

Accepted Manuscript

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PII: S0360-8352(18)30190-6
DOI: <https://doi.org/10.1016/j.cie.2018.04.046>
Reference: CAIE 5195

To appear in: *Computers & Industrial Engineering*

Received Date: 7 December 2017
Accepted Date: 23 April 2018

Please cite this article as: Feng, J., Chu, C., Che, A., Cyclic jobshop hoist scheduling with multi-capacity reentrant tanks and time-window constraints, *Computers & Industrial Engineering* (2018), doi: <https://doi.org/10.1016/j.cie.2018.04.046>

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Abstract. This paper studies the cyclic jobshop hoist scheduling with multi-capacity reentrant tanks and time-window constraints. Parts of different types are processed in a series of tanks with bounded processing times. Multi-capacity tanks are used to handle stages with long processing times. Tanks can be reentrant so that a part visits them more than once. A hoist is responsible for the transportation of parts between tanks. We consider the cyclic scheduling where multiple parts enter and leave the production line during a cycle. The difficulty to deal with the problem lies in how to effectively handle the constraints related to multi-capacity reentrant tanks and their relations with time windows. To this end, a mixed-integer linear programming model is developed by addressing the time-window constraints and tank capacity constraints in a novel way. Computational experiments are conducted to demonstrate the effectiveness of the

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