

This book tells the story of the power generation gas turbine from the perspective of one of the leading companies in the field over a period of nearly 100 years, written by an engineer. Especially in times of imminent global economic crises it appears to be worthwhile to reflect on real economic values based on engineering ingenuity and enduring management of technological leadership.

Though the book is primarily designed as a technical history of the BBC/ABB/Alstom power generation gas turbines, its scope is sufficiently broad to cover general development trends, including parallel competitor activities. A special benefit is the historical breakdown to the gas turbine component level, so that the book actually outlines the development of axial compressors from early beginnings, the progress in combustion technology towards extraordinary low emission values and that of axial turbines with special emphasis on early turbine cooling innovations.

The sheer length of certain engineering developments over several decades allows interesting historic observations and deductions on inherent business mechanisms, the effects of technology preparations and organisational consequences. A look into the mirror of the past provides revelations on the impact of far-reaching business decisions.

# 12 The Author

Dietrich ECKARDT (\*1944) has more than 40 years of professional experience in turbomachinery research at DLR Cologne, in aero engine industry at MTU Aero Engines Munich and finally in the area of power generation gas turbines at Alstom/ABB in Baden/Switzerland, where this book project was realised between 2009–2013.

He had studied Mechanical/ Chemical Engineering at TU Berlin and finished a doctoral thesis on high-speed centrifugal compressor flow investigations under the supervision of Profs. W. Traupel, ETH Zurich and H.E. Gallus, RWTH Aachen in 1975. Since 1992 he has a honorary professorship for gas turbine development at TU Dresden.

He published approximately 50 technical papers, book articles and lectures on aero and industrial gas turbine engineering, turbomachinery R&D and corresponding history, touching also remote areas like strategic supply chain management, advanced project management (HSG-MBE) and intellectual property right protection.

Currently, he prepares a follow-on publication 'Jet Web' on BBC's role between 1935–1955 on international developments of early aero gas turbines.