

Chapter 6

Creation of a New Japan Automobile Global Manufacturing Model Using Advanced TDS, TPS, TMS, TIS, and TJS

ABSTRACT

This study mentions the New Japan Automobile Global Manufacturing Model (NJ-AGMM) for the strengthening of Japan automobile corporate management in advanced companies that surpasses traditional Toyota Production System. Specifically, to evolution of Japan automobile manufacturing foundation, NJ-AGMM consists of a structured integrated 5 hold-core system - advanced TDS, TPS, TMS, TIS, and TJS for expanding uniform quality worldwide and production at optimum locations. The validity of NJ-AGMM has been verified through the actual applications based on the author's research studies in Toyota.

INTRODUCTION

At present, leading automobile companies are promoting global production strategies to realize “same quality standards and simultaneous production startup worldwide”. Advanced companies in particular are eagerly looking for a new quality management method to supply new attractive product models ahead of their competitors to ensure their survival in the worldwide market.

A future successful global marketer must develop an advanced manufacturing model that impresses users and continuously provides excellent products of high quality in a timely manner through corporate management. To realize global manufacturing that places top priority on customers with a good QCD (Quality, Cost and Delivery) in a rapidly changing manufacturing technical environment, it is essential to create the new core principles that are capable of changing the work process quality of all divisions

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in order to reform super-short-term development production. Therefore, for the strengthening of Japan automobile corporate management, this study focuses on the New Japan Automobile Global Manufacturing Model (NJ-AGMM) for expanding “same quality worldwide and production at optimum locations”.

Specifically, to evolution of automobile manufacturing foundation, NJ-AGMM consists of a structured “Integrated 5 hold-core system - Advanced TDS, TPS, TMS, TIS & TJS (TDS is the Total Development System, TPS is the Total Production System, TMS is the Total Marketing System, TIS is Total Management System, and TJS is Total Job Quality Management System) in advanced companies that utilize the author’s research principles: the New Japan Model (NJM), new corporate management principle employing New JIT, Science TQM and New Manufacturing Theory in the world (Amasaka, 2002, 2007a,b, 2008a, 2014, 2019a; Amasaka Ed., 2007a).

The aim of NJ-AGMM is *the traditional Just in Time (JIT)* system for not only manufacturing, but also for customer relations, business and sales, merchandise planning and engineering design, product development design, product engineering, administration, and management for enhancing business process innovation. The validity of NJ-AGMM surpassing JIT has been verified through actual applications based on author’s researches in Toyota Motor Corporation (Amasaka Ed., 2012, 2019; Amasaka, 2015, 2017a, 2018, 2019a,b, 2020a,b,c).

THE DEMAND FOR ACHIEVING JAPANESE AUTOMOBILE GLOBAL MANUFACTURING

Today’s Japanese Global Manufacturing Issues

For manufacturers to be successful in the future global market, they need to develop products that give strong impressions to consumers and supply such items in a timely fashion through effective corporate management. In recent years however, the Toyota Production System representing Japanese manufacturing has been adopted as a called Just-in-Time and Lean System (Ohno, 1977; Amasaka, 1988; Taylor and Brunt, 2001), and further developed in various systems shared internationally. Therefore, it is no longer Japanese (or Toyota’s) exclusive technology. In the United States and European countries also, the importance of quality control has been increasingly recognized through studies of Japanese TQM (Total Quality Management).

However, a close look at recent Japanese corporate management activities reveals various situations where an advanced manufacturer, which is leading the industry, is having difficulty due to unexpected quality related problems. Some companies have slowed down their production engineering development, and are thus facing a crisis of their own survival as a manufacturer. Against this background, improvement of the Japanese administrative management technology is sorely needed at this time (Goto, 1999; Amasaka, 1999; Nihon Keizai Shinbun, 1999, 2000, 2006; Asahi Shinbun, 2005). To be successful in the future Japanese global marketer must develop an excellent quality management system that can impress consumers and continuously provide excellent quality products in a timely manner through corporate management.

Given the above, the author has conducted an awareness survey of general management personnel and executives (a total of 72 people) from 12 advanced companies belonging to the Toyota Group (Amasaka Ed., 2007a). Similarly, based on another awareness survey of the companies (Fuji Xerox and Daikin among others, with a total of 153 participants) participating in the “Study Group for Manufacturing Qual-

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