Mikalai Khomich

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EMPLOYMENT

Director of the scientific-engineering company ***Polimag*** (Belarus) (1991 – present).

Head of the scientific-research laboratory *Technology and Automation of Machine Building Production* of the Belarussian Polytechnic Institute (1987 – 1991).

Junior and then **Senior Research Officer** in *Physic-Technical Institute* of the Belarussian Academy of Science (1970 – 1986).

All scientific activity during 40 years has been dedicated to research and development of the technologies and equipment for the Magnetic-Abrasive Machining.

As a research manager and responsible executive has realised more than 30 scientific research projects of the creation, research and industrial application of technologies and equipment for Magnetic-Abrasive Machining for samples of different materials (metals, alloys, ceramics, etc.). Main works has been realised on the orders of the enterprises of defence industry of the former Soviet Union, Russia and Belarus (rocket-space industry, nuclear machine building, aircraft industry, shipbuilding, electronics, etc.).

EDUCATION

Ph.D, Physic-Technical Institute, Minsk, Belarus (1981). Dissertation on Magnet-Abrasive Machining.

Belarussian Polytechnic Institute. Diploma of Mechanical Engineer. Specialisation: Engineering Technology (1967 – 1972).

PUBLICATIONS

More than 100 scientific publications, 50 Soviet patents and more than 20 foreign patents (including those of the United States, Japan, Germany, Italy and other countries).

Examples:

Magnetic-abrasive polishing: opportunities and prospects. M. Khomich, V. Bitkasha, K. Yurasava. // SPIE. Digital Library. Published online 28 June 2019.

Mechanosynthesis of composites in chemical non-reacting and exothermically reacting systems for magnetic-abrasive media. S. Kovaliova, V. Šepelák, T. Grigoreva, V. Zhornik, T. Kiseleva, M. Khomich, E. Devyatkina, S. Vosmerikov, P. Vityaz, N. Lyakhov. // Journal of Material Science. Published online 25 May 2018.

Pilot process of zirconium component surface finishing and modification providing component corrosion and wear resistances increase during operation as a part of light water reactor FA. S. Ivanova, E. Glagovsky, I. Belugin, M. Khomich, O. Korogoda. // Reports on Water Reactor Fuel Perfomance Meeting, September 10-14, 2017, Jeju, Korea (in the press).

Modification of the external and internal surfaces of long tubes of small diameters. M. Khomich. // Reports on 5th Korea-Belarus S&T Forum, 14 december 2016, Seoul, Korea, pp. 42-45.

Pilot process development to change surface properties providing the increased stability of LWR zirconium components in normal operation consitions and in emergency situations. S. Ivanova, E. Glagovsky, I. Belugin, M. Khomich, O. Korogoda, I. Khazov. // Reports on International Conference Top Fuel, Zurich, 21.09.2015. pp 414-423.

Fundamental problems of the electrodynamics of heterogeneous media with boundary conditions corresponding to the total-current continuity. N. Grinchik, O. Korogoda, M. Khomich, S. Ivanova, V. Terechov, Y. Grinchik. Edited by Ahmed A. Kishk // Electromagnetic Waves Propagation in Complex Matter. – InTech, 2011. – Chapter 2. – pp 25-54.

Electrodynamic processes in a surface layer in magnetoabrasive polishing. N. Grinchik, O. Korogoda, M. Khomich // Journal of Engineering Physics and Thermophysics. – 2010. – Vol. 83, No. 3. – pp 638-649.

Khomich M. Magnetic-abrasive treatment of the manufactured articles. Minsk, BNTU, 2006. 218p. (RU)

Khomich M., Alexeev Y., Demmer A., Pahler D., Dambon O., Schneider U. Magnetic-abrasive machining of silicon wafers - a hovel approach // Industrial Diamond Review. 2004, No 3, pp 45- 48.

Khomich M. Magnetic–abrasive machining: design and equipment. Magnetic fluids and powders – new technological materials. Scientific problems and applications. Minsk, BPI, 1991, 44 p. (RU)

PERSONAL

Languages: Russian, Belarussian, Polish.

Born: Luchitzy, Belarus, March 17, 1947.