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(54) Highly oriented polymer fiber and method for making the same

(57) The present invention provides a highly oriented aramid fiber with high tensile strength, high tensile modulus and low breakage elongation by spinning liquid crystal polymers such as aramids and drafting the polymer in or adjacent to a first coagulating bath. A polymer solution with concentration of 4-24 weight % is extruded as a stream (9) into a non-coagulating fluid (10), and the stream (9) is stretched in the non-coagulating

fluid (10) and passed through a first coagulating bath (4) where it is drafted by using a drafting roller (3), so that the polymer concentration of the flue is increased sufficient to form fibers. As a result, a highly oriented aramid fiber with tensile strength of 1500-5000 MPa, tensile modulus of 200-500 GPa, and the % elongation of 0.8-1.4 is provided.

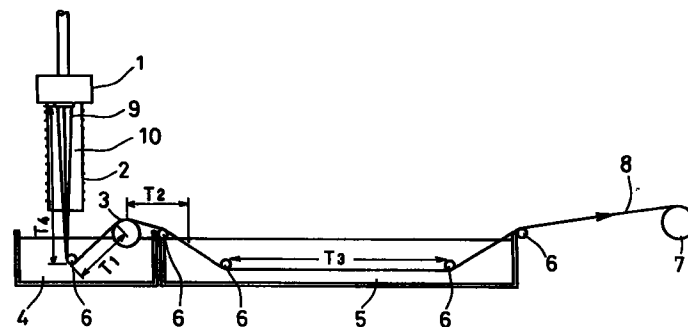


FIG. 1

EP 0 863 232 A3



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EUROPEAN SEARCH REPORT

Application Number
EP 98 10 3645

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			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			D01F
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	22 March 1999	Hellemans, W	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		& : member of the same patent family, corresponding document	

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ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 98 10 3645

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