

متطلبات التحليل الإنشائي للتوظيف الحركي للنظم المعدنية سابقة التجهيز
Structural Analysis Requirements for Kinematic Function of Pre-fabricated Metal Systems

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Abstract :

The motion mechanisms considered as the way that achieve the kinematic functions of pre-fabricated metal systems, the designer should be aware of the kinematic needs to achieve the required kinematic functions and so the designer should consider the right motion of elements in his design process. It greatly affects the form, function ,performance and the structure of pre-fabricated metal systems. Which interrelated together to give a good usage and quality for the system as well as achieving user benefits and satisfaction.

The structural design of pre-fabricated metal systems depends on the perception of structural of motion mechanisms, which can be done through good understanding of machine theory principles and the motion science concepts with a good knowledge of the rules of structural analysis of kinematic systems, as well as methods of good and flexible application of these mechanisms.

Therefore the research problem stems from the need to devise the structural analysis requirements of kinematic function in the design of pre-fabricated metal systems which facilitate the process of motion structural analysis as well as the mechanical employment of motion mechanisms in the design of pre-fabricated metal systems.

The research aims to devise the structural analysis requirements of kinematic function in the design of pre-fabricated metal systems in the field of metal furniture and construction.

The research concludes that the structural analysis process of kinematic pre-fabricated metal systems is very sensitive process which associated with the efficiency of system performance and not collapse under the various factors, therefore its need to special skills and unconventional capabilities to calculate loads and results without error. Hence, specialized institutions are moving towards the use of computer programs in the structural analysis process of pre-fabricated motion systems, whether they are metal structures or small products such as furniture

Keywords : Pre-fabricated Systems- Structural Analysis- Functional Analysis