Kompetentnost' / Competency (Russia) 1/2026
ISSN 1993-8780. DOI: 10.24412/1993-8780-2026-1-14-16

Role of Multi-Level Standardization in Ensuring Industrial Equipment Reliability

N.V. Zavol'skova[1], Academy for Standardization, Metrology and Certification (Training), natasha_zav@mail.ru

[1] 2nd Year Graduate Student, Moscow, Russia

Citation: Zavol'skova N.V. Role of Multi-Level Standardization in Ensuring Industrial Equipment Reliability, *Kompetentnost' / Competency (Russia)*, 2026, no. 1, pp. 14–16. DOI: 10.24412/1993-8780-2026-1-14-16

key words

standardization, GOST, technical regulations, regulatory ecosystem, quality management, compliance with requirements

Modern industry places increased demands on product quality and the efficiency of production processes. In this context, ensuring the reliable and uninterrupted operation of industrial equipment becomes a top priority, as it determines the competitiveness of enterprises in the global market. The quality of equipment is also a crucial factor that affects the characteristics of the final product. Factors such as the final product's compliance with established standards, its appearance, functionality, and durability depend on the accuracy, stability, and reliability of the equipment. The multi-functional nature of standards limits their adaptability to unique production conditions, requiring further development of requirements at the industry, enterprise, and design specification levels. In the article, various levels of regulatory documentation for ensuring the quality of process equipment are examined. Contradictions are analyzed, and current opportunities for interaction are presented.

References

1. GOST R ISO 9001–2015 Quality management systems. Requirements (Reprint).
2. GOST R ISO 10005–2019 Quality management. Guidelines for quality plans.
3. GOST R 15.301–2016 System for the development and production of products (SDPP). Industrial and technical products. Procedure for the development and production of products.
4. Borisov G.A., Kolodyazhnaya I.N., Slepova A.Sh., *Izmerenie. Monitoring. Upravlenie. Kontrol'*, 2018, no. 2(24).
5. Kabilov B.U., *Universum: tekhnicheskie nauki*, 2024, no. 5(122).
6. GOST 24643–81 Basic norms for interchangeability. Tolerances of shape and surface arrangement. Numerical values.
7. Kozlov K.V., Feshchenko V.S., *Nauka i biznes: puti razvitiya*, 2024, no. 6(156), pp. 141–150.
8. Frolova E.A., Tushavin V.A., Tur A.S. Proactive quality management of the components procurement process, XXV Int. sc. conf.: Wave electronics and infocommunication systems, St. Petersburg, *GUAP*, 2022, part 1, pp. 201–204.
9. Kozlova D.Yu., Denisova Ya.V., Sopin V.F., *Kontrol'. Diagnostika*, 2021, vol. 24, no. 7(277), pp. 42–49.