

E-ISBN: 978-605-68537-7-7

TICMET'19

October 10-12, 2019

The International Conference
of Materials and Engineering
Technology

(Uluslararası Malzeme ve
Mühendislik Teknolojileri
Konferansı)

Mavera Congress &
Art Center
Gaziantep University
Gaziantep/TURKEY



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INTERNATIONAL ORGANISATION FOR MIGRATION (IOM)



Established in 1951, IOM is the leading inter-governmental organization in the field of migration and works closely with governmental, intergovernmental and non-governmental partners.

With 173 member states, a further 8 states holding observer status and offices in over 100 countries, IOM is dedicated to promoting humane and orderly migration for the benefit of all. It does so by providing services and advice to governments and migrants.

IOM works to help ensure the orderly and humane management of migration, to promote international cooperation on migration issues, to assist in the search for practical solutions to migration problems and to provide humanitarian assistance to migrants in need, including refugees and internally displaced people.

The IOM Constitution recognizes the link between migration and economic, social and cultural development, as well as to the right of freedom of movement. IOM works in the four broad areas of migration management:

- Migration and development
- Facilitating migration
- Regulating migration
- Forced migration.

IOM activities that cut across these areas include the promotion of international migration law, policy debate and guidance, protection of migrants' rights, migration health and the gender dimension of migration.

IOM IN TURKEY

IOM Turkey, the UN Migration Agency first opened its offices in Turkey in 1991 following the aftermath of the Gulf War. IOM's partnership with the Republic of Turkey was formalized in November 2004 when Turkey was

granted member status to IOM. The partnership between IOM and Turkey continued since then, including support drafting the Law of Foreigners and International Protection, as well as establishing the Ministry of Interior's Directorate General for Migration Management in 2013. Now in its 27th year of operations in Turkey, the mission addresses the full scope of migration issues, supporting and developing government capacity to manage migration.

Initially focusing its attention on resettlement for Iraqi refugees in the 1990s, IOM Turkey later expanded in response to the devastating earthquake of 2011 in Van to include emergency response programmes. The mission's emergency response programmes have continued to grow rapidly since 2012 and 2015 with the start of the Syrian crisis and Mediterranean crisis.

Alongside IOM's role in addressing the needs of migrants during crises, the mission works in close collaboration with the Government of Turkey to address the longer-term impact of migration, including migrant assistance programmes, labour integration and migration management, immigration and border management and research and data collection on migrant movement.

Our resettlement programme has also grown to play an important role in the process of resettling refugees abroad through cultural orientation, medical checks and flight arrangements to third countries.

With over 25 years of operational experience in Turkey, the Mission is now one of the largest globally and has more than 900 staff working across the country, with sub-offices in Istanbul, Gaziantep, Hatay, Sanliurfa and Izmir and head office in Ankara.



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CONFERENCE OBJECTIVE

The International Conference of Materials and Engineering Technology (TICMET'19) will be organized by Gaziantep University and together with other collaborating universities in Gaziantep, TURKEY on 10-12 October, 2019.

Gaziantep, a city Southeast Anatolia is the 6th largest city in Turkey. The city has a rich cultural heritage and it has been incorporated into the creative cities network by UNESCO in the field of gastronomy.

The main objective of TICMET'19 is to present the latest research and results of scientists related to Computer Sciences, Electrical&Electronics, Energy Technologies, Material Sciences, Manufacturing Technologies, Mechatronics and Biomedical Technologies. This conference provides opportunities for the different areas delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration. We hope that the conferences results constituted significant contribution to the knowledge in these up to date scientific field. The organizing committee of conference is pleased to invite prospective authors to submit their original manuscripts to TICMET'19.

All abstracts will be reviewed and evaluated by the referees in the relevant field on the basis of technical and / or research content / depth, accuracy, relevance to the conference, contributions and readability.

Selected papers presented in the conference will be published one of the following journals:

- The International Journal of Materials and Engineering Technologies (TIJMET) (Dergipark)
- El-Cezeri Journal of Science and Engineering (TR Dizin)

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INVITED SPEAKERS

MUAMMER KOÇ



Invited Speaker

Prof. Dr. Muammer KOÇ

Professor and Coordinator

Hamad Bin Khalifa University (HBKU)

Prior to his appointment as a founding professor of sustainability at HBKU in 2014, Professor Koç held professor, director, chair and dean positions at different universities in Turkey and the USA between 2000-2014. He has a PhD degree in Industrial and Systems Engineering from the Ohio State University (1999) and an Executive MBA degree from the University of Sheffield, UK (2014). He has published 130+ publications in various international journals and conferences; edited three books; organized, chaired, and co-chaired various international conferences, workshops and seminars on design, manufacturing and product development. In addition to his academic and educational activities, he provides consulting services to industry, government and educational institutes for strategic transformation, business optimization, organizational efficiency, lean operations, restructuring and reengineering initiatives. He has taught courses across a range of subjects, including product/process/business innovation and development; medical design and production; energy and efficiency; computer-aided engineering, design and manufacturing; modern manufacturing technologies; manufacturing system design; material forming plasticity; and the mechanical behavior of materials.

MARWAN KHRAISHEH



Invited Speaker

Prof. Dr. Marwan KHRAISHEH

Hamad Bin Khalifa University
(HBKU)

Prior to joining the Masdar Institute faculty, Dr. Khraisheh was the Secat - J. Morris Professor and the Director of Undergraduate Studies in the Mechanical Engineering Department at the University of Kentucky. His research interests include materials processing and sustainable manufacturing. He currently focuses on developing innovative concepts and techniques for processing and fabrication of advanced materials including lightweight alloys. Dr. Khraisheh is a recipient of a number of significant awards including the prestigious US National Science Foundation CAREER Award, the 2004 Society of Manufacturing Engineers (SME) Eugene Merchant Outstanding Young Manufacturing Engineer Award, the 2003 North American Manufacturing Research Institute (NAMRI) Outstanding Paper Award and the 2005 Henry Mason Lutes Award for Excellence in Engineering Education. He serves on the Editorial Board of Journal of Materials Processing Technology (Elsevier) and is a member of a number of international technical committees from ASME, ASM and TMS. Dr. Khraisheh has edited a proceeding book for ASME and has more than 110 publications including refereed journal papers, refereed conference papers and presentations.

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Invited Speaker

Prof. Dr. Zakaria BOUMERZOUGUniversity Mohamed Khider
of Biskra

ZAKARIA BOUMERZOUG

Zakaria Boumerzoug is a professor of metallic materials at Biskra University. He joined Biskra University in 1992. He obtained his PhD from Constantine University in 1998. He published fifty articles and he participated to more than thirty international conferences as speaker and invited speaker. He was as a member and also as a guest editor in some international conferences. He has supervised 17 PhD students. He has reviewed many articles of some scientific journals. He is a chief of an international project between Biskra University and UMONS University in Belgium. He has a short international teaching experience at Cadiz University, Spain, May 2017(ERASMUS Program). He has organised more than 10 scientific meeting in Algeria.



Invited Speaker

Assoc. Dr. Mehmet AYDINComputer Science
University of the West of England

MEHMET AYDIN

Mehmet AYDIN joined CSCT department at the end of January 2015 as Senior Lecturer in Computer Science. Prior to this post, Mehmet AYDIN have worked in academic and research positions for various universities including University of Bedfordshire, London South Bank University and University of Aberdeen. Mehmet AYDIN editorial board member of a number of international peer-reviewed journals, and have been serving as committee member of various international conferences. Mehmet AYDIN also member of EPSRC Review College and fellow of Higher Education Academy. Mehmet AYDIN's research interests include parallel and distributed metaheuristics, wired/wireless network planning and optimization, combinatorial optimization, evolutionary computation and intelligent agents and multi agent systems.



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INVITED SPEAKERS



Invited Speaker

Prof. Dr. Yousef HAIK

Hamad Bin Khalifa University
(HBKU)

YOUSSEF HAIK

Youssef Haik is an internationally recognized scholar in the fields of engineering and nanotechnology. He has made notable contributions to the creation of novel nanomaterial that have seen applications in magnetic hyperthermia, onsite diagnostics, antimicrobials and solar cells. He is an inventor of numerous patents, many of which have been licensed. His publication record includes over 250 peer-reviewed articles, textbooks and conference proceedings. He is honored with a number of prestigious awards, including among many, the HH Sheikh Khalifa Award for Distinguished Research Professor, Arab Thoughts Foundation and the FUIW-FUMI Research Award. He is a fellow of the American Society of Mechanical Engineers (ASME) and a member of more than a dozen international societies. He serves as the Editor in Chief and on the editorial board for more than a dozen international journals. His academic career has included appointments in engineering (Mechanical, Biomedical and Nanoengineering) and science (Medicinal Chemistry, Physics and Nanoscience) programs. He is an ABET evaluator. His administrative appointments include Associate Vice President, Dean, Director for Research Centers, Department Chair and Graduate Programs Director. He has led the creation of a number of degree programs.



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ASLANKAYA DÖKÜM

Aslankaya Döküm yakın zamanda, kendi alanında uzman bir ekip ile Gaziantep 5. Organize Sanayi Bölgesi'nde kurulmuştur. Bölgede ürün kalitesi ve üretim teknolojisi olarak öncü bir marka olma konusunda emin adımlarla ilerleyen firmamız, kaliteyi kendine ilke edinmiştir. 5000 m2 kapalı alanda üretim faaliyetlerimizi gerçekleştiriyoruz. Şirket olarak teknolojik gelişmeleri yakından takip ederek Güneydoğu Anadolu bölgesinin en gelişmiş dökümhane laboratuvarı ve son teknoloji test ve analiz cihazlarıyla döküm sektöründe hizmet vermekteyiz.

Bulunduğu bölgede ilkleri gerçekleştirme becerisine sahip yetenekli insan gücü ve bilgi birikimine sahip olan Aslankaya Döküm, özel dökümhanelere kıyasla ürettiği parça ve yedeklerle bu bilgi birikimi ve becerisini ortaya koymuş ve kendini ispatlamıştır.

Firmamız çevreye duyarlı, kaliteli ve rekabetçi hizmet anlayışıyla üretimin her aşamasında müşteri memnuniyetini ilke edinmiştir. İnşaat ve Maden Endüstrisi, Çimento Endüstrisi, Makine Endüstrisi, Enerji Sektörü başta olmak üzere birçok sektöre ve alana en üst kalite ile üretim yapmaktayız.



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Anadolu Mühendislik 1988 yılında demir & çelik fabrikalarına refrakter malzeme üretimi için Gaziantep'te kurulmuştur. Kısa sürede geniş bir müşteri portföyü edinen firmamız, ilerleyen yıllar içerisinde ithalat ve ihracata ağırlık vermiş, Avrupa, Asya, Afrika ve Ortadoğu ülkeleri gibi çok geniş bir coğrafya ile ticari ilişkiler kurmuş çok çeşitli refrakter ürünleri ithal ve ihraç etmektedir.

Firmamızın üretmiş olduğu ürünler:

- ✓ Pota sürgü plakaları ve Refrakterleri
- ✓ Tandış Zirkonya Nozulları
- ✓ Şekilli Refrakterler
- ✓ Çelik Könvertörler için Curuf kesme dartı
- ✓ Pota nozul kumu
- ✓ Refrakter harçları (Alumina, Manyezit)
- ✓ DC-AEF için iletken sıcak tamir harcı
- ✓ Pota sürgü sistemleri, Tandış mekanizmaları ve yedekleri
- ✓ Tandış akış kontrol sistemi
- ✓ Sürgü Plakası ve Nozul sacları



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Gazi Haksan 1994 yılında Kadir FIRAT tarafından CNC dik işlem makine,CNC kayar otomat,CNC c eksen sürücülü makineleri ile yedek parça imalatına başlamıştır.

2000 yılında metal enjeksiyon, plastik enjeksiyon kendi kalıplarını üreterek, asansör ve çelik para kasaları yedek parça imalatı ile Gaziantep sanayisine katkıda bulunarak Türkiye'nin bir çok yerinde çeşitli sektörler ile çalışarak hizmet vermektedir. 1000 metrekare arazi üzerindeki fabrikada Türkiye'nin birçok bölgesindeki şehirlere uzanan hizmet ağı ile ülke ekonomisine katkıda bulunmaya devam etmiştir.



YÜCE TEKNİK; Firmamız 2007 Yılında kurulmuş, kuruluşundan Bu Yana Edindiği Ticari Tecrübesini Yenilikçi Yapısı Ve Zengin Ürün Yelpazesiyle Birleştirerek, Metal Sektöründe Faaliyet Gösteren Firmalara Tedarikçi Konumuyla Perakende ve Toptan satış olarak Hizmet Vermektedir.

Teknik hırdavat ve kalıp Elemanları ürünleri üzerine kurulan firmamız 2017 yılından itibaren kendi markası (HERO, WINDBREAKER,YTH) adı altında ithalat ve ihracat yapmaya başlamıştır.

Yüce Teknik, metal sektöründe müşteri odaklılık prensibi üzerinde çalışan, sektörünü iyi tanıyan, paydaşlarının beklentilerini bilen ve yeni beklentiler tanımlayıp, bunların en üst düzeyde tatminini hedefleyen, yaratıcı insan gücüne sahip ve bu doğrultuda tedarik sürecinde en iyi hizmeti veren, güvenilir, Teknik Hırdavat ve Kalıp elemanlar değer zinciri alanlarında verimli ve kârlı hizmet sunmayı hedefleyen bir Teknik Hırdavat şirkettir.



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günmak®

Günmak Makine; 1975 yılında ilkokul 3. Sınıftan terk Sıddık KAYABAŞ tarafından 75 m2 bir alanda temelleri atılan, zaman içerisinde kendini bilgi ve tecrübe olarak geliştirmenin yanında, alan ve ekipman olarak ta büyüme sağlayan şu anda 4. Organize sanayi bölgesinde 25.000 m2 bir kurulu alanda, makine ve helezon üretimi yapmaktadır. Ürün yelpazesi oldukça geniş olan GÜNMAK MAKİNE, başlıca üretimi; Anahtar teslimi Bulgur tesisleri, kırmızı mercimek tesisleri, bakliyat çeşitlerinin(arpa, yulaf, bakla, mısır, kinoa, sorgum, bezelye, nohut, pirinç vb.) her türlü makinaları(temizleme, kabuk soyma, taş ayırma, yıkama, eleme ve sınıflandırma vb.) mısır çerezi üretim makinaları, Antep fıstığı kurutma ve taşıma sistemleridir. Ayrıca plastik geri dönüşüm tesisleri, beton santralleri , asfalt plantleri, yağ fabrikaları, bakliyat üretim tesisleri, maden ocakları gibi bir çok iş kolu için ise değişik çap ve modellerde helezon üretimi yapmaktadır. Bugün itibarı ile 2 ülkeye ihracat gerçekleştirmekte, ihracat ağını genişletmek için yoğun dış ticaret faaliyetlerinde bulunmaktadır.

Sürekli ve köklü değişim fırtınaları her alanda tüm sektörleri vuruyor; işletmeler, bireyler, meslekler ve kariyerler savruluyor. Başlarını kuma gömüp fırtınaların dinmesini beklemek, eskiden öğrenilenler, geleneksel yaklaşımlar yeni durumla başa çıkmaya yetmiyor. Öğrenilmiş savunma mekanizmaları, durumu kötüleştirmekten başka bir işe yaramıyor. Firmalar yenilik için ARGE merkezleri kurarak değişim rüzgarına karşı en önemli adımları atıyorlar.

Günmak değişimin gerekliliğini, yenilikçiliğin olmadığı firmaların yarınlara yelken açamayacağını bilincindedir. Bu kapsamda sürekli kendi ile yarışan yeni ürünler geliştiren ve üretenlerin başında gelmektedir. 1990 ılı yıllardan beri Üniversite Sanayi işbirliği ile AR-GE bilincini başlatan, personeli bu bilinç ile yetiştiren firma, Tübitak'tan 4 projede 7 Adet AR-GE yaparak gıda dalında en fazla proje yapan firma olmuştur. 2017 yılında yapmış olduğu Bakliyat, hububat pişirme ve kurutma ve Antep fıstığı kurutma ünitesi ile, üretim kapasitesinde ve enerji tasarrufunda çok büyük ilerleme kaydederek patent başvurusu yapmış ve Türk Patent Kurumundan belgeleri almaya hak kazanmıştır. Yöresel bir ürün olan hububat ve Antep fıstığının hijyenik şartlarda el değmeden üretilmesi maksadı ile geliştirilen bu üniteler Avrupa gıda normlarına ve CE standartlarına uygun yüksek kapasiteli, istenilen nem oranında kurutma imkanı sağlamaktadır. Düşün enerji tüketimi, uygun kurutma oranları ile müşterilerine , geniş rekabet ortamında büyük avantaj sağlamıştır. GÜNMAK bundan sonra da aynı düşünceler ile uluslararası firma olma yolunda, Güzel ülkemizin istihdamına ihracatına ve gelişimine katkı sağlamak üzere tüm enerjisi ile yoluna devam etmektedir.

SIMPACT OF LI CO RATIO ON LITHIUM ION BATTERY CATHODE PERFORMANCE

OZLEM KAP¹, NESRİN HORZUM¹, MESUT ER²

¹ Izmir Katip Celebi University, Turkey

² Tubitak Marmara Research Center Energy Institute, Turkey

ABSTRACT

Lithium-ion batteries (LIBs) have become the technology of choice for portable electronics, power tools and hybrid/full electric vehicles [1]. The research and development of the battery systems are of the great importance of increasing energy requirements to improve energy density, cycle lifetime, cost and performance. Various combinations of materials used for the production of LIBs with superior electrochemical properties are essential for developing batteries. Polymers and transition metal oxides have been extensively investigated as electrolyte and electrode materials due to their high theoretical capacity, excellent safety, eco-benignity, and colossal abundance[2]. Mainly lithium metal oxides due to their high specific energy are the popular choice for mobile phones, laptops, and digital cameras for microscale technology.

Furthermore, nanosized lithium metal oxide structures are preferred because of the fast transport of Li-ion by shorter diffusion path and higher mass to charge ratio. Among the nanostructures, the use of nanofibers as electrolyte and electrode materials provides a lower load transfer resistance. Metal oxide nanofibers can be readily fabricated by electrospinning followed by calcination, providing advantageous structural properties such as high surface/volume ratio, porosity, and interconnection. Electrospun LiCoO₂ and TiO₂ supported LiCoO₂ nanofibers are fabricated as electrode materials for LIBs. Composite fibers are obtained from titania nanoparticles dispersed in the aqueous solution of polyacrylic acid and Li, Co hydroxides. Upon calcination at low and high temperatures, the polymer matrix is removed, metal oxide particles are nucleated and crystalline structure of metal oxide nanofibers have changed. We have investigated the effect of calcination temperature and Li/Co molar ratio on the electrochemical performance of the Li/LiCoO₂ half-cell.

Paper Keywords : electrospinning, Li-ion batteries, cathode

EFFECT OF CHITOSAN AND PRINTING INKS ON THE PROPERTIES AND BIODEGRADABILITY OF BIOCOMPOSITE PACKAGING FILMS

TUBA KAVAS AKARCA¹, NESRİN HORZUM¹

¹ Izmir Katip Celebi University, Turkey

The use of synthetic petroleum-based packaging films causes serious environmental problems due to their difficulty in recycling and poor biodegradability. As an alternative, natural biopolymer-based biodegradable packaging films can replace synthetic packaging films [1]. Another problem is the inks that produce the colored design on the films are mostly based on pigments containing heavy metals [2]. In this study, the production of biocomposite films containing synthetic (low-density polyethylene, LDPE) and natural (chitosan) polymers using extrusion and blow molding processes and the effects of the inks applied to the resulting films on biodegradability were investigated. Commercial (local product) chitosan flakes were ground by disc milling followed by sieving using different mesh sizes to obtain the particles below 20 μm and 45 μm . The extruded films of LDPE and chitosan fine powder were prepared with the addition of polyethylene-graft-maleic anhydride and the sorbitan ester. PE/Chitosan films were characterized through morphological, structural, thermal and mechanical analysis and compared with an extrudable biodegradable polymer commonly used in the industry. Furthermore, the biodegradability of the films before and after colorization was performed using the soil burial test method.

Acknowledgments: This study was financially supported by IKCU Department of Scientific Research Projects with the grant number İKÇÜ-2018-GAP-MÜMF-0002.

Keywords: biocomposite packaging, biodegradability, biodegradable ink, blown film extrusion

REMOVAL OF LEAD IONS FROM AQUEOUS SYSTEM USING ALGAE BASED NANOFIBER SORBENTS

FATMA RABİA KARADUMAN¹, SANİYE TURK CULHA¹, NESRİN HORZUM¹

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ABSTRACT

Heavy metal pollution is causing serious damage to the ecosystem and living environment as a result of the increase in urbanization and industrialization along with the human population. The steady reduction of clean water resources requires the development of effective, environmentally friendly and low-cost treatment applications. Among the applicable methods including sorption, ion exchange, reverse osmosis, chemical precipitation, etc., sorption has been recognized as the most optimum one due to its high efficiency and ease of implementation. Biosorption of the metal ions can be realized using biological materials (algae, fungi, etc.) [1] that functional groups having metal-binding ability such as carboxyl, hydroxyl, amino, and phosphate [2]. Nanofibers are used as filtration materials due to their high porosity, specific surface area, and functionality [3]. For this purpose, this study cost-effective and ecological nanofiber sorbents containing brown marine macroalgae are successfully fabricated by electrospinning to remove lead ions (Pb(II)) from aqueous solutions. Electrospun bionanofiber sorbents are produced from polyacrylonitrile (PAN)/Cystoseira barbata. Scanning electron microscopy (SEM) is used for the morphology of the composite nanofibers and the elemental content is analyzed with the Energy Dispersion X-ray (EDX) detector. Structural characterization studies are performed by using Fourier transform infrared (FTIR) spectroscopy, thermogravimetric analysis (TGA), and X-Ray Diffraction (XRD) techniques. In order to examine the filtration efficiency of the nanofibers, both batch and column methods are used. The effects of sorption time, metal ion concentration, and temperature on the adsorption of Pb(II) ions on the nanofiber mat are investigated. The concentrations of the metals remaining in the filtrates before and after filtration are determined by inductively coupled plasma-mass spectrometry (ICP-MS).

Paper Keywords : Algae, Biosorption, Cystoseira barbata, Electrospinning, Heavy metal removal

EFFECTS OF COLD METAL TRASFER CMT WELDING PARAMETERS ON THE CLAD BEAD PROFILE

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ABSTRACT

The effects of the cold metal transfer (CMT) welding process variables on weld cladding bead geometry and dilution were studied using a newly developed flux cored cladding material 'Hadtic' deposited onto mild steel plate. Using a systematic approach a series of experiments were carried out to identify the effect of wire feed speed (WFS), arc length correction (ALC), dynamic correction (DC), and weld traverse speed (WS) on the clad bead geometry and dilution. The findings indicate that the dilution of the bead and its dimensions i.e. weld bead width and penetration depth and the reinforcement height are dependent on the process parameters. Undesirable features of welding like the generation of the spatter and excessive fume can be controlled if the process parameters are optimised for the specific cladding wire.

PRODUCTION OF SINOITE CERAMICS A NOVEL ONE STEP METHOD VIA SPARK PLASMA SINTERING

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ABSTRACT

Sinoite ($\text{Si}_2\text{N}_2\text{O}$) is a promising ceramic for several applications due to exhibit good performance at high temperatures. Synthesis and densification of $\text{Si}_2\text{N}_2\text{O}$ was aimed in one-step by spark plasma sintering (SPS) technique using SiO_2 , Si_3N_4 as starting powders and Li_2O as sintering additive and optimized of pressure, temperature values and sintering time to achieve full dense of monolithic samples. Lattice parameter, crystallite size and amount of formation phases were characterized by X-ray diffraction (XRD) technique and grain morphology, particle size and distribution were analyzed by scanning electron microscope (SEM). Results showed that the maximum $\text{Si}_2\text{N}_2\text{O}$ ratio was reached as 98% by sintering for 15 minutes at 1650°C under 30 MPa pressure. Present research was supported by TUBITAK under project number 217M667.

Paper Keywords : Sinoite, Ceramic, Spark Plasma Sintering

NUMERICAL AND EXPERIMENTAL STUDY OF DC04 SHEET METAL FORMABILITY

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ABSTRACT

In this paper, a set of experiments and FEA simulations are presented to simulate a Bulge test. Bulge test is used to evaluate the flow stress data in biaxial manner for higher strain values without localized necking compared to a uniaxial tensile test. For the beginning, a set of tensile test is conducted to describe the uniaxial mechanical values of DC04, aluminum alloyed steel material which is commonly used in automotive parts. The experimental results in terms of engineering force and displacement values are measured at the speed of 25 mm/min. according to the ASTM E8 standard. DC04 mechanical properties are inserted in FEA simulation taking account of real stress and strain, then simulations are conducted for Bulge test die using different geometrical models; without draw bead as well as with draw bead in two various penetration depth in order to assess draw bead effects on material flow between blankholder and die. The numerical results of Bulge test simulations shall be overall presented and discussed.

Paper Keywords : Formability, Sheet Metal, Finite Element Analysis

THIN FILM MXENE METAMATERIAL ABSORBER FOR SOLAR CELL APPLICATIONS

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ABSTRACT

Solar cells do not have ability to absorb the majority of the electromagnetic waves that are coming towards them. Our aim is using MXene which is a new member of two-dimensional (2D) materials family to increase the efficiency of solar cells by increase the absorption coefficient. We designed, simulated and analyzed MXene metamaterial absorber in the visible frequency region for solar cell applications. The proposed design provide wide band with a maximum of 96.8 % absorption independency under normal incidence.

Paper Keywords : MXene, solar cell, efficiency, wide band absorber, visible frequency

BOILING HEAT TRANSFER PERFORMANCE ENHANCEMENT OF GRAPHENE CARBON NANOTUBE HYBRID NANOCOATING

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ABSTRACT

Graphene has attracted special interest in the field of boiling heat transfer due to its unique deposition characteristics in aqueous dispersion. The self-assembled porous deposition layer of graphene, formed over the heating surface during boiling, retards the transition boiling significantly. This study aims to improve the boiling heat transfer characteristics of the graphene dispersion by introducing a small concentration of carbon nanotubes into the fluid. Experimentally, boiling tests were conducted with graphene-only and mixture of graphene and carbon nanotube dispersed fluid at different particle concentrations over a flat plate heating surface. During boiling, graphene nano-sheets and carbon nanotubes simultaneously deposited on the heating surface to form a 3D porous hybrid coating. The responsible mechanisms of hybrid deposition were identified, and a series of characterization methods such as Scanning Electron Microscopy, Transmission Electron Microscopy, and sessile water droplet test is employed to identify the change in the morphology and wettability of the heating surface. The results show that well-ordered 3D porous hybrid deposition layer is responsible for the improvement of the boiling heat transfer. The new surface coating further enhanced the boiling heat transfer characteristics of water in comparison to the enhancement of graphene-only dispersion.

Paper Keywords : Boiling heat transfer, boiling curve, critical heat flux, heat transfer, graphene, CNT

BOILING HEAT TRANSFER PERFORMANCE ENHANCEMENT OF COLLOIDAL DISPERSION OF CARBON BLACK

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ABSTRACT

Dispersion of colloidal particles in fluids has proven to improve the boiling heat transfer characteristics significantly. Among different nanoparticle materials, carbon-based colloids proved superior performance enhancement. Despite the intense research on the boiling performance of carbon nanoparticles, such as graphene, carbon nanotube, and nanodiamonds, carbon black nanoparticles have never been tested. With the high conductivity, high specific surface area with micro and mesoporous structures, and cost-effectiveness, carbon black nanoparticles should be investigated in the enhancement of boiling heat transfer. Thus, this study deals with the boiling heat transfer enhancement of aqueous carbon black dispersion. Experimentally, stable dispersions of carbon black colloids are prepared in deionized water at different concentrations. An experimental pool boiling apparatus with a flat copper heating surface is employed in the investigation of the boiling heat transfer performance of the carbon black colloids. The heat transfer coefficient and critical heat flux of the fluids increased with the increasing carbon black concentration. The critical heat flux enhancement is attributed to the good lateral heat conduction of the microlayer of carbon black nanoparticles which prevented localized heating by spreading the surface heat in bilateral directions and delayed the formation of hot/dry spots to higher heat fluxes.

Paper Keywords : Boiling heat transfer, boiling curve, heat transfer coefficient, critical heat flux, carbon

BALLISTIC PERFORMANCE OF ULTRA HIGH STRENGTH ARMOR STEELS UNDER DIFFERENT CONDITIONS

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ABSTRACT

This study investigates the ballistic impact responses of two armor steels (Armox Advance, Ramor 500) and a structural wear plate (Hardox 450) with monolithic, double-layered and pre-perforated plates configurations. 7.62 mm NATO Ball, 7.62 AP (armor piercing) and 12.7 mm APM2 bullets were used as ammunition for ballistic tests. All the tests were performed complying with EN 1522/1523 ballistic test standards and at FB6 and FB 7 test levels. Test results showed different perforation behaviors for different plate configurations. All the monolithic plates were perforated with 7.62 mm AP bullets except Armox Advance. Double layered plate configurations, on the other hand, showed resistance to penetration. Among those, only the Ramor 500+Ramor 500 double plate configuration was perforated by 7.62 mm AP bullet. All pre-perforated plate configurations resulted with total protection regardless of ammunition type.

Paper Keywords : Ballistic test, armour steel, structural steel, EN 1522/1523, 7.62 mm, perforation

COMPARISON BETWEEN DIMETHYL ETHER DME AMMONIA AND METHANOL AS LARGE SCALE ENERGY CARRIER AND STORAGE BASED ON BOIL OFF GAS

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ABSTRACT

As the demand and the production of energy increases, storage, and transportation of large-scale energy becomes a significant topic. Large-scale energy is stored and shipped in liquefied fuel forms due to reduction in volume, however storage medium in a liquid form with low boiling temperature loses some of its energy because of evaporation, called boil-off gas (BOG), caused by a change in temperature between the storage medium and the ambient. Therefore, this study presents sensitivity analysis for three types of energy carriers: dimethyl-ether (DME), ammonia and methanol to store and transport energy overseas. A calculation method is used to determine the BOG rates for the three liquid fuels in their supply chain. A sensitivity analysis is presented for the effects of changes in environmental temperature, shipping time, land storage period on storing and transporting performances. The study shows which of these energy carriers lose the most of their mass and deliver the greatest energy and define which are the significant parameters affecting the BOG rates.

Paper Keywords : Energy Carriers; Sensitivity Analysis; Dimethyl-ether; Ammonia; Methanol

NUMERICAL AND EXPERIMENTAL STUDY OF DC04 SHEET METAL SPRINGBACK

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ABSTRACT

In this paper, a set of experiments and FEA simulations are presented to simulate a Springback U-bending test. A set of tensile test is conducted to describe mechanical values of DC04, aluminum alloyed steel material which is commonly used in automotive parts. The experimental results in terms of engineering force and displacement values are measured at the speed of 25 mm/min. according to the ASTM E8 standard. DC04 mechanical properties are inserted in FEA simulation and simulations are conducted for U-bending test die using two different mathematical model; an anisotropic model, HILL48 and an isotropic model, POWER-LOW. The numerical results of springback tests shall be overall presented and discussed.

Paper Keywords : springback, DC04, FEA simulation, U-bending

SUSTAINABILITY STUDIES FOR TEXTILE INDUSTRY

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ABSTRACT

Sustainability has a crucial importance for textile industry like all the other industries. Therefore, there are various studies about this topic. The subject was defined in Brundtland Commission as: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. So, it can be said that this subject is important for us and the future of the world” [1], [2]. Most of these studies are focused on reusing production wastes and recycling post-production and post-consumer wastes. There are successful examples like r-PET fibers. These fibers are recycled from PET bottle wastes and successfully implemented in textile industry [3], [4]. They are mostly used in garments and composites. Cotton is also recycled and used in textiles or other products [5], [6]. In this study, a literature review about the terms “sustainability” and “circular economy” will be carried out and information on reusing and recycling in textiles will be given.

Paper Keywords : Sustainability, Circular economy, Textile industry, Recycling, Reusing.

CONTROLLING THE STRUCTURE AND PERFORMANCE OF GRAPHENE OXIDE MEMBRANES

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ABSTRACT

Advanced membranes fabricated of multilayer/laminated graphene oxide (GO) are promising in water treatment membrane applications as they provide very high flux and good rejection of various water pollutants. However, these membranes are quasi stable and suffer from stability and swelling due to the hydrophilic nature of graphene oxide. In this presentation, we improved the stability and performance of laminated GO membranes via functionalization with different amine containing molecules. The membranes are fabricated via vacuum and pressure filtration and their structure is characterized using SEM, AFM, and mechanical testing. Pillaring the GO layers using diamine or polyamine molecules resulted in improved membrane stability and durability and increased water flux. Moreover, analysis of the effects of GO functionalization on the membrane separation performance in oil and of heavy metal removal will be presented. Our results indicate that proper functionalization of GO and GO membranes provides roadmap for potential commercialization of such advanced membranes in water treatment application..

Paper Keywords : Graphene Oxide, Membrane, Water Treatment, Functionalization

SYNTHESIS AND CHARACTERIZATION OF HIGH PERFORMANCE ALUMINUM GRAPHENE NANOCOMPOSITES FOR LIGHT WEIGHT APPLICATIONS TOWARDS ENERGY EFFICIENCY GOALS

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ABSTRACT

One route to facing energy-related challenges and enhancing environmental sustainability is through material science. Synthesizing novel light-weight ultra-tough materials and utilizing it in aviation technologies, space applications, and transportations suggests that less fuel will be required to operate those light yet strong frames and parts. This should reduce harmful emissions and enhance energy efficiency. In this regard, nanocrystalline aluminum is 10 times stronger than conventional micron-sized aluminum yet is thermally unstable. On the other hand, graphene is two-dimensional with extraordinary mechanical properties and unique morphology. In this study, we report successful fabrication of novel graphene reinforced nanocrystalline Al-2at.%Li-1at.%Sr composites via mechanical milling. The final material is a thermally stable Al-Gr composite with a grain size of 30nm with a high hardness value of 2.1GPa. Thermal stability of Al-Gr composite was maintained up to 600oC (about 90% of the homologous temperature) with a hardness of 1.1GPa. TEM analysis showed the presence of hexagonal graphene sheets distributed along the Al matrix as well as the formation of rod-like Al₄C₃ phase at high temperatures. In addition, irregularly large Sr related grains were observed to exist along certain Al grain boundaries. The presence of Al₄Sr and Al₄C₃ phases along the grain boundaries and triple junctions of Al suggest thermodynamic stabilization of the GNP-Al composite. While the presence of GNP sheets as well as Al₄C₃ phases inside Al grains suggest the contribution of kinetic stabilization. Conducting this research does not only guide other future research possibilities on other Al alloys, but it is also considered a stepping stone in the direction to enhancing structural functions and technologies to be applied around the world.

Paper Keywords : Nanocrystalline,Aluminum,Graphene,Nanocomposites

CHARACTERIZATION OF FATTY ACID METHYL AND ETHYL ESTERS IN VIRGIN OLIVE OILS AS AFFECTED BY CULTIVAR

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ABSTRACT

Olive oil is extracted directly from the fruit of the olive tree (*Olea europea* L.) without any chemical treatment. Especially, in the Mediterranean diet, it is highly appreciated for its nutrition, health and sensory properties and it constitutes one of the main components of nutrition. Due to these superior properties, olive oil is one of the most agricultural product exposed to adulteration with economic interests. Fatty acid methyl (FAME) and ethyl esters (FAEE) are one of the important quality parameters in the classification of olive oil. These compounds can also be used to detect that other oils are mixed into the olive oil. Methyl esters of fatty acids determine limits on the content of fatty acids in olive oil and are also chemical compounds used in differentiation between the original olive oil and other vegetable oils. So, the objective of this study is to characterize the fatty acid methyl and ethyl esters of some Turkish olive oils obtained from Nizip Yaglik, Gemlik and Halhali cultivars. To analyze these compounds, a suitable internal standard is added to the sample, then passed through an active hydrated silica gel column to separate its fractions. Then, appropriate fraction is collected, and directly transferred into capillary column gas chromatography.

Paper Keywords : Olive oil, Fatty acids, Methyl and ethyl esters, GC-FID.

DETERMINATION OF STEROL PROFILE OF SELECTED TURKISH OLIVE OILS USING GC FID

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ABSTRACT

Sterols constitute the majority of the unsaponifiable fraction in olive oils. They have an important role to virgin olive oil (VOO) quality regulation. In addition, in terms of health, it reduces cholesterol levels by resisting absorption in the intestinal tract and has a preventive effect against some cancers. Also, they can be used to detect that other oils are mixed into the olive oil. So, the objective of this study to investigate and compare the sterol profiles of virgin olive oils. Oil samples added to an internal standard (α -cholestanol) are saponified with potassium hydroxide in ethanolic solution and the unsaponifiables are then extracted with ethyl ether. The sterols are separated from the unsaponifiables by capillary column gas chromatography. As a result of GC-FID analysis, total sterol content was determined as 1732, 1704, and 1254 ppm for NY, GEM and HAL, respectively. The main sterols found in olive oils were β -sitosterols. The percentages of β -sitosterols were identified as 94.12, 94.81, and 94.64 % for NY, GEM and HAL, respectively. According to principal component analyses (PCA), olive oils were clearly separated in different parts of screen plot according to sterol profile.

Paper Keywords : Olive oil, Sterols, Unsaponifiable, GC-FID, PCA.

COMPARISON OF ELECTROLYTIC ETCHING AND REACTIVE OF VILELLA FOR 300 SERIES STAINLESS STEEL

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ABSTRACT

Östenitik paslanmaz çelikler sektörde yaygın olarak kullanılan paslanmaz çelik türüdürler. Bu sebeple östenitik paslanmaz çeliklerin metalografik olarak incelenmesi konusu önem arz etmektedir. Bu malzemenin gerek hammadde şeklinde, gerekse üretim prosesinde davranışını incelemek ve yorumlamak gereklidir. Geçmişten günümüze 300 serisi paslanmaz çelik için farklı dağlama yöntemleri denenmiş ve geliştirilmiştir. Klasik dağlama yöntemi olarak bilinen damlatma şeklinde dağlamada uygun reaktif kullanıldığında doğru sonucu vermektedir. Elektrokimyasal dağlama mikroyapısal bileşenlerin tanımlanmasında başarılı sonuç sağlamaktadır. Bu çalışmada farklı kalitede paslanmaz çelik numunelere iki farklı dağlama yöntemi uygulanarak karşılaştırılma yapılmıştır. Deney sonuçlarına göre elektrokimyasal dağlamanın, Vilella reaktifi ile yapılan damlatma yöntemi ile dağlamadan daha iyi sonuç verdiği kanıtlanmıştır.

COMPARATIVE EVALUATION TO THE EFFECTS OF TISSUE SCAFFOLDING PRODUCTION METHODS OF SYNTHETIC AND NATURAL POLYMERS ON SCAFFOLD PROPERTIES

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ABSTRACT

Biodegradable biopolymers are often preferred in tissue engineering applications to improve tissue development, function, and provide the three-dimensional structure for the cells. Polymeric scaffolding materials provide suitable environment for damaged-tissue regeneration with biomimetic approach to cell adhesion, differentiation, extracellular matrix formation and mineralization. In addition, they have a wide usage area in biomaterials applications due to prepare in various compositions and shapes. According their sources, biodegradable polymers are mainly classified into two groups synthetic and natural. Therefore, fabrication method generally varies according the polymer species, and there are many tissue-scaffold preparation methods, which are changed according the chemical structure of polymers. However, scaffold preparation method is one of the important factors directly affecting the properties of tissue scaffolds such as mechanical strength, porosity, degradation-rate etc. Natural polymers are generally in the hydrogel structure and dissolve in aqueous medium. Therefore, instead of conventional methods, it can be formed as scaffolding by methods based on the removal of water from the structure under special conditions. However, in tissue engineering and drug-delivery systems, hydrogel structures can also be formed using by chelators to provide 3D-environment. While synthetic polymers are formed, organic solvents are generally used. They do not require any cross-linking ligands when preparing their homo or composite scaffolds. Fabrications in this maintenance generally do not require special conditions. Scaffolds can be easily produced from synthetic polymer using both conventional and novel methods. Various characterization methods are used to investigate the similarity of scaffolds intended for tissue engineering applications. The results obtained using these methods have shown that natural and synthetic polymers have superior and similar aspects to each other. As a conclusion, the choice of polymers as a scaffolding biomaterial depends mainly on the function and type of the targeted tissue, but the time and cost required for production should be considered.

Paper Keywords : Biodegradable biopolymers ,Synthetic Polymers ,Natural polymers,Scaffold Properties

SPIRAL KAYNAKLI ÇELİK BORULARIN KOROZYONA KARŞI FBE KAPLAMALARIN TEST VE KARAKTERİZASYONU

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ABSTRACT

Doğalgaz boru hatlarında koruyucu kaplamalara olan gereksinim ve daha uzun ömürlü olma talebi sürekli artmaktadır. Kaplama- altlık arayüzü arası kirlilikler, uygun olmayan yüzey hazırlama koşulları ve bunun yanında optimize edilmemiş kaplama proses parametreleri, zorlu çalışma şartlarında kaplamanın kullanım ömrünü sınırlamaktadır. Bu çalışmada farklı ortam koşullarında, toprak üstünde çalışan spiral kaynaklı çelik (X70M - PSL2) doğalgaz borularının katodik korozyona karşı korunması amacıyla elektrostatik spreyleme yöntemiyle uygulanan, ergiterek bağlanan epoksi esaslı (FBE, fusion bonded epoxy) kaplamaların test sonuçları ve kaplamaların karakterizasyonu sunulmaktadır. Tek katmanlı FBE kaplamaların performansına etki eden bir çok faktör arasında kaplama öncesi çelik ön yüzey hazırlıkları; kaplamanın performansını önemli ölçüde etkilemektedir. Yapılan deneysel çalışmalar, ilgili uluslararası test standartları ve şartnameler (CSA-Z245.20 seri 14) gerekliliklerine göre test edilmiş ve kimyasal karakterizasyon yöntemleri (FTIR, SEM) ile analiz edilmiştir. Değerlendirme sonucunda FBE kaplamaların başarılı bir şekilde uygulanabildiği ve farklı sıcaklık koşullarında katodik soyulma, yapışma, esneklik ve darbe testlerinden başarı ile geçtiği gözlemlenmiştir.

Paper Keywords : Çelik boru, Korozyon, FBE kaplama, Katodik soyulma

DETERMINATION OF THE TEMPERATURE AND PH EFFECT ON THE FIBROIN BASED TISSUE SCAFFOLDS FORMATION

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ABSTRACT

Fibroin is a natural biopolymer that is generally obtain from the Bombyx mori cocoons, and is widely used in tissue engineering studies. Because of its protein-based structure, fibroin shows amphoteric property due to antiparallel chains in the seconder structure. Exposure of fibroin to different temperature levels at different times affect the concentration, porosity, mechanical strength, physical and chemical properties of tissue scaffolds obtained from fibroin. In this study, by taking into consideration the amphoteric structure of silk fibroin, the different scales of temperature were used in different pH values for determination of the changes in scaffold formation. The isoelectric point of a fibroin is about pH 4.5 and, gelling is observed in fibroin solutions when pH was lower than 5 and pH was higher than 8. Therefore, the planned pH range for pH changes was chosen as 5, 6, 7 and 8. Ajisawa solution was used to solve fibroin. 3D-porous scaffolds were fabricated by using lyophilization-technic, vacuum-oven and stream-autoclave each. The physical and chemical properties of polymeric composite structures were evaluated by SEM, FT-IR and TGA. Biodegradation analysis were also performed in the HANK's Balanced Medium at 37°C during the 14 days. It has been found that scaffolds have different morphologies depending on the production methods according the SEM images, and there were significant differences in total surface area and porosity according the mercury porosimeter measurements. FTIR examination showed that no specific differances because of pH and temperature changes. However, thermal properties of the scaffolds did not change significantly according to production methods was determined. In addition, intra-molecular crosslinkings occurs between the chains without using any crosslinkers due to their amphoteric structure was determined. As a conclusion, the biocompatible scaffolds that have acceptable biodegradation time to support tissue regeneration was obtained by different production methods.

Paper Keywords : Fibroin, Thermal ,Scaffold ,Composite Structure



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Günmak Makine; 1975 yılında ilkokul 3. Sınıftan terk Sıddık KAYABAŞ tarafından 75 m2 bir alanda temelleri atılan, zaman içerisinde kendini bilgi ve tecrübe olarak geliştirmenin yanında, alan ve ekipman olarak ta büyüme sağlayan şu anda 4. Organize sanayi bölgesinde 25.000 m2 bir kurulu alanda, makine ve helezon üretimi yapmaktadır. Ürün yelpazesi oldukça geniş olan GÜNMAK MAKİNE, başlıca üretimi; Anahtar teslimi Bulgur tesisleri, kırmızı mercimek tesisleri, bakliyat çeşitlerinin(arpa, yulaf, bakla, mısır, kinoa, sorgum, bezelye, nohut, pirinç vb.) her türlü makinaları(temizleme, kabuk soyma, taş ayırma, yıkama, eleme ve sınıflandırma vb.) mısır çerezi üretim makinaları, Antep fıstığı kurutma ve taşıma sistemleridir. Ayrıca plastik geri dönüşüm tesisleri, beton santralleri , asfalt plantleri, yağ fabrikaları, bakliyat üretim tesisleri, maden ocakları gibi bir çok iş kolu için ise değişik çap ve modellerde helezon üretimi yapmaktadır. Bugün itibarı ile 2 ülkeye ihracat gerçekleştirmekte, ihracat ağını genişletmek için yoğun dış ticaret faaliyetlerinde bulunmaktadır.

Sürekli ve köklü değişim fırtınaları her alanda tüm sektörleri vuruyor; işletmeler, bireyler, meslekler ve kariyerler savruluyor. Başlarını kuma gömüp fırtınaların dinmesini beklemek, eskiden öğrenilenler, geleneksel yaklaşımlar yeni durumla başa çıkmaya yetmiyor. Öğrenilmiş savunma mekanizmaları, durumu kötüleştirmekten başka bir işe yaramıyor. Firmalar yenilik için ARGE merkezleri kurarak değişim rüzgarına karşı en önemli adımları atıyorlar.

Günmak değişimin gerekliliğini, yenilikçiliğin olmadığı firmaların yarınlara yelken açamayacağını bilincindedir. Bu kapsamda sürekli kendi ile yarışan yeni ürünler geliştiren ve üretenlerin başında gelmektedir. 1990 ılı yıllardan beri Üniversite Sanayi işbirliği ile AR-GE bilincini başlatan, personeli bu bilinç ile yetiştiren firma, Tübitak'tan 4 projede 7 Adet AR-GE yaparak gıda dalında en fazla proje yapan firma olmuştur. 2017 yılında yapmış olduğu Bakliyat, hububat pişirme ve kurutma ve Antep fıstığı kurutma ünitesi ile, üretim kapasitesinde ve enerji tasarrufunda çok büyük ilerleme kaydederek patent başvurusu yapmış ve Türk Patent Kurumundan belgeleri almaya hak kazanmıştır. Yöresel bir ürün olan hububat ve Antep fıstığının hijyenik şartlarda el değmeden üretilmesi maksadı ile geliştirilen bu üniteler Avrupa gıda normlarına ve CE standartlarına uygun yüksek kapasiteli, istenilen nem oranında kurutma imkanı sağlamaktadır. Düşün enerji tüketimi, uygun kurutma oranları ile müşterilerine , geniş rekabet ortamında büyük avantaj sağlamıştır. GÜNMAK bundan sonra da aynı düşünceler ile uluslararası firma olma yolunda, Güzel ülkemizin istihdamına ihracatına ve gelişimine katkı sağlamak üzere tüm enerjisi ile yoluna devam etmektedir.



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Gazi Haksan 1994 yılında Kadir FIRAT tarafından CNC dik işlem makine,CNC kayar otomat,CNC c eksen sürücülü makineleri ile yedek parça imalatına başlamıştır.

2000 yılında metal enjeksiyon, plastik enjeksiyon kendi kalıplarını üreterek, asansör ve çelik para kasaları yedek parça imalatı ile Gaziantep sanayisine katkıda bulunarak Türkiye'nin bir çok yerinde çeşitli sektörler ile çalışarak hizmet vermektedir. 1000 metrekare arazi üzerindeki fabrikada Türkiye'nin birçok bölgesindeki şehirlere uzanan hizmet ağı ile ülke ekonomisine katkıda bulunmaya devam etmiştir.



YÜCE TEKNİK; Firmamız 2007 Yılında kurulmuş, kuruluşundan Bu Yana Edindiği Ticari Tecrübesini Yenilikçi Yapısı Ve Zengin Ürün Yelpazesiyle Birleştirerek, Metal Sektöründe Faaliyet Gösteren Firmalara Tedarikçi Konumuyla Perakende ve Toptan satış olarak Hizmet Vermektedir.

Teknik hırdavat ve kalıp Elemanları ürünleri üzerine kurulan firmamız 2017 yılından itibaren kendi markası (HERO, WINDBREAKER,YTH) adı altında ithalat ve ihracat yapmaya başlamıştır.

Yüce Teknik, metal sektöründe müşteri odaklılık prensibi üzerinde çalışan, sektörünü iyi tanıyan, paydaşlarının beklentilerini bilen ve yeni beklentiler tanımlayıp, bunların en üst düzeyde tatminini hedefleyen, yaratıcı insan gücüne sahip ve bu doğrultuda tedarik sürecinde en iyi hizmeti veren, güvenilir, Teknik Hırdavat ve Kalıp elemanlar değer zinciri alanlarında verimli ve kârlı hizmet sunmayı hedefleyen bir Teknik Hırdavat şirkettir.



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Anadolu Mühendislik 1988 yılında demir & çelik fabrikalarına refrakter malzeme üretimi için Gaziantep'te kurulmuştur. Kısa sürede geniş bir müşteri portföyü edinen firmamız, ilerleyen yıllar içerisinde ithalat ve ihracata ağırlık vermiş, Avrupa, Asya, Afrika ve Ortadoğu ülkeleri gibi çok geniş bir coğrafya ile ticari ilişkiler kurmuş çok çeşitli refrakter ürünleri ithal ve ihraç etmektedir.

Firmamızın üretmiş olduğu ürünler:

- ✓ Pota sürgü plakaları ve Refrakterleri
- ✓ Tandış Zirkonya Nozulları
- ✓ Şekilli Refrakterler
- ✓ Çelik Könvertörler için Curuf kesme dartı
- ✓ Pota nozul kumu
- ✓ Refrakter harçları (Alumina, Manyezit)
- ✓ DC-AEF için iletken sıcak tamir harcı
- ✓ Pota sürgü sistemleri, Tandış mekanizmaları ve yedekleri
- ✓ Tandış akış kontrol sistemi
- ✓ Sürgü Plakası ve Nozul sacları



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ASLANKAYA DÖKÜM

Aslankaya Döküm yakın zamanda, kendi alanında uzman bir ekip ile Gaziantep 5. Organize Sanayi Bölgesi'nde kurulmuştur. Bölgede ürün kalitesi ve üretim teknolojisi olarak öncü bir marka olma konusunda emin adımlarla ilerleyen firmamız, kaliteyi kendine ilke edinmiştir. 5000 m2 kapalı alanda üretim faaliyetlerimizi gerçekleştiriyoruz. Şirket olarak teknolojik gelişmeleri yakından takip ederek Güneydoğu Anadolu bölgesinin en gelişmiş dökümhane laboratuvarı ve son teknoloji test ve analiz cihazlarıyla döküm sektöründe hizmet vermekteyiz.

Bulunduğu bölgede ilkleri gerçekleştirme becerisine sahip yetenekli insan gücü ve bilgi birikimine sahip olan Aslankaya Döküm, özel dökümhanelere kıyasla ürettiği parça ve yedeklerle bu bilgi birikimi ve becerisini ortaya koymuş ve kendini ispatlamıştır.

Firmamız çevreye duyarlı, kaliteli ve rekabetçi hizmet anlayışıyla üretimin her aşamasında müşteri memnuniyetini ilke edinmiştir. İnşaat ve Maden Endüstrisi, Çimento Endüstrisi, Makine Endüstrisi, Enerji Sektörü başta olmak üzere birçok sektöre ve alana en üst kalite ile üretim yapmaktayız.



INTERNATIONAL ORGANISATION FOR MIGRATION (IOM)



Established in 1951, IOM is the leading inter-governmental organization in the field of migration and works closely with governmental, intergovernmental and non-governmental partners.

With 173 member states, a further 8 states holding observer status and offices in over 100 countries, IOM is dedicated to promoting humane and orderly migration for the benefit of all. It does so by providing services and advice to governments and migrants.

IOM works to help ensure the orderly and humane management of migration, to promote international cooperation on migration issues, to assist in the search for practical solutions to migration problems and to provide humanitarian assistance to migrants in need, including refugees and internally displaced people.

The IOM Constitution recognizes the link between migration and economic, social and cultural development, as well as to the right of freedom of movement. IOM works in the four broad areas of migration management:

- Migration and development
- Facilitating migration
- Regulating migration
- Forced migration.

IOM activities that cut across these areas include the promotion of international migration law, policy debate and guidance, protection of migrants' rights, migration health and the gender dimension of migration.

IOM IN TURKEY

IOM Turkey, the UN Migration Agency first opened its offices in Turkey in 1991 following the aftermath of the Gulf War. IOM's partnership with the Republic of Turkey was formalized in November 2004 when Turkey was

granted member status to IOM. The partnership between IOM and Turkey continued since then, including support drafting the Law of Foreigners and International Protection, as well as establishing the Ministry of Interior's Directorate General for Migration Management in 2013. Now in its 27th year of operations in Turkey, the mission addresses the full scope of migration issues, supporting and developing government capacity to manage migration.

Initially focusing its attention on resettlement for Iraqi refugees in the 1990s, IOM Turkey later expanded in response to the devastating earthquake of 2011 in Van to include emergency response programmes. The mission's emergency response programmes have continued to grow rapidly since 2012 and 2015 with the start of the Syrian crisis and Mediterranean crisis.

Alongside IOM's role in addressing the needs of migrants during crises, the mission works in close collaboration with the Government of Turkey to address the longer-term impact of migration, including migrant assistance programmes, labour integration and migration management, immigration and border management and research and data collection on migrant movement.

Our resettlement programme has also grown to play an important role in the process of resettling refugees abroad through cultural orientation, medical checks and flight arrangements to third countries.

With over 25 years of operational experience in Turkey, the Mission is now one of the largest globally and has more than 900 staff working across the country, with sub-offices in Istanbul, Gaziantep, Hatay, Sanliurfa and Izmir and head office in Ankara.



GAZİANTEP ÜNİVERSİTESİ
MÂVERA
KONGRE VE SANAT MERKEZİ

