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A CASE STUDY ON THE IMPLEMENTATION OF A TECHNOLOGICAL ERGONOMIC DESIGN IN OIL AND GAS FACILITIES

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Abstract

The notions of work hygiene, health, and labor conditions are recent, since they appeared in the 19th century with the industrial development that progressively constituted labor law, with the first protective measures for the benefit of the most fragile workers. The improvements in working conditions are the subject of research at several universities and state and non-state companies because, as we have already mentioned, they are new concepts. By analyzing these activities in order to get some propositions and modifications to reduce the negative consequences of these activities on the safety, health, and global efficiency of the system, we usually follow the principle of fitting the system to the human limits and capabilities and not the reverse, which is generally practiced by many designers for various reasons. The purpose of this study is to clarify and identify reasons which prevent both the designer and the client's engineers from implementing ergonomics within the design of new oil and gas facilities. We attempt to propose a methodical approach to emphasize ergonomics' implementation and its control. Engineering companies should insert all ergonomic features into the design of new oil and gas facilities in order to reduce the mismatches between the operators and the system in which they are working and, as a result, diminish the likelihood of the occurrence of injuries, incidents, and accidents.

Key words: accident, design, ergonomics, human factors, oil and gas facilities, prevention, safety

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