



## ITMA 2003: REVIEW OF AIR-TEXTURING/INTERMINGLING

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### ABSTRACT

*Air textured yarns are produced from thermoplastic, cellulosic or non-organic filament yarns using compressed air. Loops are formed on the surface of the filament yarn, giving it a voluminous character. Depending on the material used, the loop structure results in a yarn with characteristics resembling those of conventional staple-fiber yarn. The resulting yarns are used for sewing thread applications, apparel fabrics, fancy yarn articles, automotive interior fittings, and home furnishing fabrics, carpets, fire blankets and a wide range of other applications. This report presents a review of the latest developments in air-jet texturing/intermingling machinery and nozzle manufacturing from around the world that were on display at ITMA 2003 in Birmingham* U.K.

*Keywords: Air texturing, Intermingling, SSM Staehle, Heberlein, Air jet Nozzles, Intermingling Nozzles, Loops*

### INTRODUCTION:

Air textured yarns are produced from thermoplastic, cellulosic or non-organic filament yarns using compressed air. Loops are formed on the surface of the filament yarn, giving it a voluminous character. Depending on the material used, the loop structure results in a yarn with characteristics resembling those of conventional staple-fiber yarn. The resulting yarns are used for sewing thread applications, apparel fabrics, fancy yarn articles, automotive interior fittings, and home furnishing fabrics, carpets, fire blankets and a wide range of other applications.

In its simplest form, the air-texturing machine consists of a supply yarn creel, a

J suitable winding head fitted with yarn transport including an extra pair of feed rolls and an air jet interposed.

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A Traditionally air-texturing machines fall in two main groups:

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- Machines with individual drives (SSM Staehle)
  - Machines having a headstock with motors, drives, and shafts at each position; the lineshaft machines (Guidici, ICBT and RPR)

Due to their ability to process a very wide range of yarns and the fact that each machine position can be set up to produce a different yarn, machines with individual drives have become the norm in present day air-jet technology. Apart from the few