
Plasma technology in the “Rosatom” system: Interindustry effects of the study and application in the economy

© I.A. Bazhenov, V.G. Rodionova

Bauman Moscow State Technical University, Moscow, 105005, Russia

The article considers the potential of the positive interindustry effects in the study of innovative technique of plasma melting developed in the system of “Rosatom” in the scientific and educational spheres, as well as its application in industrial and environmental fields. A model of the complex for plasma melting (CPM) is presented in the article as a scheme with the description of technological, functional and economic characteristics, allowing the use of CPM for more effective management of radioactive waste in the nuclear industry, as well as in most of manufacturing industries. For practical distribution and the actual use of the CPM in industry and in the field of environmental protection the table of the indicative cost calculation of commercialization of CPM as an innovative product in terms of money is presented.

Keywords: *technological innovation, nuclear power engineering, plasma furnace, economic characteristics, benefits and advantages of application.*

REFERENCES

- [1] Shingarkin M.A. *Strana Rosatom – Country Rosatom*, 2015, no. 46 (222), pp.1, 5. Available at: <http://www.strana-rosatom.ru/%E2%84%96-46222/> (accessed December 9, 2015).
 - [2] Naumov V.A., Gusak S.A. *Vestnic MGTU – Herald of MSTU*, 2010, vol. 13, no. 4/2, pp. 887–894.
 - [3] *Strana Rosatom – Country Rosatom*, 2015, no. 46 (222), p. 2. Available at: <http://www.strana-rosatom.ru/%E2%84%96-46222/> (accessed December 17, 2015).
 - [4] *SMI ob atomnoy otrasli* [Media about the Nuclear Industry]. Available at: <http://www.rosatom.ru/journalist/atomicsphere/59e5c10041c0ae01900ade7d52db92e7> (accessed November 11, 2015).
 - [5] Petrov V. Dva reaktora “Akademika Lomonosova” zhdu v Peveke [Two Reactors of "Academician Lomonosov" Are Waiting in Pevek]. *Gazeta.ru*, 26 August, 2015. Available at: http://www.gazeta.ru/science/2015/08/26_a_7718603.shtml (accessed November 11, 2015).
 - [6] Devisilov V.A., Aleksandrov A. A., Sushchev S.P., Kopytov D.O., Kalaydov A.N. *Bezopasnost v tekhnosfere – Safety in Technosphere*, 2014, no. 3, pp. 55–59.
 - [7] Marakhtanov M.K., Dukhopelnikov D.V., Ivakhnenko S.G. *Inzhenernoe obrazovanie – Engineering education*, 2013, no. 11, pp. 193–204.
 - [8] Dukhopelnikov D.V. *Magnetronnyye raspylitelnyye sistemy* [Magnetron Sputtering Systems]. Moscow, BMSTU Publ., 2014, 55 p.
 - [9] *Strana Rosatom – Country Rosatom*, 2015, no. 39 (215), p. 2. Available at: <http://www.strana-rosatom.ru> (accessed October 29, 2015).
 - [10] Rodionova V.G. *Upravlenie v gosudarstvennom sektore ekonomiki* [Management in the Public Sector of the Economy]. Moscow, BMSTU Publ., 2001, p. 53.
 - [11] Rodionova V.G. *Mikro- and makroekonomika* [Micro- and Macroeconomics]. Moscow, BMSTU Publ., 2015, p. 448.
-

[12] Drogovoz P.A. *Upravlenie stoimostyu innovatsionnogo promyshlennogo predpriyatiya* [Cost Management of Innovative Industrial Enterprise]. Moscow, BMSTU Publ., 2007, p. 239.

Bazhenov I.A., independent researcher, seventh year student, Department of Nuclear Reactors and Plants, Bauman Moscow State Technical University.
e-mail: brovi.brezhneva@gmail.com

Rodionova V.G., Cand. Sci (Economics), Associate Professor, Department of Economic Science, Bauman Moscow State Technical University. Laureate of the Russian Federation Government Prize (2002). Author of about 38 educational and research works. The author of electronic publications and printing of teaching aids "Macroeconomics" (2013) and "Microeconomics" (2014). Author of a special course «State Property Management ". Co-author of the textbook "Economics" (having been issued from 1990 to the present), as well as the textbook "Microeconomics" (having been issued from 2004 to the present by Finance Academy under the Government of the Russian Federation), author of the textbook "Micro-and Macroeconomics" issued by BMSTU Publ. in 2015. Field of research interests: innovation and information technologies, aerospace activity as a factor of the dynamic efficiency of the economy. e-mail: avroro2@mail.ru