

누출 사고 시 위험물 임시 저장을 위한 시스템 연구

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The leakage accident from a oil storage tank occurred in April 2014 in Korea and the total loss was about KRW 18 billion. De to this accident, many companies have tried to develop their own mitigation systems to prevent or minimize the loss of the leakage accident. This study aims to design a temporary storage facility system to mitigate leakage accidents. The basic design concept is that the leakage fluid of a hazardous material moves to a temporary storage tank and this is transferred to a spare tank by a pump. Moreover, the overflow of a temporary storage tank should be avoided. In order to design this system, the leakage velocity and quantity according to the accident size and time series should be evaluated. In addition, to avoid repeating the pump switching on and off, the proper pump capacity has to be evlouted. In this study, the benzene tank is selected to verify the efficacy of this system and this case study will be helpful to provide a guideline for designing this system.