(AMT) can be very helpful for managers, especially Chinese manufacturing managers to adopt proper strategy and system to face market competition.

The paper summarises a wide scope of manufacturing systems and presents them on an evolutionary map, highlighting their key characteristics in terms of technology, strategy, and integrated system. It develops a mapping tool based on the evolutionary process of manufacturing system development in world class manufacturers in recent years. This map can help Chinese companies to position themselves against different manufacturing paradigms, from which Chinese manufacturing managers can understand their competitive potential, advantage and weakness.

The research will be conducted in Chinese manufacturing firms on different strategic levels from factory towards supply relation based inter-firm network in automobile, machinery, electronics and textile sectors. By identifying and understanding the structure and capability beyond content, process and outcome for each system, the core differences between Chinese and the typical western manufacturing system will be analysed, leading to position and improve Chinese manufacturers' core competence and capability along the supply chain under globalisation circumstance.

Key words: manufacturing system, collaborative manufacturing

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Biography: LIU Yilei (1978—), Male, Doctoral Researcher.

The Intelligent Measuring Sub-system in the Computer Integrated and Flexible Laser Processing System

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Abstract: Based on the computer integrated and flexible laser processing system, we developed an intelligent measuring sub-system. A novel model has been built to compensate the deviations of the main frame-structure, and a laser tracker system is applied to calibrate the accuracy of the system. Analyzing the characteristics of all kind surfaces of automobile outer penal moulds and dies, the surface and border to be measured and processed are classified into four types. A 2-D adaptive measuring method based on B? zier curve and a 3-D adaptive measuring method based on Spline curve are developed for different types of surface. During the data processing, a 3-D probe compensation method is described in details. The control software of the sub-measuring system is described. Some measuring experiments are carried out to testify the methods.

Key words: adaptive measuring, 3-D probe compensation, CIMS

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