fiber pretreatment, the chemical treatment, the biological treatment and the later period processes the step, the baste fiber pretreatment through the torture, supersonic or the extract enhances the baste fiber loose divergence; Biological treatment through biological enzyme or microorganism fermentation impurities and so on degeneration pectin, hemicellulose; The chemical treatment practices through the soda boil further degrades impurities and so on residual pectin; Later period processes through the torture, the blanching, the laundering, the dehydration, for the oil, flings does, combs, drying obtains the China grass fine why for what purpose. This invention's product quality meets the GB/T 20793-2006 top-quality product requirements, the degum makes rate the enhancement 15%, the water consumption reduces above 60%, does not use the acid, reduces 65% with the alkali quantity, various steps use's water, the alkali, the biological enzyme may circulate the use, can recycle the by-product promptly, the volume of contaminated water waste are few, and the pollution degree is low.

NON-WOVEN PRODUCTION LINE FOR RECYCLING ACETATE FIBER TOWS OF FILTER ROD

Patent number: CN201334585

Date of publication: 20091028

WEIQUAN YE

The utility model relates to a device for recycling waste and defective filter rods during the cigarette production, in particular to a non-woven production line for recycling acetate fiber tows of filter rods. The production line comprises an unpacking lift table, a sorting platform, a material mixing tank, a lifting conveyor belt, an opening and scutching processor, a carding machine, a cotton spinning machine, a lapping roller press, a cotton punched machine, a cotton ironing machine and a winder. Due to the adoption of the utility model, cigarette manufacturers can take the waste and defective tows of filter rods as raw material to produce non-woven fabrics used widely in the clothing industry and the daily use articles industry. Therefore, the production waste material which is hard to process in the past is changed to be industrial raw material which is helpful to the society; moreover, wastes and negative effects are avoided, considerable economic benefits are created, and a beneficial economic cycle is achieved.

REGENERATED TERYLENE SPUN-BONDED HOT ROLLING NON-WOVEN FABRIC

Patent Number: CN101532211

Date of publication: 20090916

SHANDONG TAIPENG NON WOVEN CO

The invention discloses a regenerated terylene spun-bonded hot rolling non-woven fabric, which is prepared by raw polyester slices or particles with a melting point of (250-265) DEG C +/- 3 DEG C and the controlled viscosity of (0.55-0.7)dl/g +/- 0.02dl/g through crystallization, drying, high-temperature fusion, spinning, net laying, hot rolling and coiling, wherein process parameters of various working procedures are optimized during the processing. The invention takes cheap renewable slices such as waste terylene silks, waste cloth, polyester mineral water bottles, disposable polyester utensils and the like as raw materials to produce the filament spun-bonded hot rolling non-woven fabric by controlling the raw materials and the process parameters of various working procedures so as to save a raw terylene material and reduce production cost, also ensure that various technical indexes of the non-woven fabric fully achieve the requirement of the national standard, and provide a recycling way for waste silks and waste cloth discarded by terylene non-woven fabric manufacturers at the same time

PROCESS FOR MANUFACTURING REGENERATIVE THERMAL-BONDED SPUNBOND NONWOVEN

Patent Number: CN101476213

Date of publication: 20090708

CHEN CHAO (CN)

The invention discloses a producing cloth technique by using recycled PET bottle being spunbonded hot rolled which includes steps as follows: (1) processing pre-treatment to recycled PET bottle; (2) processing surface pre-crystal, removing dust by using cyclone separator and high temperature drying to the treated PET bottle; (3) feeding the dried PET bottle to a screw extruder for heating melting; (4) adjusting fused mass viscosity and melting point; (5) PET material with melt state passing through a fused mass filter and a spinning metering pump then feeding to a spinning box; (6) spinning; (7) cooling and drafting; (8) forming net hot rolling; (9) rolling cloth. The technique by using recycled waste PET rebirth for producing cloth can save in raw material cost and energy consumption in technique process, reduce productive cost of enterprise greatly, enhance rupture strength of polyester PET rebirth spunbonded hot rolled nonweaven cloth by technique control effectively; and recycle utilization of PET has important meaning for saving rare resource petroleum, and has good social effect.

METHOD FOR PRODUCING NONWOVEN FABRIC OF SYNTHETIC FIBER, AND APPARATUS FOR SORTING CLOTH-SHAPED AND/OR COTTONY FIBER

Patent Number: JP2009191375

Date of publication: 20090827

KANEKA CORP

PROBLEM TO BE SOLVED: To efficiently produce a nonwoven fabric of a synthetic fiber which has high additional value from a cloth-shaped fiber waste in which various kinds of materials are mixed.

SOLUTION: The kinds of materials constituting a cloth-shaped fiber waste are identified from the cloth-shaped fiber waste by using a plastic-distinguishing machine constituted by a near infrared spectrophotometer. The fiber containing 10 wt.% or more of cellulose-containing fiber included in the cloth-shaped waste is specified, selected and removed. The remaining fiber waste from which the fiber containing 10 wt.% or more of cellulose-containing fiber is selected

PatentAlert 03-2010
Ecomaterials for textile production

and removed is recovered and finished to a nonwoven fabric so as to be recycled as the nonwoven fabric of the synthetic fiber which is a material for industry.

COPYRIGHT: (C)2009,JPO&INPIT

COMPOSITE COTTON AND POLYESTER YARN AND METHOD FOR MAKING SAME

Patent Number: US2009173054

Date of publication: 20090709

SILVER SCOTT

A composite polyester and cotton yarn is formed by blending polyester fibers with cotton fibers which have been regenerated from waste cotton material such as trimmings and cuttings from the apparel manufacturing industry. The fibers are cleaned and blended, then carded to align the fibers into strands. Depending on the size and texture of the desired yarn, the fibers are stretched and drawn into slivers prior to spinning to join the fibers together. The polyester fibers are preferably recycled polyethylene terephthalate fibers which are up to three times longer than the regenerated cotton fibers, so that the polyethylene terephthalate fibers overlap and braid onto the regenerated cotton fibers during spinning. The resultant yarn is stronger and more absorbent than yarns made solely out of regenerated cotton fibers. The yarn is suitable for producing woven or knit fabric for the production of colorful and functional clothing and home textiles without the need for further bleaching or dyeing.

AREA BONDED NONWOVEN FABRIC FROM SINGLE POLYMER SYSTEM

Patent Number: US20090047856

Date of publication: 20090219

FIBERWEB INC

A nonwoven fabric is provided having a plurality of semi-crystalline filaments that are thermally bonded to each other and are formed of the same polymer and exhibit substantially the same melting temperature. The fabric is produced by melt spinning an amorphous crystallizable polymer to form two components having different levels of crystallinity. During spinning, a first component of the polymer is exposed to conditions that result in stress-induced crystallization such that the first polymer component is in a semi-crystalline state and serves as the matrix or strength component of the fabric. The second polymer component is not subjected to stress induced crystallization and thus remains in a substantially amorphous state which bonds well at relatively low temperatures. In a bonding step, the fabric is heated to soften and fuse the binder component. Under these conditions, the binder component undergoes thermal crystallization so that in the final product, both polymer components are semi-crystalline.

METHOD FOR PRODUCING ARAMID FIBER PULP BY ARAMID FIBER WASTE MATERIAL

Patent Number: CN101250771

Date of publication: 20080827

SHANGHAI YIJI TECHNOLOGY CO LT

The invention discloses a method for manufacturing aramid pulp by using aramid waste materials, which comprises the following steps: shredding the aramid waste materials by directly arranging the aramid waste materials in a multi-tool mechanical cutter, enabling the average length of the shredded fiber to be 0.1- 5.0mm, dispersing the shredded fiber in water, forming suspending liquid with concentration of 0.1-8.0%, arranging the suspending liquid in a multi-tool bilateral beater, wherein beating time is 0.5-2h, then arranging the beat suspending liquid in a two-plate lapping machine, carrying out the knocking fibrillation, wherein knocking time is 20-300s, forming steady serous fluid, then dehydrating by arranging the serous fluid into a continuous filter and drying by arranging the serous fluid into a continuous drier, then opening, and obtaining the aramid pulp, wherein the aramid waste materials are made of aramid cloth rim leftovers, aramid yarn leftover bits and pieces and

PatentAlert 03-2010
Ecomaterials for textile production

aramid filament waste materials, and the aramid waste materials are obtained by recycling used aramid textile such as aramid old gloves and the like. The method of the invention has the advantages of simple process, high manufacturing efficiency and less pollution to environment, simultaneously the method can satisfy the requirements of industrialization

AN AIR-LAID NON-WOVEN FIBRE PRODUCT COMPRISING FIBRES OF RECYCLED MATERIAL

Patent number: WO2008145131

Date of publication: 20081204

FORMFIBER DENMARK APS

The present invention concerns an air-laid non-woven fibre product manufactured by a dry forming process, said product comprising a first portion of up to 98% recycled shredded material, where the shredded material is a mixture of shredded fabric material fibres from automotive tires or the like and residues of rubber and other components from the shredded tires, and a second portion of 1 - 30 %, preferably 1 - 5 %, bi-component fibres having a length between 2 - 50 mm, preferably 2-6 mm in length.

TEXTILE DYEING PROCESS OF CELLULOSIC FIBERS AND THEIR BLENDS AND POLYESTER AND ITS BLENDS WITH RECYCLED DYEING BATHS

Patent number: WO2010017606 (A1)

Date of publication: 2010-02-18

GOLDEN QUIMICA DO BRASIL LTDA [BR]; VALLDEPERAS-MORELL JOSE [ES]; LIS-ARIAS MANUEL JOSE [ES]; NAVARRO-VICIANA JUAN ANTONIO [ES] + (GOLDEN QUIMICA DO BRASIL LTDA, ; VALLDEPERAS-MORELL, JOSE, ; LIS-ARIAS, MANUEL JOSE, ; NAVARRO-VICIANA, JUAN ANTONIO)

"Textile dyeing process of cellulosic fibers and their blends and polyester and its blends with recycled dyeing baths, without carrying out any later depuration treatment," deals, most particularly, with a textile dyeing process of cellulosic fibers and polyester and their respective blends with other fibers in recycled dyeing baths, without carrying out any intermediate depuration treatment, with reactive and direct dyes for the cellulosic fibers and disperse dyes for polyester. Recycling both the water already used in a previous dyeing cycle and all added products that have not been absorbed by the textile substrate, as well as the rest of the disperse dyes that had not been depleted in the previous dyeing cycles.

METHOD AND APPARATUS FOR PROCESSING SCRAP TEXTILE FOR RECYCLING

Patent number: GB2453656 (A)

Date of publication: 2009-04-15

REEDS CARPETING CONTRACTORS LTD [GB] + (REEDS CARPETING CONTRACTORS LTD)

A method for processing scrap material such as used carpet for recycling includes a coupling operation to couple sections of scrap textile together to form a length of scrap textile 200. A preferably substantially continuous length of scrap textile undergoes a cleaning operation for removing or dislodging dirt or debris from the scrap textile. The cleaning operation is carried out after the coupling operation. The coupling operation may occur remote from the cleaning operation wherein the length of textile is arranged to extend between the coupling location and the cleaning location. The textile may be allowed to accumulate in a buffer zone 150 in a relaxed state, prior to the cleaning operation. Once cleaned, the length of textile may be arranged in rolls ready for transportation to a recycling location. The apparatus 100 comprises a coupling zone 130, inspection zones 140 and 170, the buffer zone 150 and a cleaning zone 160.

FUNCTIONAL NEXT-TO-SKIN ENVIRONMENT-FRIENDLY TYPE KNITTED FABRIC

Patent number: CN201165581 (Y)

Date of publication: 2008-12-17

QINGDAO XUEDA GROUP CO LTD [CN] + (QINGDAO XUEDA GROUP CO., LTD)

The utility model provides a functional near-skin and environmental protection type knitting fabric, which is characterized in that the knitting fabric adopts a repeated recycling structure that four connected weaving tangent planes in the vertical direction are taken as a recycling unit structure, and each weaving tangent plane adopts the structure which is formed by knitting four ways of degradable and functional fiber scribbled and the comfortable, healthy and degradable cellulose fiber scribbled. All layers of weaving tangent plane of the four connecting weaving tangent planes are respectively knitted into the twill convex-concave structure along the inner row of vertical yarns and outer row of vertical yarns by knotting, winding and weaving two ways of comfortable, healthy and degradable cellulose fiber scribbled and two ways of degradable and functional fiber scribbled. The functions of near-skin, thermal protection, wet permeability and antistatic are achieved, the comfortable and healthy performance of the textile fabric is enhanced, the selected textile fiber is degradable and functional fiber, thus the environment can not be polluted, and the knitting fabric has the function of environmental protection.

RECYCLABLE FLAG, DECOLORING METHOD OF RECYCLABLE FLAG, AND RECYCLING METHOD OF FLAG

Patent number: JP2009069265 (A)

Date of publication: 2009-04-02

KOMATSU SEIREN CO + (KOMATSU SEIREN CO LTD)

PROBLEM TO BE SOLVED: To provide a recyclable flag, a decoloring method thereof, and a recycling method of a flag. ; SOLUTION: A flag made of polyester fiber fabric printed by a disperse dye like an azo disperse dye, a benzodi-furanone disperse dye, or a phthalimide disperse dye is treated by a treatment liquid for decoloring, which contains an alkali agent, a reducing agent, and a nonionic surfactant, and the decolored flag is used as a material of chemical recycling or material recycling. ; COPYRIGHT: (C)2009,JPO&INPIT

LOW MELT PRIMARY CARPET BACKINGS AND METHODS OF MAKING THEREOF

Patent number: US2008131649 (A1)

Date of publication: 2008-06-05

JONES DAVID M [US]; HARVIE WILSON B [US] + (JONES DAVID M, ; HARVIE WILSON B)

Described herein are primary carpet backings that possess improved physical properties such as tuft binding strength. The backings described herein can be easily recycled and re-used. Also described herein are methods for making and recycling primary carpet backings.