



Research School for Operations
Management and Logistics

Aggregate planning of assembly lines with reconfigurable cells
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The research focuses on the optimization of Reconfigurable Assembly Systems. Specifically, aggregate level planning of the multi-product assembly lines with reconfigurable cells is performed to minimize the total cost of ownership while solving configuration selection and part routing problems. A variety of constraints, such as specific layout requirements and product assembly sequences, are considered in the problem. Additionally, different material handling equipment, e.g., automated guided vehicles and conveyors, are used in the system. An IP model is developed, and different solution methods, i.e., heuristic and exact methods, are explored to solve different problem instances efficiently.