

United States Patent [19]

Riggins et al.

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[54] **EXHAUST PROCESS FOR
SIMULTANEOUSLY DYEING AND
IMPROVING THE FLAME RESISTANCE OF
ARAMID FIBERS**

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Related U.S. Application Data

[63] Continuation of Ser. No. 139,761, Dec. 30, 1987, abandoned.

[51] Int. Cl.⁴ **D06P 5/00**

[52] U.S. Cl. **8/490; 8/130.1;**
8/572; 8/925

[58] Field of Search 8/49 D, 572

[56] References Cited

U.S. PATENT DOCUMENTS

4,198,494	4/1980	Burckel	525/432
4,324,706	4/1982	Taber et al.	524/15
4,525,168	6/1985	Kelly	8/130.1
4,583,986	4/1986	Lapidus et al.	8/405
4,710,200	12/1987	Cates et al.	8/574
4,759,770	7/1988	Cates et al.	8/490

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[57] ABSTRACT

Aramid and aramid-blend fabrics are dyed and optionally flame-retardant treated using conventional pressure and heat dyeing equipment. Odor-free, colored or colored and highly flame resistant products result.

16 Claims, No Drawings