

## **The application of mechatronic design approach in a reconfigurable manufacturing environment**

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**Abstract:** Manufacturing companies are faced with the challenge of unpredictable, high frequency market changes in both local and international markets. Two types of conventional manufacturing system: dedicated manufacturing system (DMS) and flexible manufacturing system (FMS) do not longer meet the requirement of modern manufacturing. So there is a need for greater, more effective responsiveness by manufacturers to change in customer requirements by changing manufacturers' manufacturing capability and capacity. To fulfill this purpose, the concept of reconfigurable manufacturing system (RMS) has been proposed. But according to the literature, there is no suitable methods available yet can be applied directly to reconfigurable manufacturing tools (RMTs) design for RMS. So in this paper, by utilising mechatronics design approach, a full scale reconfigurable machining tool has been designed and analysed.