

Supply Chain Optimization Model for Refinery Industry with Aggregation Approach

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This paper deals with supply chain optimization (SCO) model for refinery industry. Refinery industry has a room enough to maximize economical benefits though SCO because it has large-scale operation and complex supply chains. We develop an extended SCO model which involves not only supply network of crude oil but also product distribution network. Accordingly, the model has a large number of integer decision variables, which cause computational complexity for solving an MILP problem. So, we propose a technique to solve the problem. We use a rolling horizon approach with aggregation concept. This approach has a merit to better solution than normal rolling horizon approach because it considers not only the optimization horizon but also the whole scheduling horizon at each optimization. CPU time and total profit in various cases are shown as a result.