

INTRODUCTION

I am delighted that Professor Opitz has accepted our invitation to present the opening address to this Conference. As a scientist, researcher, teacher and adviser to universities and industry Professor Opitz needs no introduction. The laboratory which he created after his appointment to the Chair of machine tools and production technology at the Technical University Aachen in 1936, and which today is one of the most, if not the most important laboratory of its kind in the world, can speak louder and with more emphasis than any words of mine could hope to achieve.

There is practically no aspect in the academic and industrial field concerned with production engineering which has not in some way been positively influenced by the work carried out in the Aachen laboratory. His studies of tool wear and machinability have resulted in the development of new methods and materials. His research into high speed grinding has led to considerable progress both inside and outside Europe. His proposals for and contributions to workpiece classification, part family manufacture, group technology, computer-aided design and NC programming languages have enhanced the efficiency of many industrial organisations.

When last June Professor Opitz mentioned that the 1971 Aachen Kolloquium may be the last to take place under his leadership our selfish interests made us suddenly think of the fact that the 1971 International Machine Tool Design and Research Conference in Manchester may be the last which he would attend when still in office at Aachen.

The organisers of our International Machine Tool Design and Research Conferences owe a particular debt of gratitude to Professor Opitz, because from the first and very modest beginning until today he has given us not only his wholehearted support, but also his active participation to every one of the 12 conferences which took place between 1960 and today. His positive contributions have enhanced the value of the conferences and his moral support has given great encouragement to the organisers.

I must mention in this connection that we in Manchester are especially indebted to Professor Opitz for his advice as external examiner in our post-graduate courses which has strengthened the impact on our young engineers who specialise in the field of machine tools. I am also sure that the regular

exchange of staff between Aachen and Manchester has been of benefit to all concerned.

During his long and distinguished career Professor Opitz has been invited to carry out many duties which not only brought honour to him but also great benefit to those for whom they were performed. Mention may be made of his two terms of office as Rector of the Technical University Aachen, his membership of many research committees and working groups at national and international level and in particular his Presidency of the International Institute of Production Engineering Research (CIRP). Universities and public bodies of many countries have honoured him; the Universities of Louvain, Strathclyde and Cincinnati have conferred on him honorary doctorates, and we are particularly proud that he also accepted the honorary fellowship of UMIST. In addition to this he has received many decorations from engineering associations and governments.

Through the success of his work Professor Opitz has proved that the needs of the machine tool manufacturing and user industry can be fully covered only if the approach of a teaching and research unit is geared towards its special problems rather than being dictated by the requirements of a general engineering discipline. We are aware of the fact that Universities must play an ever increasing part in the development of machine tool technology as well as production engineering in this country. We know that this can be done most efficiently only if the role of the university, both in the line of research and teaching, is backed by efforts to anticipate the needs of this specialised field. Professor Opitz has proved that this is possible if a committed and professional interest exists across a diversity of the disciplines involved and if work is planned and carried out in an independent manner completely devoted to the needs of the machine tool manufacturing and using industry.

We at UMIST have every intention of continuing to work along this path on which regrettably we have only been able to proceed at a relatively slow pace. We have no doubt, however, that we shall succeed in achieving the aims which we set ourselves and for the purpose of which we are organising this conference. It gives me great pleasure to ask Professor Opitz to declare the 12th International Machine Tool Design and Research Conference open.

F Koenigsberger