

Obituary

Prof. Dr. Werner Schatt



Professor Dr.-ing. habil Werner Schatt, one of the leading powder metallurgists of the 20th century and a pioneer of sintering science, passed away in Dresden on June 24th, 2009.

Werner Schatt was born on January 26, 1923, in Friedrichroda, Thuringia. He easily passed primary and secondary school, but after graduating from high school, in 1941, he, as many others at this time, was immediately drafted to the German Army or “Wehrmacht” to fight in the Second World War. He was trained as an officer, in part at the Military Academy in Wiener Neustadt, near Vienna, and served at the Eastern Front for two years until being captured by the Soviet Army. He spent six years as a POW in Siberia, where he learnt to speak Russian perfectly, but he also caught “morbus Bechterev”, a disease of the spine which troubled him all his further life, preventing him e.g. to fully turn his head during driving. After four years in captivity, he was offered immediate release on the condition that he joins the nucleus of the East German Army, to be newly formed at that time. His refusal resulted in two more years in Russian camps, but this did not change his mind. After returning to Germany, at first he started to work in a foundry, as “Gussputzer”, where he had to deburr the cast components by hand, with hammer and chisel. When he finally could go to university, studying mechanical engineering at Technische Hochschule Dresden, he was one of the oldest students in his class but immediately was recognized by his mates as the most able student. After finishing his engineering studies, he earned his PhD under the supervision of Professor Friedrich Eisenkolb, the renowned powder metallurgist; the topic of the thesis was Al_2O_3 -Cr cermets. Subsequently, Werner Schatt joined the Materials and Product Testing Establishment in Magdeburg and soon afterwards also taught materials at Magdeburg University, stepping in after the death of the chaired professor there. In Magdeburg, he earned his habilitation (venia docendi), on metallographic techniques for determining the lattice orientation in metals. In 1966, when Prof. Eisenkolb retired, Werner Schatt became his successor as professor of materials science at TU Dresden, and, continuing the tradition established by Eisenkolb, he focused on powder metallurgy. He intensely worked on the mechanisms of sintering, proving the unique process of self-activation by spontaneous formation of dislocation-enriched regions at the sintering contacts. Werner Schatt also stressed that the sintering process could not be regarded only in the isothermal section but that extremely crucial processes occur already during heating, such as e.g. particle rearrangement by sliding of entire particles on highly disordered contact zones. He thus showed that the mechanisms of solid state and liquid phase sintering, respectively, are much more similar than previously assumed.

Werner Schatt was widely recognized as a high-profile scientist; his convincing and engaged lectures are still well remembered among all those who had the privilege to attend. His performance is also mirrored by numerous awards, although Werner Schatt was always very reluctant to accept public honours. From the GDR he received the “Karl-Marx order”, an unusual thing for a scientist, and the DGM, the German Materials Society, awarded him its highest honour, the Heyn Medal. In 1986, he was honoured by the prestigious “Skaupy lecture” of the “Gemeinschaftsausschuss Pulvermetallurgie”, the PM association of the German-speaking countries, and in 1997 he received the “Plansee Medal” in the course of the 14th Plansee Seminar.

Werner Schatt was also famous as the organizer and mastermind of the PM congresses held every four years in Dresden, within the PM conference series in the Eastern countries (East Germany, Poland, Czechoslovakia and Bulgaria). In particular the Dresden congresses were attended also by numerous delegates from Western countries, because of their high standard in particular regarding the fundamentals of powder metallurgy.

Werner Schatt was not only a respected scientist but also an excellent academic teacher who had the ability to transmit his own enthusiasm for materials science, and in particular powder metallurgy, to his students, the Dresden School of Powder metallurgy being widely renowned. He edited and co-authored several textbooks on materials science, structural materials and, of course, powder metallurgy, which have remained standard even today, having been consistently revised and updated by his successors at TU Dresden, and the book “Powder Metallurgy” has also been translated into English. Werner Schatt was a very precise writer who handled the German language perfectly and also urged his coworkers to write both scientifically and grammatically sound.

Despite the political situation in those days, before 1989, and the existence of the Iron Curtain, Werner Schatt managed to establish and maintain close contacts to powder metallurgists not only in Eastern, but also – with considerable personal risk - in Western countries, e.g. to Prof. Günter Petzow at the Max Planck Institute for Metals Research in Stuttgart and to TU Wien, where Profs. Kieffer, Jangg, Etmayer and Wruss were his partners and hosts. Regular exchange of senior and young scientists could be arranged, and a scientific stay in Dresden was always a very interesting time, since Prof. Schatt regularly took time to discuss science and politics with the young postdocs from abroad who also learnt to enjoy his sense of realism and humour and his extensive knowledge of history and arts.

One very typical feature was Werner Schatt’s very courageous “no-nonsense” way in dealing with the SED party bureaucracy, which held immense power in East Germany. Thus he was able to strictly limit the influence of politics at his institute or, as it was called in those days, the “Bereich Werkstoffwissenschaft”. All his coworkers knew that the boss demanded hard work and first-class results and would not tolerate any laxness, but they also could rely on his engaged support in case of conflicts e.g. with the ruling party or even the dreaded “Stasi” (state security ministry), which were not uncommon in those days. Werner Schatt was loyal to his country, but he would not accept anything he regarded as incorrect, how powerful ever the responsible authority was. He also tried to overcome the adverse effects of the “iron curtain” on the PM community and, being respected also by the Government authorities, was quite successful in that respect. He was convinced that, in the long run, the splitting of Germany would disappear, and he lived to see German unification coming shortly after his retirement and also to see the Dresden academic community grow to become one of the strongest focal points of materials science in Europe, a feat he had made major contributions to, and also to remain a premier focus of powder metallurgy.