

Study of the Performance of Metal Tanks with a Floating Roof

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Abstract : This work exposes metal tanks in general and floating roofs in particular by listing the codes and standards which study this kind of structure. Initial research discusses the types of tanks, how they are designed, and the disadvantages and advantages that each type has. Then, in-depth research was carried out carefully in order to popularize the floating roof tank and the principles of its design and operation while defining the different types of this kind of roof, how and what they are designed, naming the main installation accessories for these roofs and the dangers that a malfunction of these accessories would cause, also exposing the problems likely to be encountered on these roofs and the considerable and important advantages that floating roof tanks bring. A simplification of the two API 650 and Eurocode 3 regulations - Tanks part - has been made by explaining and mentioning the design rules and laws of this type of structure. Thus a comparison of the two regulations is accomplished by exemplifying this with a study of an actual project.

Keywords : tanks of metal, floating roof, performance, comparative analysis

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