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Cover story

Less than 50 days is left to the Opening Ceremony of the biggest in the World in 2008 sports event – Beijing Olympic Games 2008. The given Issue of the Journal of Achievements in Materials and Manufacturing Engineering is to pay homage to the idea of the Olympic Movement and a noble sports competition, which is for millions of young people in the World a way of creating own character and physical fitness, at the same time creating billions of people supporting sports achievements the occasion to unrepeatable experiences and satisfaction. On the other hand sport is at present the huge global business, which is one of driving forces of the world economy and the reason to create thousands of new products, working out countless number of new technologies and implementation of new engineering materials.

In the given Issue the attention was paid to the probably most dynamically developing in the 21st century country of the World. After 40 ages of isolationism China takes part significantly in the creation of the future of the World, as one of the World empires. China, known for centuries as Zhong Guo (the Middle Kingdom) the most populated region of the World and the third country of the World as far as the area is concerned, has the longest constant history. Many most important human scientific and technological inventions e.g. a wheel, a paper, a clock, a compass, a seismograph, silk, gunpowder, a porcelain and also in the 12th century it was here where it was found that a year has 365,2424 days, what almost exactly refers to our contemporary settlements. At present it is just here where in staggering pace new imposing investments, which have astonished the World many times with its momentum, a gigantic scale and the courage of designers and investors. As a result of the Olympic Games, beginning in a few weeks in Beijing a very ambitious plan of renovation and rebuilding of the city have been realised. Today it is one of the most modern world metropolises.

The cover of the given Issue points out in a symbolical way for the modernity of China and its capital of Beijing, which owe among others the Olympic Games, symbolised by the ultramodern National Stadium and the unity of contemporary achievements of that country with the history and tradition, symbolised by the Forbidden City and the Great Wall of China. A dozen years ago the watchword "more open China", which led in the end to the organisation of the Olympic Games in Beijing, although it was announced 8 years ago that the host of the Olympic Games was Sydney, Australia, not Beijing, as the Chinese wanted already then. It caused crying and mourning of almost the whole nation. It is just that watchword and the realisation of so many important achievements following it which led to the present organisation of the Olympic Games in China. The symbol of that open and modern information politics is a modern styled dragon, located at the foot of the China Central Television CCTV Broadcast Tower, in spite of a very traditional symbol, an ultra modern in its form.

The "Bird's Nest" Olympic National Stadium presented from the Chinese Nationalities Ethnic Culture Park in the main photo on the cover is the main stadium of the 29th Olympiad in 2008. The venue will host the opening and closing ceremonies of the Beijing Olympic Games. The "Bird's Nest" occupying an area of 21 hectares has a floor space of 258,000 square metres. Its seating capacity amounts to 91,000 seats. The main body of the National Stadium is 333 metres long from north to south, 294 metres wide from east to west, and 69 metres tall and is a colossal saddle-shaped elliptic steel structure weighing 42,000 tons. The roof is covered by a double-layer membrane structure, with a transparent ETFE membrane fixed on the upper part of the roofing structure and a translucent PTFE membrane fixed on its lower part. A PTFE acoustic ceiling is attached to the side walls of the inner ring. The upper part of the stand and the stadium's steel structure are separated from each other, but both are based on a joint footing.

