CREATING AN ANNUAL DELIVERY PROGRAM OF MULTI-PRODUCT LIQUEFIED NATURAL GAS

Résumé / Abstract
We consider a combined ship routing and inventory management problem for one of the world's largest producers of liquefied natural gas. The problem is how to manage the producer's inventory and fleet of vessels to create an annual delivery program that respects the long-term contracts at lowest possible cost, while maximizing the expected revenue from spot contracts. A basic voyage formulation (BVF) and a pattern based formulation (PBF) are presented. Two heuristics are presented for the BVF, and a branch-and-price method for the PBF. Some cuts applicable to both models will also be presented.

Note
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