ESTABLISHMENT OF BODY AUTO FITTING MODEL "BAFM" USING "NJ-GPM" AT TOYOTA

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ABSTRACT
The Toyota Production System (TPS) exemplifies Japanese manufacturing. It has been further developed and spread in the form of internationally shared global production systems. The authors have proposed the New Japan Global Production Model "NJ-GPM", a system designed to achieve worldwide uniform quality and production at optimal locations – the keys to successful global production at Toyota. Based on NJ-GPM, the authors have further established the Body Auto Fitting Model "BAFM". We have realized innovative unmanning of a fitting line by integrating the technologies utilizing BAFM. The ability to automatically fit and fasten door, hood and luggage compartment panels to the car body was achieved, utilizing robotics, vision systems, bolt tightening and product quality management. This paper shows the development of the highly reliable production system combining the following three items: (1) panel fitting accuracy, (2) automatic bolt tightening, and (3) integration into flexible assembly line at Toyota.

Keywords: NJ-GPM, Body Auto Fitting Model "BAFM", Toyota