

Offshore Remanufacturing with Variable Used Product Condition

ABSTRACT

We consider the acquisition and production decisions of a remanufacturer who acquires used products of variable condition and allocates remanufacturing activity to domestic and offshore facilities. The problem is formulated as a multicommodity network flow model with economies of scale and product obsolescence. We show that the remanufacturer's optimal strategy can be chosen from a finite set of simple policies in which each product is routed to a facility based on its condition. We then numerically investigate the impact of key parameters on optimal decisions regarding offshore remanufacturing.