

GUANG XIAO IS 75



Guang Xiao was born on July 2, 1935 in the city of Tiayun (China) in the family of engineer-architect. In 1952–1953 he took the preliminary course, and in 1953–1959 he studied at N.E. Bauman MSTU, from which he graduated with honours. Having started to work at Beijing RIAT, he was soon offered a post-graduate course (1959–1963).

Under the guidance of G.A. Nikolaev, Guang Xiao prepared Candidate's thesis at N.E. Bauman MSTU on the subject of «Argon-arc welding of aluminium decking of prefabricated transportable bridges» (1963).

Coming back to China, Guang Xiao continued working at Beijing RIAT. Here he led a group of welding engineers with great energy and enthusiasm, solving a number of urgent practical issues arising in fabrication of aircraft structures, and wrote production instructions and norms.

At the end of 1960s–beginning of 1970s Guang Xiao was the leading specialist and he is involved in development of research and introduction of new welding processes, technologies and equipment for manufacturing structures of local aircraft, aircraft jet engine cases and components, in particular such as pulsed consumable and nonconsumable electrode argon-arc welding, flash-butt welding, electron beam welding, plasma and diffusion welding, brazing, etc. For his contribution to development of welding equipment in aircraft construction Guang Xiao was awarded a State Prize and Award at the Chinese Congress of Science in 1978.

Later Guang Xiao performed fundamental studies on kinetics of elasto-plastic displacements of metal occurring directly during welding using moire method. He managed to obtain a quantitative distribution of actual elastic-plastic welding strains in welded joint

section, depending on technological parameters of welding. This fundamental work allowed Guang Xiao substantiating the possibility of development of «strainfree welding» process. This method was recognized in the world welding community as «deformationfree welding for joining thin materials».

Starting from 1984, Guang Xiao combines his job with giving a course on welding mechanics at the Beijing University of Aviation and Aeronautics, organizes China's first International Conference on Welding in the city of Han-Zhou devoted to application of fracture mechanics for studying welding problems. State Key Laboratory of Beam Treatment of Materials is organized by his initiative and with his direct participation.

In 1987 by the invitation of the Royal Society, London, Guang Xiao fulfilled a one year research program of co-operation with The Welding Institute, where he successfully improved the technique of deformationfree welding.

Guang Xiao is a fervent supporter of establishment and strengthening of creative connections and business contact between scientists and specialists of various countries, he is developing co-operation between Beijing RIAT and foreign organizations and universities. He initiated wider avenues of co-operation and specialist exchange between PWI and Chinese organizations, including Beijing RIAT. He is a member of the international editorial board of «Avtomaticeskaya Svarka» journal.

By the initiative of Guang Xiao the Chinese Center of Friction Stir Welding was organized at Beijing RIAT in 2002. And this advanced welding process was quickly accepted in various industries of the country, and due to that it became the subject of research performed by many specialists.

In 1994 Guang Xiao was elected a member of the Chinese Academy of Engineering (CAE). During 2000–2002 he was the Head of Department of «Carrier Engineering and Means» at CAE Presidium, and in 2000 he became Presidium Member.

Guang Xiao has paid and is now paying a lot of attention to training young scientists. Tens of theses of Candidate and Doctor of Science were defended under his guidance.

Guang Xiao was awarded numerous scientific awards and honorary diploma, including the title of «Advanced worker in science and technology of China», Gold Medal of Aviation of China, awards granted by IIW and Chinese Society of Welders for his achievements in science and technology, Brooker (TWI medal), HLHL prize and award for contribution to science and technology, etc.