

Monitoring System for Digital Production Organization in Petrochemical Industry

M.E. Nadezhdina¹, FSBEI HE Kazan State Power Engineering University, Frida333@mail.ru

A.I. Shinkevich², FSBEI HE Kazan National Research Technological University (FSBEI HE KNRTU), ashinkevich@mail.ru

M.V. Shinkevich³, FSBEI HE KNRTU, leotao@mail.ru

¹ Senior Lecturer, Kazan, Republic of Tatarstan, Russia

² Head of Department, Kazan, Republic of Tatarstan, Russia

³ Professor of Department, Kazan, Republic of Tatarstan, Russia

Citation: Nadezhdina M.E., Shinkevich A.I., Shinkevich M.V. Monitoring System for Digital Production Organization in Petrochemical Industry, *Kompetentnost' / Competency (Russia)*, 2021, no. 7, pp. 36–39. DOI: 10.24412/1993-8780-2021-7-36-39

key words

strategic planning, digital development, monitoring system, production organization

We have analyzed the strategic planning of digitalization of petrochemical enterprises' production activities in Tatarstan using the example of JSC KVART. We began our work by studying the results of end-to-end monitoring of the production processes of this enterprise. As you know, based on the available data using an integral indicator, monitoring allows you to assess the effectiveness of the use of digitalization tools, revise the management technologies and engineering of the activities carried out, increase the level of production organization, increase labor productivity and reduce production losses of the enterprise. Based on the results of the analysis, we have found out that JSC KVART is at an intermediate stage of digitalization of production processes. Development and modernization of equipment is underway, strategic priorities for the development of the enterprise are outlined. The recommendations we have developed assume a partial transition to an information ecosystem using cloud technologies and the further development of digital technologies. The study was carried out with the financial support of the Russian Foundation for Basic Research within the framework of scientific project N 20-010-00655.

References

1. PwC. The impact of global megatrends on the petrochemical industry in Russia until 2030: the view of the leaders of petrochemical companies, 2017, 35 P.; <https://www.pwc.ru/ru/publications/impact-of-global-megatrends-in-the-petrochemical-industry.html>.
2. Nadezhdina M.E. Metody informatizatsii khimicheskikh proizvodstvennykh protsessov [Methods of informatization of chemical production processes], *9 Int. sc.-pract. conf. Promising development of science, technology and technologies*, 2019, pp. 347–352.
3. Malysheva T.V. Razvitie regional'nogo rynka nefteproduktov Respubliki Tatarstan s ispol'zovaniem informatsionnykh logisticheskikh tekhnologiy [Development of the regional market for oil products in the Republic of Tatarstan using information logistics technologies], *Mir nefteproduktov. Vestnik neftnykh kompaniy*, 2017, no. 12, pp. 4–9.
4. Nadezhdina M.E. Sovershenstvovanie modeli snabzheniya proizvodstva neformovnykh RTI na osnove primeneniya printsipov logistiki [Improving the supply model for the production of non-molded rubber goods based on the application of the principles of logistics], *Vestnik KNITU*, 2017, no. 24, pp. 111–114.
5. Il'yasov R.S., Vol'fson S.I., Nelyubin A.A., Ayupov M.I., Kazakov Yu.M. Osnovy proektirovaniya i oborudovanie predpriyatiy po pererabotke polimerov. Chast' 2. Proizvodstvo shin [Basics of design and equipment for polymer processing enterprises. Part 2. Tire production], Kazan', 2007, 236 P.
6. Shinkevich A.I. Puti povysheniya effektivnosti organizatsii proizvodstvennykh protsessov na neftekhimicheskikh predpriyatiyakh za schet primeneniya sistem avtomatizatsii [Ways to improve the efficiency of organizing production processes at petrochemical enterprises through the use of automation systems], *Russkiy inzhener*, 2019, no. 4, pp. 48–51.
7. Plotnikova L., Bainov A., Torkunova Y., Nadezhdina M. Digitalizing the process of tracking technical condition of the main equipment of energy providing enterprises, SHS Web of Conferences 93, 010209 (2021), *NID*, 2020, pp. 1–7.



87872

ПО ОБЪЕДИНЕННОМУ КАТАЛОГУ «ПРЕССА РОССИИ»