CLASSIFICATION OF FILMS FOR MANUFACTURING FLEXIBLE PACKAGING

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Flexible packaging is in great demand, which is constantly growing and making some areas of life easier. It protects the product from the influence of external factors, increases the shelf life of the product, acts as an advertisement for the product (attracting attention), performs packaging functions (ease of transportation) and more.

Since flexible packaging acts as an advertisement (bright labels should encourage the purchase of goods), much attention is paid to the quality of manufacture of these packaging.

The deep method is used for printing flexible packaging on polypropylene and polyethylene teratholate. However, due to the design of the machine (distance between sections 5-7 m, taking into account the passage of many leading cylinders) cannot be used for printing on polyethylene, due to easy stretching and deformation of such material when stretching the web on the leading cylinders.

The quality of flexible gravure printing packaging is generally influenced by many factors: the parameters and characteristics of inks and solvents, namely their viscosity; the amount of solvents, odor, number and size of pigments, the size of the dry residue; parameters and condition of equipment; technological modes; film characteristics (slip percentage, film activation level, type of activation); quality of materials; characteristics of materials: for the film thickness, density, melting point, etc., for paint interaction with various solvents, scope; staff qualifications; microclimate; observance of technological stages.

One of the main indicators is the physicochemical properties of the material. It includes parameters: abrasion resistance, torsion and delamination (adhesive resistance of the paint to the film, adhesive to the laminate), barrier properties, no residual solvents in the packing layers, compliance with the customer's requirements and technological requirements of their equipment (sliding coefficient, uniform thickness) materials), compliance with quality systems (ISO 9001).

To systematize and further study the quality parameters of flexible packaging, all types of printing films were analyzed in detail, and based on the analysis, a classification of printing films was developed (Figure 1).

The classification reflects both the structural performance of the films and the possible printing properties. The following classification features were identified: type, structure, orientation, type of activation, method of activation, properties, degree of transparency, method of application, deformation structure, thickness and gloss.

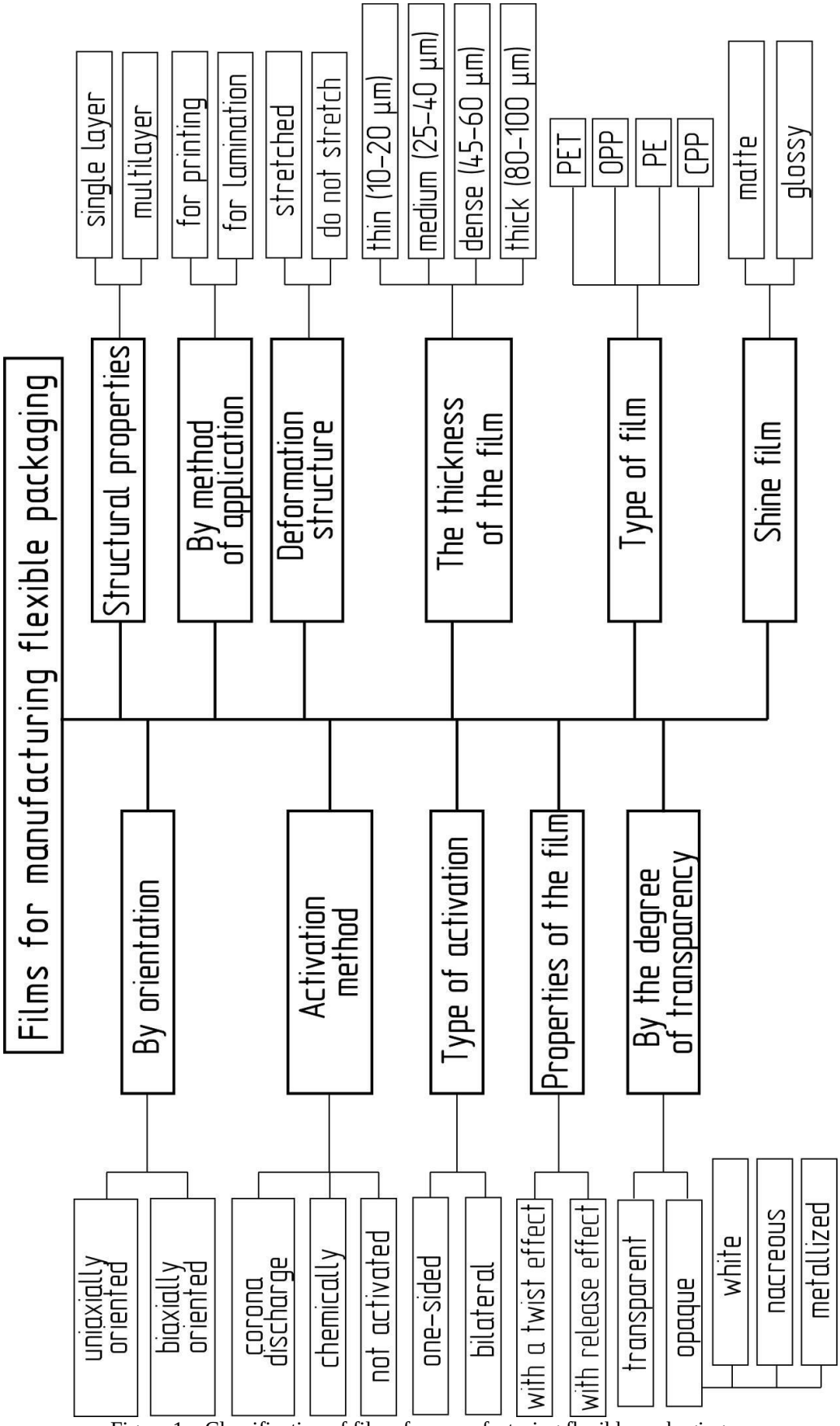

Figure 1 – Classification of films for manufacturing flexible packaging