

# Editorial



Only few events can unite a great deal or even most of people on the Earth. Surely, Such an event is at present Olympic Games. Just such a unity can be expected in August 2008. The Olympic Games have a 28-century-tradition. The Olympic Games were of fundamental religious importance, contests alternating with sacrifices and ceremonies honouring both Zeus and Pelops in ancient Greek. There are many legends describing the origin of the ancient Olympic Games. The most popular one says that Heracles built the Olympic stadium and surrounding buildings as an honour to his father Zeus and was the creator of the Olympic Games, after completing his 12 labours. He walked in a straight line for 400 strides and called this distance a "stadium". This is why a modern stadium track is 400 metres in circumference. The Games were held every four years, and the period between two celebrations became known as an 'Olympiad.' The Greeks used Olympiads as one of their methods to count years. The date of the Games' inception based on the count of years in Olympiads is reconstructed as 776 BC. The number of events increased to twenty, and the celebration was spread over several days. Only young men could participate in the Olympic Games. They were usually nude for the reason of the festival of the achievements of the human body. Winners of the events were not only greatly admired and had the prestige of being in a first place and were also presented with a crown of olive leaves as a sign of hope and peace but also were immortalised in poems and statues. The Olympic Games gradually declined in importance as the Romans gained power in Greece and were outlawed as a pagan festival in 393 AD after the proclamation of Christianity – the religion of the Roman Empire by Emperor Theodosius the First.

Interests in reviving the Olympic Games properly was first shown in the poem "Dialogue of the Dead" in 1833 by Panagiotis Soutsos – the Greek poet and newspaper editor. The classical games of antiquity were revived near Athens in 1870 and 1875 on the Panathinaiko Stadium, which was refurbished for Games by Evangelos Zappas in 1859, who sponsored this enterprise. The French nobleman, Pierre Frédy, Baron de Coubertin started the initiative to found in 1894 the International Olympic Committee. In 1896 in Athens, Greece the first of the IOC's Summer Olympic Games were held. The Olympic Motto is "Citius, Altius, Fortius", a Latin phrase meaning "Swifter, Higher, Stronger" and the Olympic Creed is as follows: "The most important thing in the Olympic Games is not to win but to take part, just as the most important thing in life is not the triumph but the struggle. The essential thing is not to have conquered but to have fought well." The five coloured rings on a white field from the Olympic Flag, the colours, white, red, blue, green, yellow, and black, were chosen such that each nation has at least one of these colours in its national flag. The five interlocked Olympic rings signifying the joining of hands of people of the World in a shared dream for a brighter tomorrow were designed in 1913, adopted in 1914 and debuted at the Games at Antwerp, The Netherlands in 1920. These five intertwined rings represent the unity of the five inhabited continents (with the Americas regarded as one continent).

The participation in the Olympic Games has increased to include men and women from nearly all nations worldwide. From the 241 participants from 14 nations in 1896, the Games grew to nearly 11,100 competitors from 202 countries at the 2004 Summer Olympic Games in Athens, Greece. Currently 203 countries participate in the Olympic Games. This is a noticeably higher number than the number of countries belonging to the United Nations, which is only 193. Today the Olympic Games is an international multi-sport event subdivided into summer and winter sporting events. The summer and winter Games are held every four years until 1992. Since then, they have been separated by a two-year-gap. The Summer Olympic Games includes 28 sports with 38 disciplines and the Winter Olympic Games includes 7 sports with 15 disciplines. With the improvement of satellite communications the Olympic Games are consistently gaining supporters. The most recent Summer Olympic Games were in 2004 in Athens, Greece and the most recent Winter Olympic Games were in 2006 in Turin, Italy. By 2008, the Olympic Games have been hosted by 39 cities in 21 countries.

The upcoming 2008 Summer Olympic Games will be held in Beijing, China and are planned to comprise 302 events in 28 sports with 38 disciplines. In Chinese culture, the number 8 is a symbol of prosperity. It is the reason why the Opening Ceremony Olympic Games 2008 will take place on 08.08.2008 at 08:08 PM and 08 seconds of the local time. It will be a great event which thanks to the television, the Internet and the radio will join billions of people all over the world. In August 2008, the National Stadium dubbed the 'Bird's Nest', and the National Aquatic Centre, known as the Water Cube or the Ice Cube will be two of the main sites to feature major Olympic Games events. In Beijing, there are also next 10 new, 11 upgraded and 8 temporary Olympic venues – 31 in all. Beijing landscape will be enhanced and will be home to an amazing thirty million flower pots that will brighten the streets, hotel reception areas, Olympic venues and scenic spots of Beijing in the lead-up to and during the Olympic Games.

The Beijing 2008 Olympic Games aims to be a "Green Olympics", "High-Tech Olympics" and "People's Olympics". Beijing was changed so it cannot be recognised, because huge investments

were made both in the range of very numerous new buildings, ways, railway connections, airport, underground and many other structures. Beijing and its people will be able to use greener energy generated by thirty-three gigantic wind-driven generators. Beijing Guanting Wind Power

Station adds to Beijing's High-Tech Green Olympic Games. When its first phase of construction completes, the station will be able to offer 100 million kWh of power a year, equivalent to 100,000 households' electric power consumption.

The Beijing 2008 Olympic Games motto: 'One World, One Dream' indicates our common desire for the Olympic ideals of excellence, respect, harmony, peace and friendship. Unfortunately, politics casts a shadow over the preparations to Olympic Games 2008. In many places of the

World there are protests against the protection of human rights. In spite of that opinions in many countries are divided. Not all of them announce the participation in those

Olympic Games. However, athletes are going to take a sport fight to achieve the best possible results in a noble competition. Unfortunately, ideals of

such a competition are threatened in reality of the contemporary

civilisation. One of the main problems facing the Olympic Games is

doping, or performance enhancing drugs. But also great business

seriously threatens sports ideals, because it is easy to loose them

when a lot of money are taken into consideration. Terrorism has

also become a recent threat to the Olympic Games. Unfortunately, the

contemporary world is not able to refer to a noble old Greek principle to stop all wars for the time of the

Olympic Games. Maybe it can be also achieved once, independently to the high organisational and security level, a

perfect level of the information distribution and a very high technical level of equipment used directly or indirectly to sports

achievement. Those technical aspects are the reason why that case is discussed in the Journal of Achievements in Materials and

Manufacturing Engineering.

People are striving to improve their performance and compete. They want to

hit further, jump higher, or run faster and further than their opponent. When the

difference between sports results is one-hundredths of a second or a small part of

centimetre, then the sport equipment design is fundamental. The factors in equipment

performance and main material properties are strength to weight ratio, stiffness, damping

characteristics and friction between equipment and surface. For this reason advanced materials

should be used in sports equipment. These advanced materials are used to improve the users'

clothes as well as the users' equipment. A significant effect on performance, safety and

enjoyment of a sport can have new materials designing and application. Today advertisements

for new types of running shoes, golf clubs, tennis rackets, and hundreds of other sports

accessories appear in the market almost every day. It is necessary to pay attention to the fact

that advanced materials could democratize sports, allowing the less-talented and athletic, and

even persons with handicaps, to get in the game or on the playing field. Athletes with handicaps

now can participate efficiently in numerous activities never before available to them because of

advanced materials. Materials applied for clothes and sport equipment are usually introduced for

the usage almost as quickly as in space technology. They are very often materials introduced to

space equipment and sometimes projected almost equally in those two technological fields.

Issues of design and various engineering materials applied to equipment and sports devices are

surely interesting for P.T. Readers. That is why we invite P.T. Authors to become interested in

such a subject matter.



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