A Bi-fuzzy Production-Recycling-Disposal Inventory Problem with Environment Pollution Cost via Genetic Algorithm

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Abstract

This paper develops a production, recycling-disposal inventory problem over a finite time horizon in fuzzy and bi-fuzzy environments. The production and recycling process are performed in a plant which is located very near to the market. The products of the plant are continuously transferred to the market. Here, the dynamic demand is satisfied by production and recycling. The use units are collected continuously from the customers and then either recycled or disposed. Recycling products can be used as new products which are sold again in the market. The rate of production, recycling and disposal are assumed to be function of time. The setup cost, idle cost and environment pollution recovery cost for production-recycling system in industry are also included. The optimum results are presented both in tabular form and graphically.

References

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Index Terms

- Computer Science
- Fuzzy Systems

Keywords

- Production
- Recycling-Disposal
- Idle cost
- Environment pollution cost
- Bi-fuzzy ifx