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Cover story — continued

The name of the city was officially changed from Ragusa to Dubrovnik. During World War II, Dubrovnik became part of the Nazi controlled Independent State of Croatia, occupied by the Italian army first, and by the German army after 8 September 1943. In October 1944 Tito's partisans entered Dubrovnik that became consequently part of Communist Yugoslavia. In 1979, the city of Dubrovnik joined the UNESCO list of World Heritage Sites. In 1991 Croatia and Slovenia, which at that time were republics within the Socialist Federal Republic of Yugoslavia, declared their independence. At that event, the Socialist Republic of Croatia was renamed the Republic of Croatia. On 1st October 1991 Dubrovnik was attacked by the Yugoslav People's Army (JNA) with a siege of Dubrovnik that lasted for seven months. In May 1992 the Croatian Army liberated Dubrovnik and its surroundings, but the danger of sudden attacks by the JNA lasted for another three years. Following the end of the war, damage caused by the shelling of the Old Town was repaired. Adhering to UNESCO guidelines, repairs were performed in the original style. As of 2005, most damage had been repaired. The inflicted damage can be seen on a chart near the city gate, showing all artillery hits during the siege, and is clearly visible from high points around the city in the form of the more brightly coloured new roofs. The International Criminal Tribunal for the former Yugoslavia as a United Nations court indictments were issued for JNA generals and officers involved in the bombing. A feature of Dubrovnik is its walls that run 2 km around the city. The walls run from four to six metres thick on the landward side but are much thinner on the seaward side. The system of turrets and towers were intended to protect the vulnerable city. On the cover the Old Town surrounded by the walls and in the small pictures two views from the main street and the small street of Dubrovnik can be seen. The central picture presents the view of Cavtat, situated on the narrow headland, squeezing into the sea and covered by Mediterranean flora as an unusually picturesque town founded yet in the Roman times and situated only 20 km south from Dubrovnik, limited on the one hand by a cliff coast from the Adriatic and on the other – by the huge massif of Snijeznica (1234 above sea level) and political boarders – at the east from Bosnia and Herzegovina, from the south – Montenegro. In Cavtat the main debates of the Conference on "New Challenges in Heat Treatment and Surface Engineering" took place.

Selected materialographical photo

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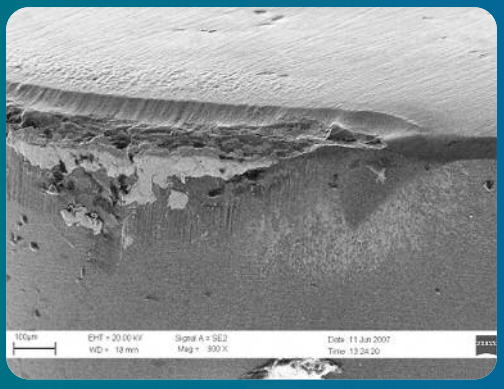
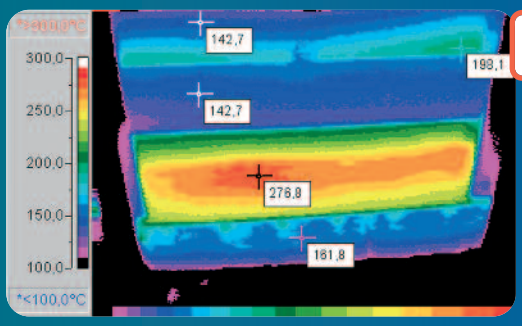
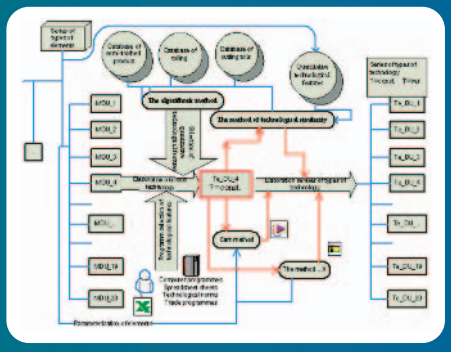


The paper written by L.A. Dobrzański, L.W. Żukowska, J. Mikuła, K. Gołombek and P. Podstawski on "Functional properties of the sintered tool materials with (Ti,Al)N coating" on a **page 134** presents investigation results of functional properties of the sintered tool materials: high speed-steel matrix composites (HSSMC), cemented carbides, cermets and Al_2O_3 type oxide tool ceramics with (Ti,Al)N coating deposited in the cathodic arc evaporation CAE-PVD method and their comparison with the uncoated tool materials. Deposition of (Ti,Al)N coating onto high speed-steel matrix composites (HSSMC), cemented carbides, cermet and Al_2O_3 type oxide tool ceramics substrate causes increasing of wear resistance as well as reduces the exceeding of steady stresses' critical levels. It causes multiple (up to 800%) increasing of tool life. The combination of substrates (especially coatings deposited on high speed-steel matrix composite) is unique and very interesting in respect of achieved functional properties.



The materials section represented by Z. Rdzawski, B. Krupińska and M. Musztyfaga on "Thermovision systems used to improve a technological process hot-rolled the copper and brass strips" on a **page 115** presents the thermovision testing with the use of Inframetrics 760B system. Measurements were executed on the surface of the heat furnace and also on the surface of material heated before and hot-rolled. The results of the investigations in form of thermograpic pictures were taken down in working environment. The process of heating charge material is carried through in order to facilitate its machining during a rolling process. When the material does not obtain the adequate temperature or does not become uniformly heated, internal stresses which cause appearance of the rims of fracture and occurrence of other defects in structure appear in the next cold rolling. Because of this there is a need of temperature controlling. If a temperature profile on heated to a hot-rolled cakes is not uniform and does not reach a given level, this can mean forming some defects, which can be revealed during a hot-rolled process, relatively during following technological operations leading to a quality decrease and in a consequence to product disqualification.



The research paper made by R. Rząsiński and P. Gendarz on "Methods of creation series of types of technology" on a **page 150** describes new methods of transformation technology into construction was introduced in the process of creating ordered technologies on the basis of the series of construction types. The worked out datum of these methods is already elaborated ordered families of construction in form of series of types or modular series of elements construction. The basic result of the analysed problem is the realisation of relations between construction and technology for specified series of types of elements of machine engines. Moreover, the theory of technological similarity with its essential constituents which determine input date of algorythmisation of processes of selection of technological features on basis of constructional features was introduced. The method of the technological similarity, the algorithmic method and CAM method are basis for selection of technological features in the process of already ordered technology families (series of types and module systems of constructions) creating. This method is characterised with possibility of shortening time connected with preparation of manufacture and the enlargement of seriality of manufacturing.

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