A flexible manufacturing system is a high automated GT machine cell, consisting of a group of processing workstations (usually CNC machine tools), interconnected by an automated material handling and storage system, and controlled by a distributed computer system. The reason the FMS is called flexible is that it is capable of processing a variety of different part styles simultaneously at the various workstations, and the mix of part styles and quantities of productions can be adjusted in response to changing demand patterns. To develop the concept of flexibility in an automated manufacturing system, consider a machine cell consisting of two CNC machine tools are loaded and unloaded by industrial robots.


**Index Terms**

Computer Science  
Information Systems

**Keywords**

flexible manufacturing systems, automated