

# Algorithm for Decision-Making During the Implementation of a Lean Production System

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## key words

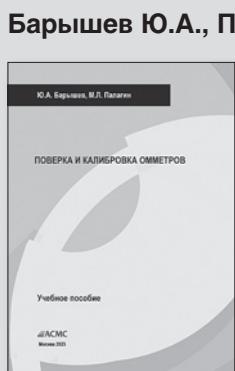
chemical engineering system,  
Lean production, decision-making  
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The authors discuss the expediency and relevance of implementing Lean production principles in chemical engineering systems (CES) and propose a decision-making structure for implementing a Lean production system for organizing effective management of CES. The article presents the examples of implementation stages and practical implementation of Lean production principles. A standard management scheme is provided resulting from improving business processes in CES. This internal standard is the last stage of Lean production system management, which allows you to document processes, track them and improve the efficiency of CES. If the standard has already been developed, changes should be made to it and training should be conducted for all interested employees. If there is no standard, then the procedure is described in the article.

## References

1. Amos N. B., Adebola S. A., Asikhia U. O., Abiodun J., *Journal of Management and Social Sciences*, 2018, vol. 1, is. 1, pp. 1–28.
2. Arsenova E.V., Pankova O.N., *Efektivnoe antikrizisnoe upravlenie*, 2017, no. 4(103), pp. 42–51.
3. Maskell B. H., Baggaley B., Grasso L. Practical Lean Accounting. A Proven System for Measuring and Managing the Lean Enterprise, New York, *Productivity Press*, 2017.
4. Meshalkin V.P., Malkov A.V., Malyavin A.S., *Khimicheskaya promyshlennost' segodnya*, 2024, no. 2, pp. 70–75.
5. Repin V.V., Eliferov V.G. The process approach to management. Modeling business processes, 6th ed., Moscow, *Standards and Quality*, 2008.
6. Conti T. Quality: a missed opportunity? Trans. from Ital. by V.N. Zagrebel'nyy, Moscow, *Standarty i kachestvo*, 2007, 216 P.
7. Feygenson N.B., Matskevich I.S., Lipetskaya M.S. Lean production and quality management systems: a series of reports (green books) within the framework of the project Industrial and technological foresight of the Russian Federation, St. Petersburg, *Tsentral'nyy razrabotok Severo-Zapad*, 2012, is. 1, 71 P.
8. Vadan O. Kaizen philosophy and its basic principles; <http://rosinvest.com/page/filosofija-kajdzen-i-ee-osnovnye-principy>.
9. Tselin V.E., Blinova E.A. Lean production systems: study guide, Samara, Samara University, 2020, 72 P.
10. Meshalkin V.P., Guseva T.V., Malyavin A.S., etc, *Teoreticheskie osnovy khimicheskoy tekhnologii*, 2024, vol. 58, no. 1, pp. 8–16.

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