

Journal

of Achievements in Materials
and Manufacturing Engineering



Published monthly as the organ of the World Academy of Materials and Manufacturing Engineering

Editor-in-Chief Prof. Leszek A. Dobrzański

Volume 32 • Issue 1 • January 2009





Journal

of Achievements in Materials
and Manufacturing Engineering

PUBLISHED SINCE 1992
formerly as **Proceedings on**
Achievements in Mechanical
and Materials Engineering

Published monthly as the organ of the World Academy of Materials and Manufacturing Engineering

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Committee of Materials Science,
Section of Metallic Materials



International Federation of Heat Treatment and Surface
Engineering



Association of Computational Materials Science and
Surface Engineering



Institute of Engineering Materials
and Biomaterials of Silesian University
of Technology, Gliwice, Poland

Financial support

In 2009 the publication of the Journal is financially supported by the Ministry of Science and Higher Education in Poland.

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Directory

The procedure of its registration in the databases of Scopus, Scirus, Compendex, CiteSeer, GetCited and Web of science has begun.

Journal Registration

The Journal is registered by the Civil Department of the District Court in Gliwice, Poland at number 279

Publisher



Gliwice 44-100, Poland
ul. S. Konarskiego 18a/366
e-mail: info@journalamme.org

Bank account:
Stowarzyszenie Komputerowej Nauki o Materiałach i Inżynierii Powierzchni
Bank name: ING Bank Śląski
Bank address: ul. Zwycięstwa 28, 44-100 Gliwice, Poland
Account number/ IBAN CODE: PL76105012981000002300809767
Swift code: INGBPLPW

Gliwice – Campinas – Portland – Madrid – Daejeon – Brisbane – Cairo

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The paper used for this Journal meets the requirements of acid-free paper
Printed in Poland

Cover story

The International Conference on Advances in Materials and Processing Technologies AMPT 2008 supported by the World Academy of Materials and Manufacturing Engineering took place in Manama, the capital of the Kingdom of Bahrain, which is full of modern architecture, 2nd-5th November 2008. On the cover the Al-Fateh Grand Mosque, named after Ahmed Al Fateh, the conqueror of Bahrain and built by the late Sheikh Isa ibn Salman Al Khalifa in 1987, can be seen. It is one of the largest mosques in the world, capable of accommodating over 7,000 worshippers at a time. The mosque is the largest place of worship in Bahrain. It is located next to the King Faisal Highway in Juffair, which is a town located in the capital city of Manama. The mosque is very close to the Royal Bahraini Palace, the residence of the king of Bahrain Hamad ibn Isa Al Khalifah. The huge dome built on top of the Al-Fatih Mosque is made of pure fibreglass. Weighting over 60 t, it is currently the world's largest fibreglass dome. Al-Fateh now includes the new National Library which was opened to the public in 2006.

In the first photo on the cover the two tallest twin-towers: Commercial East and Commercial West of the Bahrain Financial Harbour, which are currently the highest structures in Bahrain, with a height of 260 m with 54 floors can be seen. Bahrain Financial Harbour is a large-scale commercial development project, currently under construction in Manama. The commercial complex is located next to the King Faisal Highway, near many popular landmarks such as the Bahrain World Trade Centre, Abraj Al Lulu, Pearl Roundabout and the National Bank of Bahrain. Majority of the project is being constructed on reclaimed land. The Bahrain Financial Harbour project consists except the Commercial East and Commercial West also of multiple construction phases, including the Bahrain Performance Centre, the Diamond Tower, the Dhow Harbour, the Financial Centre, the Harbour Row, Hotel, Residential North, Residential South.

In the second small picture on the cover the Bahrain World Trade Centre can be seen. It is a 240 m high twin tower complex by South African architect Shaun Killa, located in Manama. The 50-floor structure is constructed next to the King Faisal Highway, close to popular landmarks such as the towers of the Bahrain Financial Harbour, the National Bank of Bahrain, Abraj Al Lulu and the scenic Pearl Roundabout. It is the second tallest building in Bahrain, after the twin towers of the Bahrain Financial Harbour. The building is the first skyscraper in the world which integrates wind turbines into its design. Three bridges connect the towers; each holding one large 29 m turbine. These turbines face north, which is the direction from which air from the Persian Gulf blows in. The sail-shaped buildings on either side are designed to funnel wind through the gap to provide the maximum amount of wind passing through the turbines. The three wind turbines were turned on for the first time on 8th April 2008 and are expected to provide 11-15% of the towers' total power consumption (approximately 1.1-1.3 GWh a year).

The third small picture on the cover presents the Tree of Life – the 400-year-old mesquite tree in the middle of the desert that is considered a natural wonder and is situated a few dozen or so kilometres from Manama. This unique tree stands alone in the desert about 2 km from the Jebel Dukhan, the highest point in Bahrain. The source of water for this tree remains a mystery because it stands in a place completely out of water. Generally, a tree of life is a mystical concept, a metaphor for common descent or a motif in various world theologies, mythologies and philosophies. This symbol has also been used in other areas, first of all in science.

