## The meaning of contradictions in technical creativity

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The article substances the urgency of analyzing the contradictions in technical creativity when developing and improving technical systems. The paper shows that if some characteristics of the technical system are improved, the deterioration of its other indicators is noted. The law of development, improvement of any technical system, is expressed by such unity of opposites. It is emphasized that the process of resolving contradictions in both qualitative and quantitative directions can be carried out. It is noted that quantitative changes in technical systems are no less significant than quality ones. The process of quantitative improvement of the technical system has a certain limit. Transition to a new principle of action in a technical system is necessary. The principle of operation is the most important indicator in the technique. Its value in the scientific and technical creativity is carried out. The importance of indicators for improving the technical systems available in the collections of patens is highlighted. Their connection with various forms of conflict resolution is indicated. Findings of the research show that the conflict resolution methodology in domestic practice is significantly different from the methodology in foreign practice. This is a certain novelty of this work. Recommendations for further investigation of the resolution of contradictions in technical systems are given. Recommendations for further research of the conflict resolution in technical systems are given.

**Keywords:** technical contradiction, technical creativity, technical system, qualitative and quantitative changes, principle of operation, collection of patents, conflict resolution methodology

## REFERENCES

- Potaptsev I.S., Pavlikhin G.P., Bushuev N.N., Bushueva V.V. Ispolzovanie zarubezhnogo opyta resheniya tekhnicheskikh zadach v inzhenernoy podgotovke studentov [The use of foreign experience in solving technical problems in the engineering preparation of students]. Moscow, Etnosotsium Publ., 2015, pp. 19–25.
- [2] Altshuller G.S. *Nayti ideyu: vvedenie v TRIZ teoriyu resheniya izobretatel'skikh zadach* [Find an idea: introduction to TRIZ theory of inventive problem solving]. Moscow, Albina Pablisher Publ., 2014, 319 p.
- [3] Bushueva V.V. Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroenie Proceedings of Higher Educational Institutions. Machine Building, 2012, no. 6, pp. 71–76.
- [4] Gareev R.T., ed. Inzhenernoe tvorchestvo (TRIZ): teoriya i praktika resheniya tvorcheskikh inzhenernykh zadach [Engineering works (TRIZ): theory and practice of creative solutions of engineering problems]. Moscow, KnoRus Publ., 2010, 164 p.
- [5] Aznar G. *La creativité dans l'entreprise* [Creativity in business]. Paris, Editions d'Organisation, 1971, 185 p.
- [6] Mathieu-Batsch C. *Invitation à la creative* [Invitation to the creative]. Paris, Editions d'Organisation, 1983, 132 p.
- [7] Altshuller G.S. *Standartnye resheniya izobretatel'skikh zadach (76 standartov)* [Standard of inventive problem solving (76 standards)]. Available at: www.altshuller.ru/triz/standards.asp (accessed April 20, 2018).

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