EDITORIAL

In this Issue, five papers recommended by IIW Commission III "Resistance welding, solid state welding and allied joining processes" have been published. Consequently, Welding in the World has invited its new Chairman, Dr.-Ing Miro Uran, to pen the Editorial.

While it is hoped that the present global economic recession will be short-lived, it is clear that the advances to be made will be fruitful for the IIW. Cost-cutting will be essential in all industrial fields and in particular, the automotive industry. In the long term, the market shares of major vehicle manufacturers will no doubt be considerably altered. After the recession, vehicles will certainly be different, i.e. made of new materials. Above all, this will require the use of lighter materials, high strength steels and plastics. Consequently, this tendency will boost the development of all joining processes dealt with by Commission III.

Resistance welding is a comparatively old welding process. It has, however, experienced its renaissance due to the advancement of power electronics and computer science. Regulations, including today the practical measurements of four and more welding parameters (several hundred thousand times per second), permit the change in welding parameters during welding (i.e. a thousand times per second). This makes it possible to weld various new materials, particularly those used in the automotive industry.

New options have also been presented in the control of welding quality and the documentation of welding parameters, as well as those offered by the inverter technique, enabling the advancement of the weldability of exacting materials and structures. Such advances in resistance welding technology are being made, for the most part, in laboratories of manufacturers of resistance welding equipment and remain, however, the domain of research teams in steel plants, at faculties and in laboratories of the automotive industry. While interesting papers in this field are rarely available to the wider public, members of these teams have always been the core members of IIW Commission III. Consequently, numerous worthy documents have been prepared on the theme and are therefore available to subscribers of *Welding in the World*. They are scheduled for publication in 2009 issues of the journal and in those of upcoming years.

Recently in this field, despite the fact that resistance spot welding is a thousand times more frequent in industrial applications than friction stir welding, a disproportionately high number of investigations has been conducted. They are highly interdisciplinary. Mechanical engineers, metallurgists and electronic engineers work hand in hand with mathematicians, physicists and I.T. (Information Technology) engineers. As a rule, the papers prepared are very significant and of a high calibre and, due to their current relevance, they are ideal for publication. Among these were some excellent doctoral theses which were presented on friction (stir) welding last year, one of which was awarded a Granjon Prize. A condensed version is published in the current issue of *Welding in the World*.

Since the end of the 1990s, the membership of Commission III has steadily been increasing, due to the involvement of new experts representing the various friction stir welding processes. The active participation of numerous Commission III members is therefore expected at the IIW's Annual Assembly in Singapore in July 2009.

Miro Uran
Chairman of IIW Commission III