FEATURES AND IMPROVEMENT SOLUTIONS FOR A LENS PRODUCTION LINE

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Rezumat. *Scopul acestei lucrări este de a prezenta evoluția și procesul complet de prelucrare a unei lentile. Prin urmare, pornind de la materia primă, sticla, în lucrare va fi prezentat procesul de obținere a sticlei optice, urmată de tehnologia de procesare și de metoda de procesare a materiei prime pentru a obține o lentilă cu dioptrie corespunzătoare.*

Summary. *The present paper scope is to follow the evolution and the process of a lens. Hence, starting from the raw material, the glass, in the following pages will be presented the process to obtain the optical glass, followed by the processing technology and the method to process the raw material in order to obtain a lens with the corresponding diopter.*

Keywords: glass, optical, lens, process.

1. Introduction

The glass is the material that, when cooled, goes from liquid to solid state without any intermediate state, with the condition that both states to be in thermodynamic balance. Over two hundred types of optical glass are known. Because of the specific technoligies and special materials used, the cost of the optical glass is higher. [1]

Normal glass can be easily obtained by melting a mixture of sand, soda and chalk. After cooling dow, the mixture pass into a homogeneous, amorphous and transparent material. To obtain glasses with special technical features, the mixture will contain some new substances, like: borax, lead oxides, dolomite, inorganic dyes (metal oxides or sulphides). [1]

The most important technical variants of glass are: industrial glass, colorless optical glass, colored optical glass, light dispersing glass, technical glass, organical glass.

Production technology for optical parts is determined by the part shape and size, precision, raw material and glass type. Optical parts can be grouped into next

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