Employing the parametric analysis principles in metal furniture design

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Abstract:

Furniture is an integral and inseparable element of architecture, and its design depends a lot on its function and the space in which it will be placed and its consistency with the place. Some furniture units were executed in different eras in a beautiful manner and with great skill, so they came back from wonderful works of art and deserved to occupy their proper place in museums because they are pieces of art. In the twentieth century, a number of architects, designers and furniture makers came up with making artistic furniture units that took into account the aesthetic aspect, and sometimes at the expense of functionality. At the present time, parametric digital systems have been relied on to find artistic aesthetic formal systems that take into account form and function. Where the analysis represents Parametric has recently been a trend that allows designers to explore new forms of meaning within more complex geometric systems. The design systems resulting from this trend are characterized by being mathematically based in an algorithmic form, where the methods taken by the designer can be determined when modeling his design and thus can be simulated digitally. Where modern digital design methods can play a role in the emergence of the parametric form as one of the most important pillars of the physical image of products in general and metal furniture the focus of research in particular through its ability to achieve connotations and visual messages that it presents to the recipient, and the parametric form can be realized in the design of metal furniture by realizing Laws regulating perceptions from a parametric viewpoint in furniture design.Therefore, this research aims to explore the mechanism of employing the principles of parametric analysis in the design of metal furniture, and to achieve this goal, the research was divided into three parts.The first dealt with metal furniture (concept and design methods) ,While the second reviewed the methods of analyzing and finding the parametric form.The research ended with the third part, which concerned with studying the principles of parametric analysis for the design of metal furniture.The research concluded that parametric design tools can explore important relationships by achieving design and engineering purposes, which are carried out through the designer's interaction with parametric tools through rule algorithms to capture and process these relationships, in addition to generating parametric forms and relationships between different design elements.

Keywords:

parametric analysis principles - metal furniture- parametric design

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