DYNAPLAS OPTIMAL INVENTORY SYSTEM DEVELOPMENT

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Title

Dynaplas Optimal Inventory System Development

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Context:

Dynaplas Ltd, Engineering Department. Located in Scarborough, Ontario, Canada

Keywords:

Economic Order Quantity models; optimization; inventory control, management science

Summary:

The Engineering Department designs and builds injection moulds and tools for both internal use and commercial distribution. Dynaplas' automotive products include pulleys, connectors, seals, fuel systems, brake parts, and insert bearings. Recently, as part of a continuous improvement effort, Dynaplas examined trends in its customer orders over the last couple of years. They found that, on some occasions, parts were shipped out late and/or in poor condition, resulting in unnecessary and unforeseen costs. Therefore, the Engineering Department launched a project to develop an optimal inventory level prediction model to ensure that every Dynaplas product is available in sufficient stock to guarantee customers receive quality parts, on time. The department was tasked with developing an optimal inventory level prediction model. My specific tasks include examining the steps required to develop a mathematical model and building a user interface to help implement the application.