ABSTRACT

PT XYZ Dumai is an oil and gas processing company which has responsibility to maintain the availability of fuel supply in several areas in Sumatra and Riau. Out of stock on material spare part often occurs at PT XYZ Dumai when the spare part is needed so that it causes the decrease of machine performance which directly impacts to the number of products produced.

Out of stock problem can be solved by using the probabilistic inventory system Model Q using the Hadley-Within method solution to determine the order lot size and reorder point which is an indicator for company to reorder to the supplier in order to reduce the out of stock and minimize the total cost of inventory as well.

The existing of total cost inventory is Rp 82.964.115. By using the Q Model, total cost of inventory at PT. XYZ can be reduced by 82,14% or Rp 68.143.008 of existing contidion of the company.

Keywords : Q Model , Hadley -Within , booking Lot Size , Reorder Point