Occupational Ergonomics Standards for Digital Manufacturing of Metal Furniture Products

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Abstract:

Occupational ergonomics is responsible for the relationship between the worker and the machine in the work environment to achieve smooth، comfortable and safe performance، and therefore professional ergonomics for digital manufacturing is concerned with clarifying the relationship between digital production machines and the worker in the work environment to achieve the best quality and performance. The research problem can be expressed through the following questions: - What is the extent of ergonomic compatibility between digital production machines and technicians working on them in the field of metal furniture production? Is it possible to improve this ergonomic compatibility using professional ergonomics standards in order to achieve the best quality and safety for technicians working in this field? The research aims to determine the occupational ergonomics standards that govern the relationship between the machines of digital production systems for metal furniture and the technicians working on them. In order to improve the compatibility between digital production machines and technicians to achieve the best quality and safety in the work environment. The research uses the descriptive analytical method to monitor the relationship between the machines of digital production systems and the technicians working on them and analyze this relationship to come up with ergonomic criteria governing this mutual relationship to achieve the best quality and safety in the work environment. Through several axes:- First: The emergence and concept of digital manufacturing - Second: Professional ergonomics and its link to digital manufacturing machines - Third: Conclusion of professional ergonomics standards for digital manufacturing - The research reached a number of results and recommendations، including:- occupational ergonomics for digital manufacturing is one of the most important modern requirements due to the shift towards the digital age in manufacturing، which necessitated the presence of ergonomic factors that achieve ergonomic controls and standards that suit the good performance of jobs and their suitability with the worker or operator and digital machines.- Conducting more studies on the applications of ergonomics in the digital age and the consequent difference in ergonomic requirements and standards that suit new tasks.

Keywords:

Occupational Ergonomics، Digital Manufacturing، Metal Furniture

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