

عنوان مقاله:

Well drilling fuzzy risk assessment using fuzzy FMEA and fuzzy TOPSIS

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خلاصه مقاله:

One of the most important issues that organizations have to deal with is the timely identification and detection of risk factors aimed at preventing incidents. Managers' and engineers' tendency towards minimizing risk factors in a service, process or design system has obliged them to analyze the reliability of such systems in order to minimize the risks and identify the probable errors. Concerning what was just mentioned, a more accurate Failure Mode and Effects Analysis (FMEA) is adopted based on fuzzy logic and fuzzy numbers. Fuzzy TOPSIS is also used to identify, rank, and prioritize error and risk factors. This paper uses FMEA as a risk identification tool. Then, Fuzzy Risk Priority Number (FRPN) is calculated and triangular fuzzy numbers are prioritized through Fuzzy TOPSIS. In order to have a better understanding toward the mentioned concepts, a case study is presented.

کلمات کلیدی:

Failure mode and effects analysis, Fuzzy risk priority number, Fuzzy technique for order of preference by similarity to ideal solution, Risk priority number

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