عنوان مقاله:

The two-level capacitated lot-sizing problem with backlogging and safety stocks

محل انتشار:

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خلاصه مقاله:

Integration of sequencing decisions in lot sizing and scheduling problems has received an increased attention from the research community due to its inherent applicability to real-world problems. In this paper, we develop and solve a synchronized and integrated two-level lot sizing and scheduling problem motivated by a real-world problem that arises in soft drink production. The soft drink production process has two main stages: flavor preparation (stage1) and bottling (stage2). In stage 1, the liquid flavor (concentrated syrup plus some water) is prepared in tanks of varying capacities. In stage 2, the liquid flavors are bottled at the filling lines. we considered stock capacity constraint, and shortages combination(shortages backlog and lost sales) added to the model. The aim is to determine the lot sizing and scheduling of raw materials and products such that the soft drink flavors and bottle types are assigned to the tanks and bottling lines, respectively, in order to meet a known weekly product demand. Finally we implement LINGO solver for solving this model

کلمات کلیدی:

Lot sizing, Mathematical programming, Production planning, Scheduling

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