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A Semantic-Based Approach for Preserving Operational Experience of Nuclear Installations

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The paper discusses the experience in developing tools necessary for the first phase of automation of description of explicit technological knowledge - the thematic categorization of text documents on nuclear facility life cycle. In the study the existing thematic index IAEA INIS was used as a target index due to its fullest provision at the moment by such means for Russian texts, thanks to the Russian multilingual thesaurus INIS as there is a lack of similar tools in Russian national index GRNTI. It is proposed to increase the stability of categorization procedures by using a simple ontological model to establish complex links between the presence of words. The communication model using simplified standard ISO 15926 concepts is proposed to separate descriptors and their relationship to the two types: - “intelligent concept” and “physical property”. Experience has shown that to build such a model, it is necessary that the indexing experts marked out manually all descriptor according to their belonging to each category. Based on the experience in implementation of this approach the paper argues that for its implementation, it is necessary to train a new type of specialists, knowledge workers, with new competencies including the concepts described above.

Country or International Organization

Russian Federation

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