

**Quality And Defect Analysis For Yarns,  
Knitted, Woven Fabrics And Clothing Products**

Zampetakis, Katsaros – no.1/2006

From the consumer’s point of view, the way a final products fits one’s needs, namely its quality, depends, obligatory, on the subjective and objective parameters of the respective product. If the subjective parameters are decisive in the moment of purchasing (appearance, price, presentation manner, brand image etc.), the objective parameters step into the use of the article (permanence of the aspect and of the color in wearing, tear resistance, weathering resistance etc.). The present paper brings forward a very important subject, i.e. the quality control of one’s own products within the main technological processes: yarn production, weaving, knitting and dyeing. Staring from the fact that most of the fabric faults have their own origin in the defects of the used yarns, the paper succeeds in performing a detailed and systematic evaluation of the causes leading to the appearance of the faults that are specific to the above mentioned technological processes.

Key words: yarns, warp, weft, spinning, defect, weaving, quality

**Plaits For Technical Application**

Cioara, Onofrei, no.1/2006

The paper presents a study over the possibilities of using certain tri-axial plaited structures for performing ledgers used in making fittings for concrete. To get polypropylene ledgers reinforced with glass yarns, the study started from a polypropylene yarn plait with glass yarn reinforcement. The glass yarns are arranged within the structure as filling yarns on the sense of the length of plaiting. The plaits obtained in this manner are subjected to a heat treatment which results in the melting of the polypropylene, while the glass yarns remain embedded in this matrix. The composite material represented by these ledgers must show exploiting properties specific to the respective field of use, i.e. high bending rigidity, high stretching resistance, low weight, stability against environmental factors. The properties of the glass yarn reinforced ledgers depend on the structure and properties of the components and of their proportion in the composite material. The paper presents the results of the author’s own researches and experiments regarding the exploiting properties of the reinforced plaits depending on the structural characteristics and proportions of the components.

Key words: technical textiles, glass yarns, polypropylene, plait, composites, rigidity, resistance

**Artificial Neural Network Embedded Expert System For Design Of Woven Suiting  
Fabrics. Part I and II**

Behera, Muttagi, no.1/2006 (Part I), no. 2/2006 (Part II)

Artificial neural network embedded expert system has been developed to assist the fabric designer for design formulation. The knowledge base of the system is based on design specific empirical rules. Two radial basis function neural networks have been implemented to resolve the fabric structure-property relationships. Graphic user interface makes design process fast and user-friendly. The system has been validated for fabrics under industrial environment and has found to yield low errors.

Key words: expert system, neural network, projection, design, textile materials

**The Elaboration Of The Dyeing Recipes Of Wool  
Using Derby Procedure**

Monica Pustianu, no.1/2006

In the present paper it was verified experimentally the application of Derby procedure in elaboration of the dyeing recipes of wool fabric with dyes mixtures of three acid colorants. It was made dyeing with three acid colorants on 100% wool texture, for six concentrations. Using calculation formulas was determined the concentrations of three colorants for dyeing recipes for imposed standard colors reproduction. It was tested the graphic method for elaboration of dyeing recipes with acid colorants, too. The recipes establishing dyes concentration was made directly on functions diagram between dyeing remission and concentration.

Key words: dyeing recipes, wool, acid dyes, Derby procedure, concentration

**The Anthropologic View Of The Men Garment Industry**

Radu, Glavce,..no.1/2006

There have been effected determinations for the anthropologic evaluation of the masculine population in Romania, on individuals aging between 20 and 60 years, selected from different areas of the country. For each individual, have been drawn more basic sizes (up to 53 sizes) and 15 items (identification and personal data). The processed statistical and mathematical indicators allow an anthropometrical evaluation of each specimen, as well as a general evaluation per country. There have been drawn conclusions regarding the evolution of the body sizes by age, which suggests the possibility to create different patterns for the population up to 35 and other patterns for the population over 40 years old, an age when the modifications on the body conformation appear, due to the increase of gaining weight in excess, with a tendency to obesity.

Key words: anthropology, standardization, variability, body size

**Textile Yarn Hairiness Tester**

Mitu-Cretu, Isar,..no.1/2006

The tester is meant for physical and mechanical testing laboratories and is used for measuring the hairiness of a very large range of yarn and blends fineness. The functional model based on the opto-electronic principle, was conceived to run simultaneously with a computer meant for this application, based on software programs for automatic data processing. The advantages of applying the test method on this control electronic device are as follows: full automation, which provides tests reproducibility and elimination of operator subjectivism; information soft that allows analysis, elaboration of the analysis bulletins and processing the data of interest in order to organize a database; reducing the time of the analysis and increasing the accuracy in measurement; increasing the quality and competitiveness of the Romanian products on the European and international level.

Key words: textile yarns, hairiness, opto-electronic principle, testing method, tester, software program