

Editorial



The World Academy of Materials and Manufacturing Engineering sponsors important scientific conferences in all the continents. Among almost ten such important scientific events sponsored in 2008 there is Advances in Materials and Processing Technologies (AMPT) – the International Conference, which took place in Manama, the Kingdom of Bahrain on 2nd – 5th November 2008 at Gulf International Convention Centre, Gulf Hotel under the patronage of H. E. Dr. Abdul – Hussein Bin Ali Mirza, the Minister for Oil and Gas affairs and the Chairman of National Oil and Gas Authority of the Kingdom of Bahrain. Advances in Materials and Processing Technologies (AMPT) conference series was founded in 1993 at the Dublin City University, Dublin, Ireland and held there in 1993, 1995, 1999 and 2003. Moreover, it has taken place so far in Portugal in 1997, Malaysia in 1998, Spain in 2001, Poland in 2005, USA in 2006, and South Korea in 2007. The next conference will be organised in 2010 in Bangkok in Thailand. The initiator and the honorary chairman of the International Steering Committee of the AMPT International Conference Series is Prof. M. S. J. Hashmi from the Dublin City University in Dublin, Ireland. These conferences provide a chance for academics, researchers, and engineers to meet and exchange innovative ideas and information on all aspects of materials processing technologies. In AMPT 2008 Conference the WAMME Fellows participated in great numbers. The Conference Chair was Prof. Bekir Sam Yilbas, the WAMME Fellow from King Fahd University of Petroleum and Minerals in Riyadh, Saudi Arabia. In the makeup of the International Steering Committee of the AMPT International Conference Series among others the following WAMME Fellows: Prof. L. A. Dobrzanski, Poland, Prof. J.S. Gunasekera, United States, Prof. Y. T. Im, Korea, Prof. S. Sulaiman, Malaysia, Prof. J. M. Torralba, Spain, Prof. F. W. Travis, United Kingdom and Prof. B.S. Yilbas, Saudi Arabia are included. Four WAMME Fellows, that is: Prof. Leszek A. Dobrzanski, Poland, Prof. Emin Bayraktar, France, Prof. Hong Hoocheng, Taiwan and Prof. A.M.S. Hamouda, Qatar were invited to give invited lectures. In 2008 Prof. Bekir Sam Yilbas, WAMME Fellow was honoured with an honourable W. Johnson gold medal award for recognition and appreciation of his distinguished academic achievements. Among laureates of the gold AMPT medals for a most distinguished academic in materials and processing research and teaching were the following WAMME Fellows: Prof. F.W.Travis, UK (1997), Prof. L. Dobrzanski, Poland (2003), Prof. S.K. Ghosh, UK (2005), Prof. Y.T. Im, South Korea (2007) and Prof. Bekir Sam Yilbas (2008).

The Kingdom of Bahrain is an island microstate in the Persian Gulf. There are 718.306 inhabitants. As an archipelago of thirty-three islands, Bahrain does not share a land boundary with another country but does have a 161 km coastline and claims a further 22 km of territorial sea and a 24 km contiguous zone. Bahrain's largest islands are: Bahrain Island, Muharraq Island, Umm an Nasan, and Sitrah. The largest island, where the capital of the country – Manama is located, is only 48 km long and 16 km wide at its broadest point. Bahrain has a total area of 665 km². Saudi Arabia lies at the west and is connected with Bahrain by the King Fahd Causeway, which was officially opened on 25th November 1986. Qatar is at the southeast across the Gulf of Bahrain. The planned Qatar-Bahrain Friendship Bridge will link Bahrain to Qatar as the longest fixed link in the world. In Arabic, Bahrain means "two seas". Since the dawn of history, Bahrain has been a trading centre and until about a generation ago, virtually all trade came and went via the sea. Bahrain's history goes back to the roots of human civilisation and it has almost certainly been inhabited since prehistoric times. To the early Sumerians 5,000 years ago, Bahrain was Dilmun, a civilisation founded during the Bronze Age, the legendary land of fresh water and the flower of immortality, to the Greeks at the time of Alexander the Great, Tylos, and to the Caliphs it had been Awal. At one time or another Sumerians, Greeks, Persians, Portuguese, Turks, Wahhabis, Omanis and the British, have all taken an interest in the island. Modern Bahrain begins its story with the advent of the Al Khalifa rulers at the end of the 18th century. In 1783 it was conquered by the house of Al Khalifa form the tribe of Al Utub from the Arabic Peninsula. This house has been ruled in Bahrain until now. Since the beginning of 19th century the influence of the Great Britain has been taking place. In 1820 the peace agreement concerning the protection of maritime trade was signed – Bahrain was one of the centres of piracy and slave trade, so called Pirate Coast. The next treaties with the British (1861, 1880, 1892, 1911) put Bahrain under the British protectorate in exchange of Iranian and Turkish designs. In 1958 Bahrain made the agreement concerning the sea borders with the Saudi Arabia. In 1968 it was a part of the United Arab Emirates, after the withdrawal of which in 1971 it achieved the total independence. Since 1971 it is a member of the United Nations and the League of Arab States and since 1981 – the Cooperation Council for the Arab States of the Gulf. Bahrain has transformed into a cosmopolitan society with mixed communities. Two thirds of Bahrain's population consists of Arabs. Arabic is the official language of Bahrain, though English is widely used. The official religion of Bahrain is Islam, which the majority of the population practices. However, due to an influx of immigrants and guest workers from non-Muslim countries, such as India, Philippines and Sri Lanka, the overall percentage of Muslims in the country has declined in recent years. According to the 2001 census, 80% of Bahrain's population was Muslim, 10% were Christian, and 10% practiced other religions. Bahrain is a constitutional monarchy headed by the King, Shaikh Hamad bin Isa Al Khalifa. The Government has twenty-three members. Bahrain has a bicameral legislature with a lower house, the Chamber of Deputies, elected by universal suffrage and an upper house, the Shura Council, appointed by the king. Both houses have forty members. The inaugural elections were held in 2002. Women's political rights in Bahrain saw an important step forward when women were granted the right to vote and stand in national elections for the first time in the 2002 election. However, no women were elected to office in that year's polls. The country's first female cabinet minister was appointed in 2004. When Bahrain was elected to head the United Nations General Assembly in 2006 it appointed lawyer and women's rights activist Haya bint Rashid Al Khalifa as the President of the United Nations General Assembly, only the third woman in history to head the world body.

Desert constitutes 92% of Bahrain, and periodic droughts and dust storms are the main natural hazards for Bahrain. It has mild winters and very hot, humid summers. Seas around Bahrain are very shallow, heat up quickly in the summer, and produce high humidity, especially in the summer nights. In those periods, summer temperatures may reach about 35°C. Rainfall in Bahrain is minimal and irregular. Most rainfalls occur in the winter season, recorded maximum of 71.8 mm. Desert landscape in Bahrain is a generally flat and arid archipelago, consisting of a low desert plain rising gently to a low central escarpment. The highest point is the 134 m Jabal ad Dukhan. Environmental issues facing Bahrain include desertification resulting from the degradation of limited arable land, coastal degradation (damage to coastlines, coral reefs, and sea vegetation) resulting from oil spills and other discharges from large tankers, oil refineries, distribution stations, and illegal land reclamation at places such as Tubli Bay.

Bahrain's natural resources include large quantities of oil which was discovered in 1932 and brought rapid modernisation to Bahrain. In a region experiencing an oil boom, Bahrain has the fastest growing economy in the Arab world, the United Nations Economic and Social Commission for Western Asia found in January 2006. It also has the freest economy in the Middle East according to the 2006 Index of Economic Freedom published by the Heritage Foundation/Wall Street Journal, and is twenty-fifth freest overall in the world. In 2008, Bahrain

was named the world's fastest growing financial centre by the City of London's Global Financial Centres Index. Bahrain's banking and financial services sector, particularly Islamic banking, have benefited from the regional boom. In Bahrain, petroleum production and processing account for about 60% of export receipts, 60% of government revenues, and 30% of GDP. With its highly developed communication

and transport facilities, Bahrain is home to multinational firms. A large share of exports consists of petroleum products made from imported crude oil. Bahrain's natural resources include natural gas as well as fish stocks also. Arable land constitutes only 2.82% of the total area. The agricultural and domestic sectors' over-utilisation of the Dammam Aquifer, the principal aquifer in Bahrain, has led to its salinisation by adjacent brackish and saline water bodies.

Bahrain has one of the best airports in the Middle East and is served by many airlines and charters. Bahrain airport is also the regional hub of Gulf Air. The airport can handle 10 million passengers per year. Very good communication links create convenient conditions for the development of various forms of activeness. That is why Bahrain is among others: an important financial and tourist centre and a place of numerous business, cultural and scientific meetings. Also the Organisers of the International Conference Advances in Materials and Processing Technologies AMPT 2008 took advantages of that fact.

We pass on to P.T. Readers the next, but the first in 2009, Issue of JAMME. It is of course the super occasion to sum up the achievements it has had so far. The World Academy of Materials and Manufacturing Engineering by the use of its publishing agenda – the International OCSCO World Press and the cooperation with the Association of Computational Materials Science and Surface Engineering, the International Federation of Heat Treatment and Surface Engineering and the Metallic Materials Section of the Materials Science Committee of the Polish Academy of Sciences has been publishing the given Journal of Achievements in Materials and Manufacturing Engineering for last three years. We usually write information about the range of works published in the previous year at the turn of each year. The Journal of Achievements in Materials and Manufacturing Engineering beginning from 1st January 2008 is published in 6 volumes out of which each consists of 2 issues. The last regular extended one issue of the JAMME, published in 2008 was a special one. It included as many as 776 pages. The rest regular issues included 106 pages each one. The research monographs as a new form of the publication, were started to publish in the JAMME Journal. All the papers achieved, as usual, at least 2 positive reviews, and before the review process made by our Journal some of them were recommended as chosen ones by the Organisers of important international conferences organised in 2007-2008 and content-relatedly sponsored by the WAMME Academy among others in Turkey, Tunisia, Brasilia, Bahrain, Australia, Bosnia and Herzegovina, Israel and Poland. The 2008 Annual of Journal of Achievements in Materials and Manufacturing Engineering consists of 1920 pages, 64 editorial pages and 99 pages including indexes and other information. On the rest 1755 pages 296 reviewed full-text papers were published. Because of their form they were qualified as: short (4-page) ones – 122 papers, research (6-8 page) ones – 81 papers, research (8-10 page) ones – 78 papers. In the 2008 JAMME Annual 998 Authors and Co-authors from 31 countries published their papers. The most authors, because 604 participants of authorial teams, come from Poland, 53 – Malaysia, 41 – Korea, 33 – Taiwan, 32 – Turkey, 29 – Australia, 26 – Slovenia, 19 – Brazil, 19 – Thailand, 17 – Czech Republic, 17 – Italy, 15 – Japan, 14 – France, 11 – Spain, 9 – China, 9 – USA, 7 – India, 6 – Iran, 4 – Canada, 3 – Chile, 3 – Estonia, 3 – South Africa, 2 – Algeria, 2 – Slovakia, 1 – Bosnia and Herzegovina, 1 – Germany, 1 – Macedonia, 1 – Mexico, 1 – Norway, 1 – Portugal, 1 – Qatar. Among mentioned teams there are as many as 30 ones represented by authors coming from 2 countries out of which 117 are exclusively foreign teams. The layout of the Journal is divided into thematic chapters out of which the one concerning analysis and modelling was represented the most extensively in 2008 (79 papers). The next ones deal with manufacturing and processing (67 papers), materials (58 papers), properties (41 papers), industrial management and organisation (25 papers), research methodology (6 papers), and also research and educational trends (5 papers). This year also 12 general papers – 3 research monographs and 6 research papers and 3 technical papers were published. I would like to thank PT Authors, Deputies of Editor-in-chief, members of the Editorial Board, associated Editors and all the persons who contributed to the publication of the Journal in the 2008 for their efforts.

It is necessary to mention that the Journal is cited in the Internet databases: Google Scholars and Ulrich's Periodical Directory and in order to disseminate it the procedure of its registration in the databases of Scopus, Scirus, Compendex, CiteSeer, GetCited and Web of science has begun.

I wish P.T. Readers a successful reading and thank P.T. Authors for their content-related output and at the same time hoping that in 2009 our Journal of Achievements in Materials and Manufacturing Engineering will be not less successful than last year.

Gliwice, in December 2008

Prof. Leszek A. Dobrzanski, M. Dr H.C
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