

Title (en)  
PNEUMATIC SHOE FOR HIGH SPEED FILAMENTARY CAPSTAN

Publication  
**EP 0396680 B1 19930811 (EN)**

Application  
**EP 89911506 A 19890928**

Priority  
US 26842188 A 19881108

Abstract (en)  
[origin: WO9005105A1] An apparatus and methodology for uniformly applying a compressive force against a filament to pneumatically drive the filament or fiber optic cable against a capstan without any concentrated amount of stress at any point on the filament (12) is effectuated by pneumatically forcing the filament (12) into an equatorial V-groove (46) defined in the capstan (16). Pneumatic pressure is applied to a predefined segment of the capstan (16) by a pneumatic shoe (10) having an internal shoe pressure chamber (20). The pressurized gas or air is applied to the segment from the chamber (20) into the proximity of the equatorial V-groove (46) on the capstan (16). The V-groove (46) is vented to atmosphere so that the filament (12) is forced or blown into the V-groove (46). Side and end clearances between the rotating capstan and the shoe are sized to allow the viscosity of the pressurized gas to operate to retard the escape of the pressurized gas from the predefined segment of the capstan (16). Utilizing such an arrangement, approximately 10 kilometers or more of filament can be 20 paid out in approximately 32 seconds or less.

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