

SCOPE OF THE CONFERENCE

Both the design and production of components and load bearing structures made of steel are ever seeing after the possibility of increasing the strength level so as to reduce weight and dimensions by a significant amount. The advantages of such an action however are to be seen presently not only under the pure economic profile, but, in many sectors, like transports, also under much more important socio-eco-environmental aspects related to high energy consuming applications for example.

It is a hard task for Material Scientists and Engineers to obtain a satisfactorily good combination of properties that makes possible, or even better attractive, the use of high strength steel materials in a selected context, but the importance of the overall objective largely justifies the big efforts paid by the international Community through the years in so many directions.

The scope of the Conference was exactly to discuss the state-of-the-art and future perspectives of high strength steels – especially at the highest level – mainly for structural applications .

A really profitable assessment of material performance in specific applications can only be obtained through a serious exchange and cooperation between Steel Producers and Users, that necessarily involve Research Centres and Design Engineers on both sides. Therefore different operators in leading market sectors like Automotive, Mechanics, Oil & Gas and Energy production and transmission, Constructions, were invited to report on the more recent progresses made in the field of materials formability, jointability, corrosion, fatigue & fracture resistance, just to mention some of the main properties to be developed in association with the required High or Super High Strength levels.

On the production side specifically, Metallurgists and Technologists have been asked to contribute also on the fabrication cycles set up and control themes as well as the identification and description of the relevant property – controlling mechanisms both in the liquid and the solid state. Particular attention has been paid to the new compact cycle technologies, such as Thin Slab and Strip Casting, which have now reached a successful stage of development.

The wide range of the various Carbon and alloyed steels options have finally introduced a third component of this triangularly shaped aim of the Conference: material, fabrication, applications.