عنوان مقاله:

Proposing a New Dynamic Maintenance Model for Reliability Improvement By Antifragility Approach: A Case Study in Iranian Gas Transmission Company-Zone۱۰

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خلاصه مقاله:

Reliability is one of the most important performance evaluation indicators in maintenance and repair filed. The present study is a mixed design attempting to identify the antifragility components and their effect on the system reliability using the system dynamics. In the qualitative section, using by the thematic analysis method, with the participation of ۱۰ organizational and academic experts, antifragility factors were identified in the form of ۲۵۴ open codes, ۱۸ organizing codes and two global codes with the review of literature and using Maxqda ۲۰۲۰ software. In the quantitative part of the research, the relationship between the antifragility factors with the system reliability was investigated using multiple regression method. The three criteria of learning, redundancy and exploratory discussions were identified and selected as the factors that have the highest impact on system reliability. The effect of these indicators on system reliability in a dynamic environment was simulated using the Vensim software, DDS version. The results show the positive effect of all three criteria of learning, redundancy and exploratory discussions on improving the reliability of the system in the area in gas transmission Company-zone ۱۰. Also, the redundancy index had the highest effect and learning components and explorative discussions were in the next classes of impact on improving the system reliability.

کلمات کلیدی:

Maintenance, Reliability, Antifragility, dynamic system, Gas transmission, thematic analysis

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