

**EUROPEAN PATENT APPLICATION**

Application number: **90100443.2**

Int. Cl.<sup>5</sup>: **D01F 8/12, D01D 5/34**

Date of filing: **10.01.90**

Priority: **12.01.89 JP 5299/89**  
**15.12.89 JP 324089/89**  
**20.12.89 JP 328213/89**

Date of publication of application:  
**18.07.90 Bulletin 90/29**

Designated Contracting States:  
**DE FR GB IT**

Date of deferred publication of the search report:  
**31.10.90 Bulletin 90/44**

Applicant: **KANEBO, LTD.**  
**17-4 Sumida 5-chome Sumida-ku**  
**Tokyo 131(JP)**

Inventor: **Yamakawa, Yukio**  
**4185-1, Mure**  
**Hofu City, Yamaguchi Pref.(JP)**  
 Inventor: **Tanaka, Soichiro**  
**10-6, Tsukigaoka Senriyama**  
**Suita City Osaka-Fu(JP)**  
 Inventor: **Itonaga, Koji**  
**6-5-503, Kanebo-Cho, Hofu City**  
**Yamaguchi Pref.(JP)**  
 Inventor: **Nakai, Yasushi**  
**4-1, Kanebo-Cho**  
**Hofu City Yamaguchi Pref.(JP)**

Representative: **Hansen, Bernd, Dr.rer.nat. et**  
**al**  
**Hoffmann, Eitle & Partner Patentanwälte**  
**Arabellastrasse 4 Postfach 81 04 20**  
**D-8000 München 81(DE)**

**Composite filament yarn and process and spinneret for manufacturing the same.**

A polyamide/polyurethane composite filament yarn, which filament comprises a polyamide sheath component and a polyurethane eccentric core component exposed with a neck portion of uniform width on the surface of the filament, is manufactured by a process comprising inserting, immediately before extruding from a spinneret orifice, a molten polyurethane flow obliquely from upwards and incorporating said polyurethane flow eccentrically into a molten polyamide flow flowing down in said conduit, while a small part of said polyurethane flow radially projected in a restricted width penetrating through the thinnest portion of said polyamide flow flows down along the inner wall of said conduit. For this process, an employable spinneret comprises a leading duct for polyamide connecting to an orifice via a vertical conduit, another leading duct for polyurethane connecting to an injection pipe obliquely extending

therefrom, protruding into said conduit, opening immediately before said orifice and having a slit extending longitudinally at the under side along the entire protruded length.



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number

EP 90 10 0443

| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                     |                                                                                      |                                                                                                                                                                                                                                                                                       |                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Category                                                                                                                                                                                                                | Citation of document with indication, where appropriate, of relevant passages        | Relevant to claim                                                                                                                                                                                                                                                                     | CLASSIFICATION OF THE APPLICATION (Int. Cl.5) |
| D,Y                                                                                                                                                                                                                     | JP-A-63 256 719 (KANEBO)<br>* Whole abstract *<br>---                                | 1-23                                                                                                                                                                                                                                                                                  | D 01 F 8/12<br>D 01 D 5/34                    |
| Y                                                                                                                                                                                                                       | US-A-3 607 611 (M. MATSUI TAKATSUKI et al.)<br>* Claims; figures 5,13,15-17 *<br>--- | 1-23                                                                                                                                                                                                                                                                                  |                                               |
| A                                                                                                                                                                                                                       | DE-A-2 032 912 (I.C.I.)<br>---                                                       |                                                                                                                                                                                                                                                                                       |                                               |
| A                                                                                                                                                                                                                       | GB-A-1 518 500 (COURTAULDS)<br>-----                                                 |                                                                                                                                                                                                                                                                                       |                                               |
|                                                                                                                                                                                                                         |                                                                                      |                                                                                                                                                                                                                                                                                       | TECHNICAL FIELDS SEARCHED (Int. Cl.5)         |
|                                                                                                                                                                                                                         |                                                                                      |                                                                                                                                                                                                                                                                                       | D 01 D<br>D 01 F                              |
| The present search report has been drawn up for all claims                                                                                                                                                              |                                                                                      |                                                                                                                                                                                                                                                                                       |                                               |
| Place of search<br>THE HAGUE                                                                                                                                                                                            |                                                                                      | Date of completion of the search<br>21-08-1990                                                                                                                                                                                                                                        | Examiner<br>VAN GOETHEM G.A.J.M.              |
| CATEGORY OF CITED DOCUMENTS                                                                                                                                                                                             |                                                                                      |                                                                                                                                                                                                                                                                                       |                                               |
| X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                      | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>-----<br>& : member of the same patent family, corresponding document |                                               |