

The benefits of parametric design methodology in developing structural solutions for metal furniture

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Abstract:

The parametric design methodology is an updated methodology that aims to employ computer design programs (such as Maya and Rhino programs) to find a new and important design pattern that appeared after modernity. It takes care of finding a suitable design for various areas of life, starting with architecture, product design, passing through metal furniture and the smallest details of treatments. Automatically, which saves effort and time, and is unique in its smooth handling of complex blocks and highly complex structural systems in the design of metal furniture to employ these concepts in impressive designs of very complexity adapted to the era, and is characterized by the possibility of obtaining from it a dynamic design as well as sustainable design through the principle of re-employment and the use of materials, making it an almost integrated design. This research aims to clarify the role of the parametric design methodology in upgrading the design of metal furniture. The design thinking of metal furniture has evolved from the traditional approach to the parametric design methodology, and the research found that parametric furniture is now manufactured using algorithmic thinking through certain parameters and variables that are renewable and implementable, where products are made on solid supports with unconventional creative flowing shapes. The parametric design methodology gives each metal furniture design a great level of adaptability to different materials, tools and individual preferences. The parametric design methodology for manufacturing enables manufacturers anywhere to download the design file, and modify the design to suit local materials, available CNC tools, or any specific uses or needs

Keywords:

parametric design methodology, parametric design, metal furniture.