

PERSONALIA

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On the Memory of Hans Berns (I/01/1935–XII/02/2013)

2 December 2013 saw the passing of an outstanding metal scientist, Prof. Hans Berns of Ruhr University, Bochum, Germany, who was also Professor Emeritus at the G. V. Kurdyumov Institute for Metal Physics, Ukraine.

Prof. Berns was known in metal science as the developer of highly durable, corrosion resistant steels, which have been widely applied in industry, as well as the founder of a highly respected school of metal science, specialising in wear-resistant materials.

Hans Berns was born on 15 January 1935 in Solingen—a town whose name may have predetermined his future career. Prof. Berns developed as a specialist through three distinct periods of his life: as a student at RWTH Aachen (1959), as an engineer at Bohler Edelstahl AG Düsseldorf during which time he also acquired a PhD and a Doctor Habilitation degree (1959–1979), and as head of the Department of Material Technology at Ruhr University, Bochum (1979–2000), where he later became Professor Emeritus.

It was at Ruhr University that Prof. Berns fully revealed his talent for research and teaching. His wide range of scientific interests included, in particular, high-nitrogen steel as a new class of materials for use in construction and tool manufacture. His work in this area culminated in the development of a new brand of martensite steels, Cronidur, successfully used in aviation and space. The Adolf Martens medal awarded to Prof. Berns in 1999 was a fitting tribute to his achievements as the father of Cronidur.

He also received innovation awards from: Verein Deutscher Eisenhüttenleute (VDEh), Düsseldorf, 1991; Kugelfischer-Stiftung,



Schweinfurt, 1994; Benningsen-Foerder Forschungspreis des Landes NRW, 1995; the G. V. Kurdyumov Prize from the National Academy of Sciences of Ukraine, 2003; the steel research best paper award from Stahl Institut (VDEh), Düsseldorf, 2007; an award from the Hans-Wahl-Preis Society für Tribologie (GfT), Aachen, 2009.

A prolific lecturer, Prof. Berns became the author of a topical textbook for metal scientists in engineering: ‘Stallkunde für Ingenieure’ published by Springer in 1993. This book quickly sold out and was soon republished.

Alongside more than 350 articles in high-impact journals, he published a number of standalone studies such as: Hartlegierung und Hartverbund-Werkstoffe, Springer 1998; High Nitrogen Steels, Springer 1999; Eisenwerkstoffe, Springer 2006 and 2008; Ferrous Materials, Springer 2008. His final study, High Interstitial Stainless Austenitic Steels, Springer 2013, summed up the last five years of intensive research.

His popular science books ‘What is Steel’ published by Springer in 1974, 1980 and ‘The History of Hardening’, Härterei Gerster AG, Egerklingen, 2013, on the history of steel and its heat treatment since ancient times combine deeply erudite knowledge with an innate sense of humour.

Prof. Berns supervised 34 PhD and three Doctor Hability dissertations. The school of science founded by him continues successfully both in research and engineering. This outstanding scientist and wonderful human being will live on in the memory of his colleagues, students, and friends.

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