

## Title (en)

Apparatus, method and system for air opening of textile tow and opened textile tow web produced thereby

## Title (de)

Vorrichtung, Verfahren und System zur Ausbreitung eines Faserbündels durch Luftstrahlen und damit hergestellte Faserbahn

## Title (fr)

Appareil, méthode et système pour l'étalement pneumatique d'un cable textile et nappe ainsi produite

## Publication

**EP 1096047 A1 20010502 (EN)**

## Application

**EP 00122227 A 20001017**

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## Abstract (en)

The invention provides an air opening jet for use in a process for making a rectangular structure made from a tow of fibers, such air opening jet including a housing, an air jet for moving the tow through the housing and opening the tow, and an accumulating chamber that includes at least one, and preferably two, perforated plates located in the path of the moving tow, and an air control arrangement for controlling the flow of air so that the moving tow is urged into engagement with the perforated plates to retard movement of the tow and cause it to properly accumulate in the accumulation chamber. The invention also includes methods for using the air opening jet apparatus to produce multi-tow band products, and products produced by such methods. <IMAGE>

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## Citation (search report)

- [AX] US 3664115 A 19720523 - WATSON GEORGE A
- [A] US 3505155 A 19700407 - BALCH RALPH H, et al
- [A] US 3501811 A 19700324 - WATSON GEORGE A
- [DA] US 3226773 A 19660104 - PAUL PALIYENKO
- [A] US 3795944 A 19740312 - DANIELS C
- [A] EP 0357257 A1 19900307 - PHILIP MORRIS [US]
- [A] US 4949441 A 19900821 - ETHRIDGE FREDRICK A [US]
- [A] US 4268940 A 19810526 - KURODA TOSHIMASA, et al

## Cited by

DE102008003369A1; CN107916496A; EP2780498A4; EP2377978A1; CN112041488A; EP2787107A4; US8623248B2; US9849638B2; WO2013074609A1; WO2011131670A1; EP2893821A1; DE102014200397A1

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