

Applying DEMATEL in FMEA for corrective utility

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Abstract

Failure Mode and Effects Analysis (FMEA) has become a common tool on risk assessment which applying in manufacturing or service industries, the priorities of improvement are based on RPN numbers. Many scholars queried the formula from traditional algorithm, and proposed the revised methods respectively. Owing to the implementation for actions decides or influences the resource allocation and effects, sometimes resolving one corrective action may simultaneously improve the different failure modes. This paper aims at identifying the corrective utility which considers the relationship between actions and the sequence of improvement. The decision making trial and evaluation laboratory (DEMATEL) is a useful methodology to visualize the structure of complicated causal relationships, this paper adopts DEMATEL which combines with FMEA to enhance the decisions of corrective actions in orders. Through this revised method to determine the critical variables for the priorities of improvement.

Keyword : Failure Mode and Effects Analysis (FMEA), Risk Priority Number (RPN),