

SKIN-CORE HIGH THERMAL BOND STRENGTH FIBER
ON MELT SPIN SYSTEM

ABSTRACT OF THE DISCLOSURE

Process and apparatus for spinning polymer filaments permits the obtaining of skin-core filament structure by feeding a polymer composition to a spinnerette at a flow rate sufficient to obtain a spinning speed of about 10 to 200 meters per minute through the spinnerette; heating the polymer composition at a location at or adjacent to the spinnerette so as to heat the polymer composition to a sufficient temperature to obtain a skin-core filament structure upon quenching in an oxidative atmosphere; extruding the heated polymer composition through the spinnerette at a spinning speed of about 10 to 200 meters per minute to form molten filaments; and quenching the molten filaments in an oxidative atmosphere so as to effect oxidative chain scission degradation of at least a surface of the molten filaments to obtain filaments having a skin-core structure.

(figure 1)