

A Control Model for the Dismantling of Industrial Plants

Authors : Florian Mach, Eric Hund, Malte Stonis

Abstract : The dismantling of disused industrial facilities such as nuclear power plants or refineries is an enormous challenge for the planning and control of the logistic processes. Existing control models do not meet the requirements for a proper dismantling of industrial plants. Therefore, the paper presents an approach for the control of dismantling and post-processing processes (e.g. decontamination) in plant decommissioning. In contrast to existing approaches, the dismantling sequence and depth are selected depending on the capacity utilization of required post-processing processes by also considering individual characteristics of respective dismantling tasks (e.g. decontamination success rate, uncertainties regarding the process times). The results can be used in the dismantling of industrial plants (e.g. nuclear power plants) to reduce dismantling time and costs by avoiding bottlenecks such as capacity constraints.

Keywords : dismantling management, logistics planning and control models, nuclear power plant dismantling, reverse logistics

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