

Optimal tool allocation on tool magazines using a Short Indexing Algorithm - SIA

Jatuporn Jaidumrong
Department of Industrial Engineering
Rajamangala University of Technology Sivijaya
Songkhla, THAILAND
jatuporn1974@gmail.com

Abstract

Minimization of nonmachining time is a crucial issue for effective and profitable utilization of tool magazine. Most of the tool magazine contain an automatic tool changer (ATC) for holding multiple cutting tools. Effective operation of indexing tool magazine in relation to the parts assigned for machining is critical in minimizing indexing times. Position selection is performed using a Short Indexing Algorithm which takes a list of cutting tools assigned to certain machining operations together with total number of index positions available on the ATC or tool magazines. Experiment result are compared the simulation problem.

Keywords (12 font)

Tool location optimization, Tool magazine, CNC Turning

Biography

Jatuporn Jaidumrong received his B.Eng. Degree in Industrial Engineering from the Rajamangala Institute of Technology, (Now University) Thailand, and obtained his M.Eng. in Production Engineering from King Mongkut Institute of Technological North Bangkok, Thailand. Jatuporn is now working at the Department of Industrial Engineering, Rajamangala University of Technology Sivijaya, Thailand. His current research interested are Optimization, Algorithm Design and CNC/CAD/CAM.