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Issuing Date:

ApplicationNo. or Pubilcation No.201180029444.2

Issue No.:

Applicantor Patentee: Germany Ying Feiyana Limited Liability limited partnership

Title of Invention: Multi-layer film permeable to UV radiation

The First Office Action

(PCT Application Entering the National Phase)

1. Upon the request of substantive examination of the applicant, in accordance with Article 35.1 of the Patent Law, the State Intellectual Property Office performs the substantive examination for the aforesaid application for a patent for invention.

In accordance with Article 35.2 of the Patent Law, the State Intellectual Property Office proceeds to examine the aforesaid application for a patent for invention as to its substance on its own initiative.

2. The applicant requests on the basis of:

DE 专利局的申请日2010 年 06 月 15 日为优先权日。

3. Upon examination, the amendment submitted by the applicant on_____,shall not be accepted for not in conformity with Rule 51.1 of the Implementing Regulations of the Patent Law.

4. Examination is proceeded on the basis of Chinese document or the Chinese translation of the original filing international application.

Examination is proceeded on the basis of the following applicant documents:

依据专利合作条约第28 条或者第41 条提交的修改, 权利要求第-23 项;

2012 年 12 月 14 日提交的说明书第1-89 段、说明书附图、说明书摘要、摘要附图。

5. The following reference documents are cited in this Office Action(the serial number(s) of which will be used in follow-on examination)

No.	Document number or Document title	publication date (or application date of the conflicting
1	RU 2182999C1	20020527
2	EP 0342897A2	19891123

6.Conclusive opinions of the examination:

About the description:

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2010.2



The application falls into the scope of subject matter which is nonpatentable according to Article 5 of the Patent Law.

The description fails to comply with the provisions of Article 26.3 of the Patent Law.

The description fails to comply with the provisions of Article 33 of the Patent Law.

The drafting of the description fails to comply with Rule 17 of the Implementing Regulations of the Patent Law.

About the claims:

The claim(s) _____ fail(s) to comply with the provisions of Article 2.2 of the Patent Law.

The claim(s) _____ fail(s) to comply with the provisions of Article 9.1 of the Patent Law.

The claim(s) _____ fail(s) to comply with the novelty requested by Article 22.2 of the Patent Law.

The claim(s) 1-3, 6, 10-14, 19-23 fail(s) to comply with the inventive steps requested by Article 22.3 of the Patent Law.

The claim(s) _____ fail(s) to comply with the applicability requested by Article 22.4 of the Patent Law.

The claim(s) _____ fail(s) into the scope of subject matter which is nonpatentable according to Article 25 of the Patent Law.

The claim(s) 1, 17-18 fail(s) to comply with the provisions of Article 26.4 of the Patent Law.

The claim(s) _____ fail(s) to comply with the provisions of Article 31.1 of the Patent Law.

The claim(s) _____ fail(s) to comply with the provisions of Article 33 of the Patent Law.

The claim(s) _____ fail(s) to comply with the provisions of Rule 19 of the Implementing Regulations of the Patent Law.

The claim(s) _____ fail(s) to comply with the provisions of Rule 20 of the Implementing Regulations of the Patent Law.

The claim(s) _____ fail(s) to comply with the provisions of Rule 21 of the Implementing Regulations of the Patent Law.

The claim(s) _____ fail(s) to comply with the provisions of Rule 22 of the Implementing Regulations of the Patent Law.

The application fails to comply with the provisions of Article 26.5 of the Patent Law or Rule 26 of its Implementing Regulations.

The application fails to comply with the provisions of Article 20.1 of the Patent Law.

The divisional application fails to comply with the provisions of Rule 43.1 of the Implementing Regulations of the Patent Law.

The detailed analyses of the above conclusive opinions refer to the text of this Office Action.

7. On the basis of the conclusive opinions, the examiner suggests:

The applicant should amend the application documents according to the text of this Office Action.

The applicant should state the reasons why the patent application should be granted in the observation, and amend the part which fails to comply with the provisions according to this Office Action; otherwise the patent application should not be granted.

The substantive content that might be granted can not be found in the application, if the applicant does not state the reasons or the stated reasons are not sufficient, the application shall be rejected.

8. The applicant should pay attention to the followings statements:

(1) In accordance with Article 37 of the Patent Law, the applicant should submit the written opinion within four months from the date of receipt of this Office Action. If, without any justified reason, the time limit for reply is not met, the application shall be deemed to have been withdrawn.

(2) The amendment of the application document by the applicant should be in conformity with Article 33 of the Patent Law, and it should not exceed the scope specified in the initial description and claims. Meanwhile, the amendment of the application document by applicant should be in conformity with Rule 51.3 of the Implementing Regulations of the Patent Law, and in accordance with this Office Action.

(3) The written opinion and/or amendment document of the applicant should be sent by mail or



The State Intellectual Property Office of People's Republic of China

submitted directly to the Receiving Division of the Patent Office of the State Intellectual Property Office, otherwise it will be considered to have no legal effect.

(4) Without appointment, the applicant and/or the agent should not come to the Patent Office of the State Intellectual Property Office to have an interview with the examiner.

9. The text of this Office Action has 4 pages, and the attachments are as follows:

The total number of copies of the reference documents cited is _____ copies and _____ pages.

4

Name of the Examiner:崔海星

Tel:0512-
88997677

Examination Department:专利审查协作江苏中
心材料工程发明审查部

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2010.2



F i r s t O f f i c e A c t i o n

(PCT Application of Entering the National Phase)

Application

Number:2011800294442

The present application relates to the transparent multilayer film of ultraviolet radiation. Following comments are given to the after examination.

(one), claim 1-3, 6, 10-14, 19-23 is not conform to the regulation of the relevant inventiveness of the Article 22, para. 3 of the Patent Law.

1. independent claims 1 are not conform to the regulation of the relevant inventiveness of the Article 22, para. 3 of the Patent Law. The said claim is asked for protection one kind and is applicable to the hose that inserts that renovates the underground piping. D1 (RU2182999C1) discloses a pipeline rehabilitating technique lining (it is applicable to the hose that inserts that renovates the underground piping to correspond the present application). Said lining has outside tubular membrane 5 (it is located outside hose to correspond the present application), solidifiable binder flooding enhancement layer 2, with the thermoplastic resin layer 3 of 2 rigid connections of solidifiable binder flooding enhancement layer, and the tubular membrane of inside three-layer 4 (said inside three-layer tubular membrane 4 must be that liquid is close, correspond inside hose), said inside three-layer tubular membrane 4 is 6 (the corresponding of comprising polyamide 12 layer (e) of layer in the extroversion in proper order, 7 (corresponds layer (c) of layer constituted by polyamide 12 and 8 (the corresponding layer (a) of layer that form by the mixture of polyethylene and polypropylene. Said inside three-layer tubular membrane 4 can take out after the pipeline rehabilitating technique is accomplished. Solidifiable binder flooding enhancement layer 2 adopts polyester fiber felt (corresponding the carrier material) flooding solidifiable binder to form, the solidifiable binder is like unsaturated polyester resin (corresponding reactive plastic resin). Said outside tubular membrane 5 is thermoplastic polymer materials, like the polyethylene resin by 100%, perhaps the mixture of 20-40% polyethylene and 80-60% polypropylene forms that (the tubular membrane in said outside 5 is owing to only comprise the polyene resin, consequently, it must be that liquid is close, and can absorb and/or reflect the visible light of ultraviolet radiation and/or shortwave). Tubular membrane in said outside 5 and pipeline damaged position contact, wash away (said pipeline is the groundwater pipeline promptly) of groundwater is avoided to can the safeguard lining inboard uncured binder. Thermoplastic resin layer 3 can be 100% polyurethane, the



mixture of 70-95%char(39)s polyurethane and 5-30%char(39)s polyolefin, perhaps polyolefin of 100% etc..During the construction, adopt compressed air or water to exert pressure to the inner chamber 9 of inside three-layer tubular membrane 4, the post-heat treatment makes the solidification of solidifiable binder (see description the 2nd, 34-53 section and picture 1).

The technical solution that the said claim was asked for protection is compared with the disclosed technological content of D1, distinguishing feature (1) lies in in the present application respectively being provided with between layer (a) and the layer (c) and layer (c) and layer (e) increasing attaches agent layer, the part is penetrable at least and the multilayer film is to the ultraviolet radiation; Distinguishing feature (2) lie in the thermoplasticity alkene homopolymer or the copolymer on the present application layer (a), have VICAT temperature 100 DEG Cs at least.On the basis of said distinguishing feature, how the technical problem that the present application was actually solved obtains to glue well between each layer, and the hose that inserts of ultraviolet solidification can be realized smoothly in the carrier material layer.

To distinguishing feature (1): D2 (EP0342897A2) discloses a multiply polymer film.Said multiply polymer film contains the nylon layer that has the VICAT temperature that is less than 170 DEG CsBut it becomes the plastic layer with the welded connection and is connectedBut said welded connection becomes the preferred polyethylene ionic compound of plastic layerBut, become to set up the binder layer between the plastic layer on nylon layer and welded connection, modified polyolefin can be adopted in said binder layer, by way of example Modified PE or mechanical properties, modified material is like the maleic anhydride, can contain other layer, like the polyethylene layerBut said polyethylene layer can be provided binder layer and welded connection and be become between the plastic layer (but form nylon layer / binder layer / polyethylene layer / welded connection promptly and become to mould, the structure of the bed of material).When for the restoration pipeline, the nylon layer of said multiply polymer film one side fibrofelt that can bond, good back bonds, fibrofelt flooding solidifiable resin, by way of example styrene class composition, the solidifiable resin can also be styrene resin (because the adoption ultraviolet solidification that contains unsaturated polyester resin and ultraviolet solidification catalyst, said multiply polymer film must be that the part is transparent at least to the ultraviolet radiation) (it walks to the 2nd page the 28th line for the 1st page the 14th to see the description).Thus it can be



seen that, set up modified polyolefin binder layer between nylon layer and polyolefin layer, the transparent technical feature of part is open by the D2 at least to the ultraviolet radiation for the multilayer film, and the reacting phase is together, all anchoring strength and the smooth solidification of realization response nature resin that improves between each layer of multilayer film, thereby, combine well between each layer of the said inside three-layer tubular membrane 4 of D1 in order to make, the those skilled in the art expect easily D1 said layer 6 and layer and layer between 77 with layer respectively set up the modify binder layer of polyolefin of one deck between 8,, and make the tubular membrane of said inside three-layer to be that the part is penetrable at least to the ultraviolet radiation, make the unsaturated polyester resin of solidifiable binder flooding enhancement layer 2 realize ultraviolet solidification smoothly thereby.

To distinguishing feature (2), the those skilled in the art is according to the actual need of the heat resistance of the thermoplasticity alkene homopolymer that improves said layer (a) or copolymer, can determine the thermoplasticity alkene homopolymer on said layer (a) or the suitable dimension card softening point of copolymer through limited experiment, and its technical effect can be expected.

Consequently,, technical solution that claim 1 was asked for protection, conspicuous to the those skilled in the art, therefore the technical solution that the said claim was asked for protection does not have prominent substantive features and a notable progress, therefore do not possess the inventiveness.

2. dependent claim 2-3 is not conform to the regulation of the relevant inventiveness of the Article 22, para. 3 of the Patent Law. Dependent claim 2-3 has carried out further injecting at the on the basis of of its claim of quoting. D1 discloses the restoration that said pipeline rehabilitating technique lining can be used to the foggara, thereby, the those skilled in the art is expected said lining renovating for the sewage conduct naturally easily. In addition, the those skilled in the art can be based on the actual demand to said lining mechanical performance, select whether carry out the humidifying to the multilayer film and process, and its technical effect can be expected. Consequently, when its claim of quoting was not creative, dependent claim 2-3 was not creative yet.

3. dependent claim 6,10-11 is not conform to the regulation of the relevant inventiveness of the



Article 22, para. 3 of the Patent Law. Dependent claim 6, 10-11 has carried out further injecting at the on the basis of of its claim of quoting. These additional technical features are open by D1, see the commentary of claim 1. Consequently, when its claim of quoting was not creative, dependent claim 6, 10-11 was not creative yet.

4. dependent claim 12-14 are not conform to the regulation of the relevant inventiveness of the Article 22, para. 3 of the Patent Law. Dependent claim 12-14 has carried out further injecting at the on the basis of of its claim of quoting. The D2 discloses and has set up modified polyene resin layer as the binder layer between nylon layer and polyethylene layer, see the commentary of claim 1, and the reacting phase is together, all the anchoring strength that improves between each layer of multilayer film, thereby, the those skilled in the art expects on the layer 6 of the said lining of D1 and layer and layer 7 between 7 easily and layer respectively to set up the one deck D2 between 8 said, modified polyolefin binder layer, by way of example maleic anhydride Modified PE layer or maleic anhydride mechanical properties layer, 5 layers of film by layer 6/ binder layer / layer 7/ binder layer / layer 8 of better anchoring strength obtain to have thereby. Consequently, when its claim of quoting was not creative, dependent claim 12-14 was not creative yet.

5. independent claims 19 are not conform to the regulation of the relevant inventiveness of the Article 22, para. 3 of the Patent Law. The said claim is asked for protection one kind and is applicable to the pipeline system of renovating of renovating the underground piping. D1 (RU2182999C1) discloses a pipeline rehabilitating technique lining, sees the commentary of claim 1. The technical solution that the said claim was asked for protection is compared with the disclosed technological content of D1, what distinguishing feature (1) lay in asking for protection in the present application is the pipeline system of renovating, it is also including the source of sending the visible light of ultraviolet radiation and/or shortwave; Distinguishing feature (2) lie in that the present application uses, and to insert the hose of claim 1-1, 8. On the basis of said distinguishing feature, how technical problem that the present application was actually solved obtains to insert between each layer of hose the veneer well, and the pipeline system of renovating of ultraviolet solidification can be realized smoothly in the carrier material layer.

To distinguishing feature (1), the D2 discloses a multiply polymer film, see the commentary of claim 1, when for the restoration pipeline, the nylon layer of said multiply polymer film one side



fibrofelt that can bond, good back bonds, fibrofelt flooding solidifiable resin, by way of example styrene class composition, the solidifiable resin can also be the styrene resin that contains unsaturated polyester resin and ultraviolet solidification catalyst, consequently, for the solidification that realizes said ultraviolet cure type resin, accomplish the work of renovating of pipeline, the those skilled in the art expects introducing the source of sending the ultraviolet radiation easily. Thereby, obtain the said pipeline system of renovating of the present application.

To distinguishing feature (2): see claim 1-3, 6, 10-14 character(39)s commentary.

Consequently,, technical solution that claim 19 was asked for protection, conspicuous to the those skilled in the art, therefore the technical solution that the said claim was asked for protection does not have prominent substantive features and a notable progress, therefore do not possess the inventiveness.

6 . dependent claim 20-23 are not conform to the regulation of the relevant inventiveness of the Article 22, para. 3 of the Patent Law. Dependent claim 20-23 has carried out further injecting at the on the basis of of its claim of quoting. D1 discloses the restoration that said pipeline rehabilitating technique lining can be used to the foggara, thereby, the those skilled in the art is expected said lining renovating for the sewage conduct naturally easily. And because sewage conduct axial size longer pipe line often, for renovating of the different positions of axial of realizing the long distance pipeline, the those skilled in the art expects adopting mobilizable light source easily, by way of example the ultraviolet radiation ware waits to different positions that it radiates to renovate the region, make that the locates impregnating resin solidification. Consequently, when its claim of quoting was not creative, dependent claim 20-23 was not creative yet.

(two), claim 1, 17-18 is not conform to the provision of Article 26, para. 4 of the Patent Law.

The statement of " preferred " has been adopted in the 7 . claims 1, make the protection scope of claim 1 unclear, be not conform to the provision of Article 26, para. 4 of the Patent Law.

8. the statement of " as lying in inside hose " lies in " the thermoplasticity of its middle level (a) ... softening temperature " later in the claim 1, there are two kinds of understandings, 1. liquid close, to the ultraviolet radiation transparent multilayer film of part at least " whole " as being located inside hose "; 2. layer (a) independent " as the position, in inside hose ", thereby, lead to claim 1 unclear, be not conform to the provision of Article 26, para. 4 of the Patent Law.



9. claim 15 is quoted to claim 17, injectd " said radiation is ... ", but the statement is " ultraviolet radiation " in the claim 15, consequently, claim 17 lacks basis, lead to claim 17 unclear, be not conform to the provision of Article 26, para. 4 of the Patent Law.

10. claim 1 is quoted to one of 3 to claim 18, injectd " superficial layer (a) directly borders on " with the carrier material, but all describe " layer (a) " among the claim 1-3 as, consequently, claim 18 lacks basis, lead to claim 18 unclear, be not conform to the provision of Article 26, para. 4 of the Patent Law.

Based on the aforesaid reasons, the present application is cannnoted be patented.The applicant deals with the application document and makes amendment, overcomes the drawback that exists, and commits its amended text in the appointed time limit to at the this Office Action.Please the applicant notice, to modification the provision of Article 33 of the Patent Law of shoulding comply with of application document, may not go beyond the scope recited in the original description and Claims.

Name of the Examiner:崔海星
Examiner Code:602857

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