

ПРОЕКТИРАНЕ И ПРОИЗВОДСТВО НА ЛАМПА

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DESIGN AND PRODUCING LAMP BASE

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ABSTRACT

The diploma thesis aims to encompass the entire design conception and to produce a lamp base considered to the user's wishes and needs.

In the development are presented the main stages of lamp design, as well as some basic concepts in the industrial design. In the process of designing the basic elements, the designer recreates the user's desires and the qualities of the product elements. The types of light, the light sources, and how they affect human perception are explored.

Keywords: industrial design, lamp design

Research

In order to achieve the stated goal of the diploma, the following tasks have been set and implemented:

- A study that resulted in the problems associated with the conceptual design being cleared.
- Choosing a pyramidal shape of the luminaire, symbolism of shape and durability.
- Designing the model and photorealistic visualization of the luminaire by selecting the right 3D software.
- Selection of suitable materials for the real production of the lighting model.

- Select appropriate colours and luminaire for the project.

Designing of a lighting unit includes the following stages: Researching, Drawing up a draft of a Functional Scheme and Developing a Design Decision.

- Researching - Study-designer proceeds to achieve the goal set by collecting the maximum amount of information on the subject. Research methods are used to clarify the objectives and to identify the external conditions with which the project must be compatible. The aim at this stage is to inform

the designer about the preferences of the society towards the given type of objects and their specific requirements. In order to develop a quality project, it is necessary to know the specific requirements in terms of functionality, ergonomics, aesthetics, construction and technological requirements. At the exploratory stage the specific properties are elucidated and the selection of the materials is started.

- Creating a functional scheme - the functional scheme is a simplified sketch that undergoes multiple changes. In this way, it is possible to eliminate incompleteness and avoid the possibility of various types of errors that may arise, such as the underestimation of factors influencing the design. In this way, we can also expand the approaches and types of search for a suitable solution. Exposure of designer's thinking is another important feature of the engineering design methods. This brings the process and way of thinking out of the mind of the designer. This is of utmost importance in complex design tasks and is an
- indispensable need for teamwork. This way, each member of the team can see what is going on at any time in the design process, and can see any shortcomings in the project and the problem can be avoided.
- Development of a design solution - the development is divided into conceptual and detailed design. After the first two stages of design, the general concept of the product is drawn up. The conceptual design for the overall composition is depicted with sketches, unfolding and visualization.

Results

The balance between the creative impulse of the world and the designer's personal opinion is the key to achieve the optimal effect of the creative process in designing the model. The luminaire is handmade with precision to the detail and its own personal story.

Beyond the design of an object, there is a personal component as well, one that no designer or manufacturer can provide [1,3].

Designers have been using editors such as AutoCad, 3D Studio Max through which the 3D models *Figure 1* have been designed. The process of designing the lighting model has gone through

many stages, ideas and many concepts. Choosing one of them as well as defining it as the best and most feasible was indeed a difficult task. Not always the ideas of a designer may be fully feasible, so he must also be inclined to compromise. The most important thing is to know that the process requires time to experiment with different variants until the most appropriate idea is found.

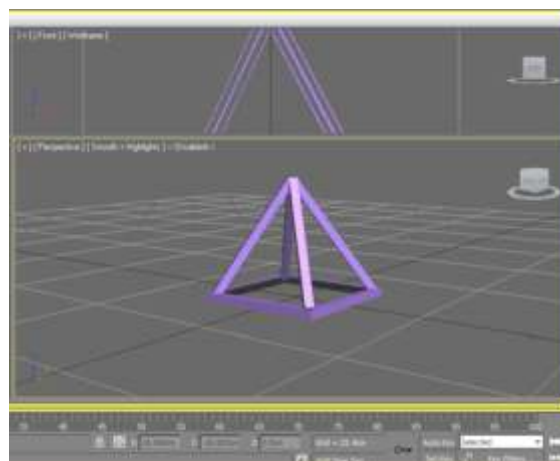


Figure 1 3D Studio max model

Traditionally, a prototype in design engineering refers to the first physical instantiation of a product before it is created by mass production [2].

The diploma thesis can be applied as part of textile art. The diploma project includes textile fiber, wood and LED strip *Figure 2*.



Figure 2 Final lamp model

Conclusion

"Although all students have their own unique skills and ways of thinking, similar to that of a gemstone, these individual intellectual assets need to first be dug up and polished before the student is able to wholly realize his or her full potential" - John Berger.

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