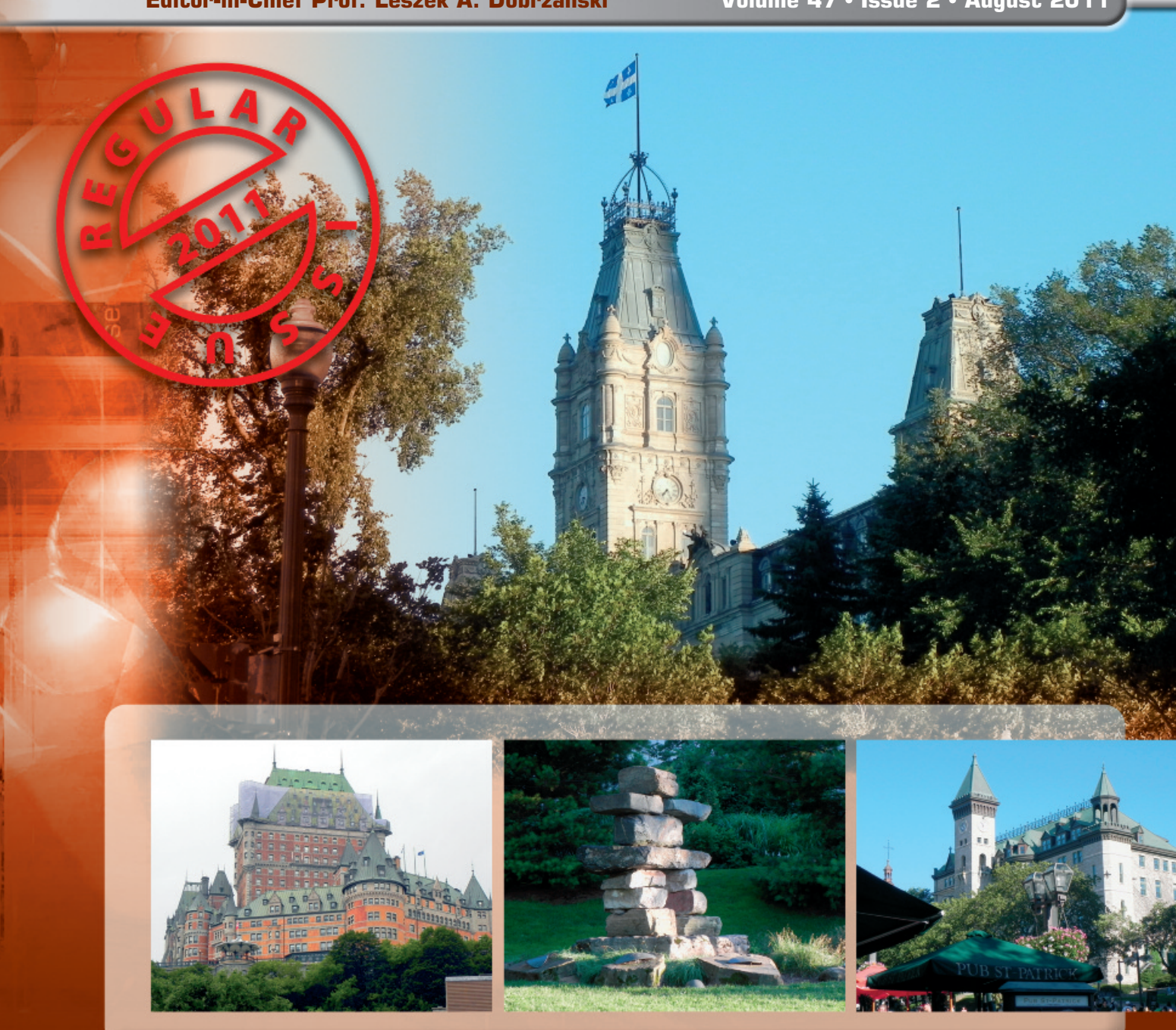
ISSN 1734-8412

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 47 • Issue 2 • August 2011



http://www.journalamme.org

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

Journal of Achievements in Materials and Manufacturing Engineering

Patronage

World Academy of Materials and Manufacturing Engineering

Polish Academy of Sciences, 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

The efforts to achieve the financial support of the Journal in 2011 from the Ministry of Science and Higher Education in Poland have begun.

Abstracting services

This Journal is sent to individual receivers from ca. 50 countries of the world and is delivered to the National Libraries and Universities and also to other scientific institutions in ca. 50 countries of the world. The electronic system of Reading Direct allows to access to the electronic version of that journal online, in the promotional period free of charge. This Journal is included in the reference list of the Polish Ministry of Science and Higher Education (9 points). The Journal is cited by Abstracting Services such as:

Directory of Open Access Journals

Google Scholar

Scirus

Ulrich's Periodical Directory

BazTech

Journalseeker

Libsearch

WorldCat

The procedure of its registration in the databases of Scopus, Compandex, CiteSeer, GetCited, Web of science, Engineering Village, Public Knowledge Project, Edith Cowan University's Institutional Repository, Journals Online and Inspec has begun.

Journal Registration

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

Publisher

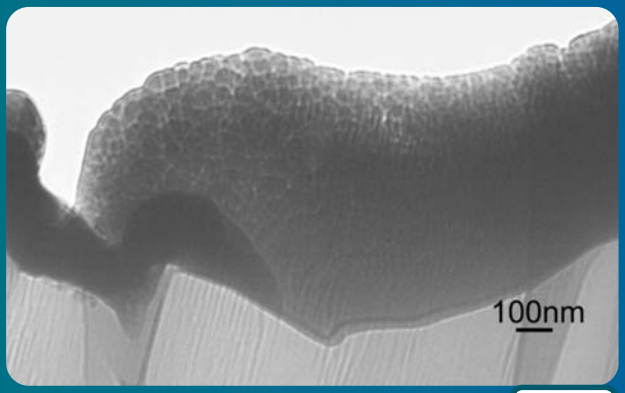
INTERNATIONAL OCSCO WORLD PRESS

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

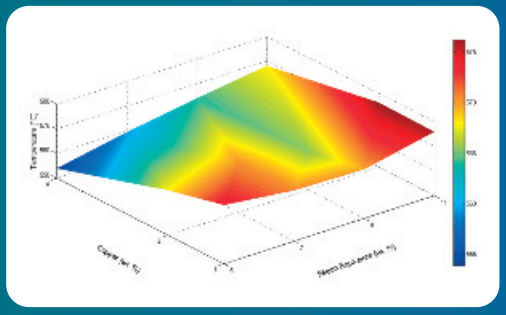
Gliwice – Campinas – Portland – Madrid – Daejeon – Brisbane – Cairo

Selected materialographical photo



177

The research paper made by M.W. Richert on "The wear resistance of thermal spray the tungsten and chromium carbides coatings" on a **page 177** describes wearresistance of different kinds of thermal spray coatings covering industrial fun blades. The coatings were sprayed onto the fun blades by Plasma Spraying and High Velocity Oxygen Fuel Spraying (HVOF) methods. The Cr_3C_2, WC and also its compositions were sprayed into the fun blades. The coatings were tested in industry conditions and the effect of influence of centrifugation industry emissions on the stage of the wearing after the exploitation was compared for deposited coatings. The microstructures of Cr and W carbides coatings were observed and analysed. The microhardness of the sprayed coatings was compared. The coatings were evaluated from the point of view of resistance against wear. The performed investigations provide information, which kind of carbide coatings characterizes the most wear resistance in the industrial conditions. It was assumed that HFOV coats have more uniform microstructure, higher microhardness, which could suggest better resistance against wear and grindability.



115

The paper written by P. Marchwica, J.H. Sokołowski and W.T. Kierkus on "Fraction solid evolution characteristics of AlSiCu alloys – dynamic baseline approach" on a **page 115** discusses the dynamic solidification processes of metals and alloys through application of improved baseline and fraction solid methodologies to hypoeutectic aluminum-silicon alloys with varying concentrations of silicon and copper. This paper identifies key temperature and fraction solid values for hypoeutectic AlSiCu alloys across a wide range of chemistries. The paper also provides correlations whereby temperature/fraction solid values for metallurgical reactions can be predicted on the basis of chemistry. The data and techniques used in this paper may be used in order to improve simulations of casting processes. The relationships between solidification events and alloy chemistries will aid in the design and optimisation of casting alloys and components. This paper would be of value to members of the engineering community who need precise information about fraction solid for use in designing alloys or optimising technology and simulations of casting processes.