

Impact of Digitalization on Technological Processes Efficiency in Modern Production

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Citation: Golinitiski P.V., Cherkasova E.I., Vergazova Yu.G., Antonova U.Yu. Impact of Digitalization on Technological Processes Efficiency in Modern Production, *Kompetentnost' / Competency (Russia)*, 2021, no. 8, pp. 48–54. DOI: 10.24412/1993-8780-2021-8-48-54

key words

HACCP principles, critical control points, worksheet, digital double, digitalization

We have studied the impact of digitalization on the efficiency of technological processes of modern production. The research was carried out at a specific enterprise that produces meat products. It turned out that despite the fact that many enterprises currently use modern technological lines with a high degree of automation, they still distrust the digital counterparts of production processes. Creating a digital double of a production line, although it requires specific applied knowledge, is not an impossible task. The next stage of digitalization is the simulation of processes that allows you to identify the time and material resources used, as well as fixed costs.

We conducted basic, semi-automated and automated modeling options. Research has shown that semi-automated systems can come close to automated ones in terms of their capabilities, thereby ensuring an increase in labor productivity and laying the foundation for further development in the form of accumulated data and highly efficient processes.

References

1. Dunchenko N.I. Scientific and methodological approaches to food quality management, *Equipment and technology of food production*, 2012, vol. 3, no. 26, pp. 29–33.
2. Leonov O.A. Methodology for calculating the effectiveness of the quality management system, *Kompetentnost' / Competency (Russia)*, 2020, no. 3, pp. 26–31.
3. Cherkasova E.I. The effect of thermal disinfection on the complex of microorganisms and the quality of multicomponent mixtures of plant origin. Dis ... Candidate of Agricultural Sciences, Krasnoyarsk, 2006.
4. Cherkasova E.I., Golinitiski P.V. Modern methods of labeling confectionery products, *Kompetentnost' / Competency (Russia)*, 2020, no. 2, pp. 34–38.
5. Voloshina E.S. Quality management of sausage products using a process approach, *Int. scientific and practical conf. dedicated to the memory of Vasilii Matveevich Gorbатов*, 2016, no. 1, pp. 76–77.
6. Leonov O.A. Elements of the HACCP system in the production of boiled and smoked sausages, *Food industry: science and technology*, 2018, vol. 11, no. 2(40), pp. 44–52.
7. Leonov O.A. Assessment of the quality of measuring processes in the production of semi-finished poultry meat, *International technical and economic journal*, 2019, no. 2, pp. 33–40.
8. Leonov O.A., Shkaruba N.Zh., Cherkasova E.I., Odintsova A.A. Quality assessment of temperature measurements in incoming inspection of raw meat, *IOP Conference Series: Metrological Support of Innovative Technologies. Krasnoyarsk Science and Technology City Hall of the Russian Union of Scientific and Engineering Associations*, 2020, p. 32030.
9. Leonov O.A. Quality and safety monitoring production of boiled-smoked sausages / O.A. Leonov, N.Zh. Shkaruba, *IOP Conference Series: Earth and Environmental Science*, 2021, p. 22089.
10. Leonov O.A. Monitoring of critical control points in the production of semi-finished poultry meat, *In the coll.: Reports of the TAA. Materials of Int. sc. conf.*, 2018, pp. 91–93.

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