

CENTRALIZED MANUFACTURING PLANNING DECISION SUPPORT SYSTEM USING SIMULATION

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ABSTRACT

Roketsan Inc. is the leading institution that designs, develops and manufactures rockets and missiles in Turkey. The production system contains 2 different facilities with 50 workshops and approximately 1200 resources. This case study presents the simulation of such complexity, considering the privacy issues of the sector. Besides standard simulation functions, our simulation model considers BOM relationships of entities (products and semi-finished products), co-worked resources and dynamic shift system. The model analyses feasibility of production calendar, reveals bottleneck resources and is used as a decision support tool for production planning and workshop scheduling, resource allocation and make/buy decisions in the factory.