



ZHURILO

Dmytro.

candidate of technical sciences, associate Professor of the Department of Ukrainian studies, cultural studies and history of science of the National technical university «Kharkiv Polytechnic Institute»

zhurilo.dm@gmail.com,

ORCID: [http:// orcid.org /0000-0002-0015-9412](http://orcid.org/0000-0002-0015-9412) (Kharkiv)

SCIENTIFIC BIOGRAPHY PROFESSOR S. M. ANDONYEV(1910-84)

Summary

The article provides biographical data and describes outstanding professional achievements in the field of metallurgy of the winner of the Stalin (State) Prize Sergey Mikhailovich Andonyev.

The origin of Andonyev is shown, data on his education and place of work are given, and the direction of his main works in the period before the Second World War is made public.

The reasons that prompted Sergei Mikhailovich Andonyev to invent are given. Extremely difficult working conditions during evacuation in Kazakhstan during World War II are described in an attempt to provide domestic metallurgy with extremely important ferrochrome.

The article explains the impact of the scientific and technological revolution on the requirements for designing metallurgical enterprises that have been established for centuries. It is determined that thanks to the contribution of such outstanding engineers as S. M. Andonyev to science and technology, in the first half of the twentieth century it was possible to radically change these requirements, move away from archaic traditions, and accelerate the development of technological progress.

Based on his own research, the scientist and inventor managed to obtain scientific foundations and practical skills in building original cooling systems for metallurgical and heating furnaces, continuous steel casting installations. Its developments were several decades ahead of similar global developments, and the developed countries of the world were forced to purchase licenses for the production of similar cooling systems for metallurgical and heating furnaces.

With the Diploma of Doctor of science, the scientist received the position of director of the established research institute. The main works of this institute were aimed at improving and creating the main and auxiliary processes of metallurgy with minimal harm to the environment, in the integrated use of thermal parameters of metallurgy, a significant increase in metal production due to more optimal use of existing resources and changes in outdated technologies. The works of the outstanding scientist received worldwide recognition, and their author was awarded Orders and medals for their introduction into production.

Thus, Sergey Mikhailovich Andonyev entered the history of Science and technology as an outstanding scientist, author of fundamental developments and classic books on the design of auxiliary equipment in metallurgy, author of a new direction on the secondary use of thermal resources in ferrous and non-ferrous metallurgy. The works of the outstanding inventor and teacher have not lost their significance today.

Keywords: *Andonyev, metallurgy, evaporation cooling, steam, furnaces, ferrous metallurgy, water.*