| | |
|---|---|
| Thesis Title | Application of Mating Condition in Assembly Sequence Planning Tasks |
| Thesis Credits | 12 |
| Candidate | Miss Paphakorn   Sunanon |
| Supervisors | Dr. Pongsak   Dulyapraphant |
| | Suthin   Channarong |
| Degree of Study | Master of Engineering |
| Department | Production Engineering |
| Academic Year | 2000 |

## Abstract

This research focus on the investigation of the use of mating conditions in an assembly sequence planning task. Based on the assumption that assembly sequence plan can be generate from the reverse order of the disassembly sequence. Only linear and monotone assembly type is considered along with the assumption that no tool and fixture are used during the assembly process.

The results unveil that mating conditions and geometric data of parts in an assembly model can be used to facility and increase the effectiveness in the assembly sequence generation process by reducing search space of answers. Information such as disassembly directions, local degrees of freedom, and blocking relationships between parts in the assembly can be directly retrieved from the assembly model. As a result, it can be seamlessly integrated with a CAD system as an analytical tool to evaluate the impact of design on assembly process. Such a tool would be valuable for a concurrent engineering practice.

Keywords   :   Assembly Sequence Planning / Mating Condition / Assembly Models / Linear Assembly Sequence / Monotone Assembly Sequence / Concurrent Engineering