

Editorial



In 2008 the World Academy of Materials and Manufacturing Engineering WAMME organises or co-organises various scientific events around the World. On 15th-17th October 2008 in Denizli, Turkey the 12th International Materials Symposium IMSP'2008 will take place. Materials can find many applications in any sector such as agriculture, food, textile industry, energy, manufacturing, aeronautics etc. Nowadays, materials of metal, plastics, glass, ceramics, polymers and wood are the commonly used in the engineering applications. The use of advanced materials is the main indicator that shows the level of each country. The quality and advancement of the materials increases the quality of life. Design and production can not be successfully achieved without materials. Pamukkale University, Engineering Faculty with the knowledge of this conscious has tried to emphasize the importance of the materials since 1986. The Symposium of Materials has been regularly organised with the pioneering of the Pamukkale University every two years.

Founded in 1992 as a national university, Pamukkale University has currently over 18,000 fulltime students. The University has 6 Faculties, 8 Vocational Colleges, and 3 Institutes. With over sixty programmes at two-year vocational college degree, four-year bachelors degree, masters and PhD degrees in subjects ranging from Engineering, Art and Sciences, Economic and Administrative Sciences, and Education to Medicine, the University has established an academic profile which will ensure its continued contribution to Turkish higher education and beyond. The Pamukkale University is committed to maintain the highest possible standards in its teaching and research. The University recognises that the success in achieving those standards involves the international cooperation, collaborations and partnerships. As a part of its international strategy and programme, the University places special emphasis on both student and staff mobility and co-operation projects. Aware of the needs and responsibilities, the Pamukkale University has developed strong ties and partnerships with the local community and has been serving as an important educational, scientific and cultural centre in the area. Situated in Aegean Sea Region of Turkey, in south-western Turkey, it is close to industry, natural wonders and cultural heritage centres all together. Pamukkale University is located in Denizli City, the southwest part of Turkey.

Denizli is a growing industrial city in the eastern end of the alluvial valley formed by the river Büyük Menderes, where the plain reaches an elevation of about a hundred metres. The city has a population of about 400,000. Denizli has achieved a remarkable economic development in the last decades based notably on textile production and exports. Having become a vibrant centre of manufacturing focused on exportation, Denizli is frequently cited, along with a number of other Turkish cities, as one of the foremost examples of "Anatolian Tigers" in reference to its rapid pace of development. Denizli also attracts many visitors to the nearby mineral-coated hillside hot spring of Pamukkale, and the ancient ruined city of Hierapolis, as well as ruins of the city of Laodicea on the Lycus, the ancient metropolis of Phrygia. Also in the depending of Honaz, about 15 km west of Denizli is, what was, in the 1st century A.D., the city of Colossae.

The Conference delegates will be accommodated in the Richmond Pamukkale Thermal Hotel in Pamukkale, which is famous for the unique travertines created by calcareous water, is at the same time a thermal area. This huge thermal spa is fed by healing spring water at a constant temperature of 35 degrees every season. The spring water, which has created this natural wonder with hundreds of pools, is also an excellent source of health thanks to its rich minerals. Pamukkale is one of the most significant natural wonders in the world. The terraces were formed by running warm spring water containing calcium bicarbonate. When the water loses its carbon dioxide it leaves limestone deposits. These are of different colours and shapes in the form of terraces with pools, overhanging surfaces and fascinating stalactite formations. Pamukkale which means "cotton castle" in Turkish takes its name from these formations. According to scientists, if the water had always flowed at this rate, the terraces must have begun forming 14,000 years ago. A little further away from Pamukkale, near Karahayit village is another thermal spring, Kirmizi Su (the Red Water) with warmer water but less carbon dioxide gas where the running water creates a reddish effect different than the white cotton terraces of Pamukkale.

Pamukkale has always been a very popular settlement where the hot springs were believed to have healing powers, so the city became the centre of a pagan cult in antiquity and a spa resort today. The city was on the borders of Caria, Lycia and Phrygia and had a mixed population. Citizens were usually involved in the wool industry and little has changed as it is still a textile centre. The ancient city of Hierapolis was founded by Pergamum, probably Eumenes II, in the 2nd century B.C. Hierapolis is believed to derive its name from Hieria, the wife of Telephus, both being legendary ancestors of kings of Pergamum. Hierapolis was also interpreted by some as the "holy city". All the surviving ruins of the city except the foundations of the Apollo Temple date back to the Imperial Roman period. In 133 B.C. the city was bequeathed to the Romans along with the Kingdom of Pergamum by the will of Attalus III. It is also thought that a large population of Jewish people who contributed to the expansion of the Christian belief lived there. Hierapolis suffered from frequent large earthquakes and was restored many times, one of them being a complete rebuilding by Nero in the 1st century A.D. Hierapolis is among the cities of the ancient world in which the grid-plan was applied. The Necropolis is the largest ancient cemetery in Anatolia with approximately 1,200 graves. The tomb of the Apostle Philip, the Martyrium was built in octagonal shape in the 5th century, according to the legend on a spot where he was stoned to death. The Roman Bath after the necropolis was originally built in either the 2nd or 3rd century A.D. In the early Christian period, probably in the 5th century it was converted into a Basilica. The Triple Arch is the northern gateway to the city and was built in the 1st century A.D. by the proconsul of the Asian Province, Julius Frontinus in honour of the Roman Emperor Domitian. It was constructed out of the local travertine and flanked by two round towers. It also had an upper story which is no longer standing. The Colonnaded Street is 1,190-metre-long with 6-metre-long walks on either side separated from the street by columns. The Sacred Pool which coincidentally contains many ancient column pieces is located in the Pamukkale Motel and is not to be missed. This pool may well easily be the remains of the original pool of the antiquity near the Apollo Temple. Somewhere under the surface of the high plateau on which the city was built there was a vent of poisonous gases, known to the people of those days as the Plutonium. It was a shrine of Pluto, the god of the dead and the underworld. Only a closed room and a paved courtyard survived till nowadays. The Theatre is a 2nd-century A.D.-building in Roman style with many reliefs depicting scenes representing the Emperor Septimius Severus and from the life of Dionysus. In the 3rd century A.D. it was thought to be restored during the reign of Septimius Severus. The seating capacity was 20,000. In the 4th century the theatre was restored again but this time with additional changes in the orchestra which offered the possibility of water displays.

About hundred and dozen or so kilometres from Denizli there is ancient Ephesus. According to the old legends, Ephesus was founded by the female warriors known as the Amazons. The name of the city is thought to have been derived from "Apassa", the name of a city in the "Kingdom of Arzawa" meaning the "city of the Mother Goddess". Ephesus was inhabited from the end of the Bronze Age onwards, but changed its location several times in the course of its long history in accordance with habits and requirements. Carians and Lelegians are to be have been among the city's first inhabitants. Ionian migrations are said to have begun in around 1200 B.C. According to legend, the city was founded for the second time by Androclus, the son of Codrus, king of Athens, on the shore at the point where the Cayster (Küçük Menderes) empties into the sea, a location to which they had been guided by a fish and a wild boar on the advice of the soothsayers. The Ionian cities that grew up in the wake of the Ionian migrations joined in a confederacy under the leadership of Ephesus. The region was devastated during the Cimmerian invasion at the beginning of the 7th century B.C. Under the rule of the Lydian kings, Ephesus became one of the wealthiest cities in the Mediterranean world. The defeat of the Lydian King Croesus by Cyrus, the King of Persia, prepared the way for the extension of Persian hegemony over the whole of the Aegean coastal region. At the beginning of the 5th century, when the Ionian cities rebelled against Persia, Ephesus quickly dissociated itself from the others, thus escaping destruction. Ephesus remained under Persian rule until the arrival of Alexander the Great in 334 B.C., when it entered upon a fifty year period of peace and tranquillity. Lysimachus, who had been one of the twelve generals of Alexander the Great and became a ruler of the region on Alexander's death, decided to embark upon the development of the city, which he called Arsinoe after his wife Arsinoe. He constructed a new harbour and built defence walls on the slopes of the Panayır and Bülbül Mts., moving the whole city 2.5

km to the south-west. Realising, however, that the Ephesians were unwilling to leave their old city, he had the whole sewage system blocked up during a great storm, making the houses uninhabitable and forcing the inhabitants to move. In 281 B.C. the city was re-founded under the old name of Ephesus and became one of the most important of the commercial ports in the Mediterranean. In 129 B.C. the Romans took advantage of the terms of the will left by Attalos, a King of Pergamum, by which they were bequeathed his kingdom, to incorporate the whole region into the Roman Empire as the province of Asia. Ancient sources show that at this time the city had a population of 200,000. In the 1st century B.C. the heavy taxes imposed by the Roman government led the population to embrace Mithridates as their saviour and to support him in his mutiny against Roman authority and in 88 B.C. a massacre was carried out of all the Latin speaking inhabitants of the city, which was then stormed and sacked by a Roman army under Sulla. It was from the reign of Augustus onwards that the buildings we admire today were constructed. According to documentary sources, the city suffered severe damage in an earthquake in 17 A.D. After that, however, Ephesus became a very important centre of trade and commerce. It was also the leading political and intellectual centre, with the second school of philosophy in the Aegean. From the 1st century onwards, Ephesus was visited by Christian disciples. St Paul remained in the city for three years from 65 to 68, and that it was here that he preached his famous sermons calling upon the hearers to embrace the faith in one God. St Paul spent some time as a prisoner in Ephesus. A legend says that St John the Evangelist came to Ephesus with the Virgin Mary in his care. In 269 Ephesus and the surrounding country was devastated by the Goths. At that time there was still a temple in which the cult of Artemis was practised. In 381, by order of the Emperor Theodosius, the temple was closed down, and in the following centuries it lay completely abandoned, serving as a quarry for building materials. In the 7th century the city was transferred to the site now occupied by the town of Selçuk and during the Byzantine era Ephesus grew up around the summit of Mt Ayasulud. The city enjoyed its last years of prosperity under the Selçuk Emirate of the Aydınodulları. During the Middle Ages the city ceased to function as a port. By the 20th century the silt carried down by the Meander had extended the plain for a distance of 5 km.

The first excavations in Ephesus began in 1859 – 1874 by an engineer, John Turtle Wood. The works financed by the British Museum in London. Researches on the greater scale and led in a more systematic way began in 1895 under the patronage of the Austrian Archaeological Institute. It was carried out by Otto Bendere. After the First World War scientists came back to the territory of excavations in 1926. The group was directed by Hermann Vetters. As a result of the outcarried works the monuments of an ancient city were discovered and partially reconstructed. At present the area is visited by many tourists and ruins of Ephesus belong to the best survived cities. The ruins of Ephesus, situated near Selçuk town, 70 kilometres south of Izmir, is a main centre of archaeological interest owing to the ancient remains that still exist. The visiting after coming into a wide territory of excavations through the Magnesia Gate can see in turn the State Agora, the Temple of Isis and Stoa, the Odeion (Bouletarian or Parliament), the Prytaneion (Town Hall), the Baths of Varius, the Monument of Memmius, the fountain of Sextilius Pollio, the Temple of Domitian, the fountain of Laecanian Bassus, the Curetes street, the Temple of Memmius, the Gate of Heracles (Hercules), the fountain of Trajan, the Temple of Hadrian, the Scholastica Baths. At the corner formed by the Curetes street and the Marble Road, the House of Love (Porneion or Brothel) is placed and the Library of proconsul Gaius Celsus. The Corinthian columns of the Stoa encircling the Trade Agora with the dimensions 110 x 110 metres, are standing erect today. The Temple of Serapes is placed behind the Trade Agora. One of the magnificent buildings of Ephesus is the Great Theatre, the largest in Asia Minor, which had a capacity of more than 24,000 people and is in a rather well preserved condition. St. Paul was dragged into this theatre to face the crowd because of his famous letter to Ephesians, but rescued by the security guards of the city. The Port Avenue 11-metre-wide and 600-metre-long, called Arcadian Street extends in front of the theatre. The avenue that passes along the front of the theatre, extends towards the Stadium. The Church of the Virgin Mary built at the beginning of the 4th century A.D. is situated behind the Port Gymnasium just before the exit from the lower gate (north gate). This was also the meeting place of the 3rd Ecumenical Council. The Temple of Artemis is one of the places to visit in Ephesus besides the Church of St. John. The Temple, which had been built at first during the Archaic period (8th century B.C.), was one of the Seven Wonders of the ancient world later during the Hellenistic period. In 356 B.C., at the night when Alexander the Great was born, the temple was destroyed by a lunatic called Herostatus and was reconstructed by the citizens of Ephesus. It had 127 ionic style columns and its dimensions were 55 x 115 metres. Today, two marble statues of the goddess Artemis can be seen in the nearby archaeological museum. On Bulbul Dag (Nightingale mountain) there is the House of the Virgin where it is believed that she passed last years of her life and died. She came to Ephesus together with St. John and taken up to Panaghia Kapulu mountain to survive the Roman persecutions. The House was destroyed by many earthquakes and not discovered until 1951 thanks to a German Nun Catherine Emmerich who saw its location in her visions. Now the House of Virgin Mary is renovated. The Organisation of the next scientific conference by the WAMME Academy just in Turkey gives its Fellows the wonderful occasion to familiarise with this dynamically developing country and also enables to familiarise with important elements of the history of our civilisation and material monuments of that proud past. I do not doubt that each of delegates of IMSP'2008 conference, who arrive to Turkey from many parts of the World among others in large numbers from Poland will remember to encounter with that history. As usual I invite P.T. Readers of the Journal AMME to publish their own scientific papers in it. Surely, among them there will be no lack of those which were prepared by the delegates of a mentioned Conference. I wish its delegates successful debates and the Organisers – a lot of satisfaction from well-done job.

Gliwice, in September 2008

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