

Prof. SEDAT KARABAY

Personal Information

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Education Information

Doctorate, Kocaeli University, Fen Bilimleri Enstitüsü, Makine Mühendisliği Anabilim Dalı, Turkey 1995 - 2000

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Maden Mühendisliği (Yl) (Tezli), Turkey 1982 - 1986

Research Areas

Engineering and Technology

Academic Titles / Tasks

Associate Professor, Kocaeli University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2008 - Continues

Research Assistant, Kocaeli University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 1984 - 1986

Academic and Administrative Experience

Kocaeli Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2008 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

I. Experimental and Numerical Vibration Analysis of Surface Mechanical Attrition Treatment

Yarar E., Ertürk A. T., Açıkgöz Ç., Karabay S.

JVC/JOURNAL OF VIBRATION AND CONTROL, vol.28, pp.1-17, 2022 (SCI-Expanded)

II. Dynamic Finite Element Analysis on Single Impact Plastic Deformation Behavior Induced by SMAT Process in 7075-T6 Aluminum Alloy

YARAR E., ERTÜRK A. T., KARABAY S.

Metals and Materials International, vol.27, no.8, pp.2600-2613, 2021 (SCI-Expanded)

III. Investigation of the effects of ultrasonic assisted drilling on tool wear and optimization of drilling parameters

Yarar E., Karabay S.

CIRP Journal of Manufacturing Science and Technology, vol.31, pp.265-280, 2020 (SCI-Expanded)

IV. Machining behavior of multiple layer polymer composite bearing with using different drill bits

ERTÜRK A. T., VATANSEVER F., YARAR E., KARABAY S.

Composites Part B: Engineering, vol.176, 2019 (SCI-Expanded)

V. Improving mechanical properties of AlSi10Mg aluminum alloy using ultrasonic melt treatment combined with T6 heat treatment

- VATANSEVER F., ERTÜRK A. T., KARABAY S.
Kovove Materialy, vol.57, no.1, pp.33-43, 2019 (SCI-Expanded)
- VI. Failure analysis of wire-breaks in aluminum conductor production and investigation of early failure reasons for transmission lines
KARABAY S., ERTÜRK A. T., ZEREN M., YAMANOĞLU R., KARAKULAK E.
ENGINEERING FAILURE ANALYSIS, vol.83, pp.47-56, 2018 (SCI-Expanded)
- VII. Vibration noise harshness of a light truck driveshaft, analysis and improvement with six sigma approach
ERTÜRK A. T., KARABAY S., BAYNAL K., Korkut T.
Acta Physica Polonica A, vol.131, no.3, pp.477-480, 2017 (SCI-Expanded)
- VIII. Determination of Zr Inoculation Effect on Improving Thermal Resistivity of EC Grade Aluminum
ERTÜRK A. T., GÜVEN E. A., KARABAY S.
Transactions of the Indian Institute of Metals, vol.68, no.4, pp.535-541, 2015 (SCI-Expanded)
- IX. Influence of Different Heat Treatments on the Solid Particle Erosion Behavior of Aluminum Alloy AA 7075 in Industrial Applications
KARABAY S., Bayraklılar M. S., BALCI E.
ACTA PHYSICA POLONICA A, vol.127, no.4, pp.1052-1054, 2015 (SCI-Expanded)
- X. Manufacturing of Al-Zr thermal-resistant alloys for transmission lines
ERTÜRK A. T., GÜVEN E. A., KARABAY S.
Acta Physica Polonica A, vol.127, no.4, pp.1292-1294, 2015 (SCI-Expanded)
- XI. Processing damages of material components of aerial conductors and their tribological behaviors under dry friction
FEYZULLAHOĞLU E., KARABAY S.
ARCHIVES OF CIVIL AND MECHANICAL ENGINEERING, vol.14, no.4, pp.682-690, 2014 (SCI-Expanded)
- XII. Determination of early failure sources and mechanisms for Al 99.7% and Al-Mg-Si alloy bare conductors used in aerial transmission lines
KARABAY S., FEYZULLAHOĞLU E.
ENGINEERING FAILURE ANALYSIS, vol.38, pp.1-15, 2014 (SCI-Expanded)
- XIII. Increasing Lightning Strength of Optical Ground Conductors
Karabay S.
TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS, vol.67, no.1, pp.105-114, 2014 (SCI-Expanded)
- XIV. THE EFFECT OF HEAT TREATMENTS ON THE SOLID-PARTICLE EROSION BEHAVIOR OF THE ALUMINUM ALLOY AA2014
Karabay S.
MATERIALI IN TEHNOLOGIJE, vol.48, no.1, pp.141-147, 2014 (SCI-Expanded)
- XV. Enhancement on Al-Mg-Si alloys against failure due to lightning arc occurred in energy transmission lines
KARABAY S., GÜVEN E. A., ERTÜRK A. T.
Engineering Failure Analysis, vol.31, pp.153-160, 2013 (SCI-Expanded)
- XVI. Modification of Conductive Material AA6101 of OPGW Conductors against Lightning Strikes
KARABAY S.
STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.59, pp.451-461, 2013 (SCI-Expanded)
- XVII. Detecting Groan Sources in Drum Brakes of Commercial Vehicles by TVA-FMEA: A Case Study
KARABAY S., BAYNAL K., Igdeli C.
STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.59, no.6, pp.375-386, 2013 (SCI-Expanded)
- XVIII. A Study on the Derivation of Parametric Cutting Force Equations in Drilling of GFRP Composites
OKUTAN E., KARABAY S., SINMAZÇELİK T., AVCU E.
STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.59, no.2, pp.97-105, 2013 (SCI-Expanded)
- XIX. Performance testing of an optical ground wire composite
KARABAY S., GÜVEN E. A., ERTÜRK A. T.
Materiali in Tehnologije, vol.47, no.1, pp.119-124, 2013 (SCI-Expanded)

- XX. THE COMPARISON OF SOLID PARTICLE EROSION BEHAVIORS OF AA-1070 AND AA-6101 ALLOYS USED INPOWER TRANSMISSION LINES IN TURKEY
 AVCU E., FİDAN S., KARABAY S., SINMAZÇELİK T.
 JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.27, no.4, pp.865-874, 2012 (SCI-Expanded)
- XXI. ACSS/TW aerial high-temperature bare conductors as a remedy for increasing transmission line capacity and determination of processing parameters for manufacturing
 Karabay S.
 MATERIALS & DESIGN, vol.30, no.3, pp.816-825, 2009 (SCI-Expanded)
- XXII. Importance of early detection of maintenance problems in rotating machines in management of plants: Case studies from wire and tyre plants
 KARABAY S., Uzman I.
 ENGINEERING FAILURE ANALYSIS, vol.16, no.1, pp.212-224, 2009 (SCI-Expanded)
- XXIII. Influence of AlB₂ compound on elimination of incoherent precipitation in artificial aging of wires drawn from redraw rod extruded from billets cast of alloy AA-6101 by vertical direct chill casting
 Karabay S.
 MATERIALS & DESIGN, vol.29, no.7, pp.1364-1375, 2008 (SCI-Expanded)
- XXIV. Performance testing of a constructed drilling dynamometer by deriving empirical equations for drill torque and thrust on SAE 1020 steel
 Karabay S.
 MATERIALS & DESIGN, vol.28, no.6, pp.1780-1793, 2007 (SCI-Expanded)

Articles Published in Other Journals

- I. PID ve Bulanık Mantık Kontrol Sistemleri ile İki Tekerlekli KendiniDengeleyebilen Robotik Sistem Tasarımı
 PEÇE F., YARAR E., KARABAY S.
 Kocaeli Üniversitesi Fen Bilimleri Dergisi, 2020 (Peer-Reviewed Journal)
- II. A STUDY ON THE POSSIBLE USE AA-6101 ALLOYS AS A MATERIAL TO MANUFACTURE AAC ALUMINUM
 ZEREN M., KARABAY S.
 Kocaeli Journal of Science and Engineering, 2012 (Peer-Reviewed Journal)
- III. Transmisyon hatlarını koruyan opgw konstrüksyonları ve yıldırım düşmelerine karşı tasarım kriteri
 KARABAY S., ERTÜRK A. T., GÜVEN E. A.
 Metal Dünyası, vol.3, no.226, pp.72-77, 2012 (Peer-Reviewed Journal)
- IV. Kompozit İletken Konstrüksyonlarında Elastisite E Ve Termik Uzama Katsayısı Parametrelerinin Hesaplanması
 KARABAY S., GÜVEN E. A.
 Metal Dünyası, vol.1, no.212, pp.124-127, 2011 (Peer-Reviewed Journal)
- V. Ekstrüzyon Mamullerinde Eloksal Sonrası Görülen Bantlı Yapıların Nedenleri
 KARABAY S., ERTÜRK A. T., GÜVEN E. A.
 Metal Dünyası, vol.10, no.221, pp.106-109, 2011 (Peer-Reviewed Journal)
- VI. Uluslararası İletken Piyasalarından Talep Gören Al 59 1120 ve AA 6101 İletken Alaşımları ve Fiziksel Özellikleri
 KARABAY S., GÜVEN E. A.
 Metal Dünyası, vol.2, no.213, pp.106-110, 2011 (Peer-Reviewed Journal)
- VII. Orta ve Yüksek Gerilim Enerji Kablolarında Çok Telli Alüminyum İletkenlerinin Soğuk Haddeleme İşleminde Ovallik Sorunu ve Önlenmesi
 KARABAY S., GÜVEN E. A., ERTÜRK A. T.
 Metal Dünyası, vol.9, no.220, pp.96-100, 2011 (Peer-Reviewed Journal)

- VIII. **İsıya dayanıklı Al-Zr alaşımı iletkenlerin teknik karakteristikleri ve geleneksel iletkenlerle karşılaştırılması**
 KARABAY S., TAYŞI Y., YILMAZ M.
 Mühendis ve Makina, vol.46, no.540, pp.12-19, 2005 (Peer-Reviewed Journal)
- IX. **Enerji nakil hatlarında kullanılan OPT-GW kompozit iletkeninin tasarımları ve imalat teknikleri**
 KARABAY S., TAYŞI Y., YILMAZ M.
 MÜHENDİS VE MAKİNA, vol.45, no.530, pp.37-42, 2004 (Peer-Reviewed Journal)
- X. **Alüminyum iletken imalat sanayiinde AlB₂ ve AlB₁₂ ön-alaşımlarının 99.5- 99.7Al ve AlMg0.7Si alaşımı üzerindeki iletkenlik tesirlerinin araştırılması**
 KARABAY S., YILMAZ M.
 METALURJİ, no.132, pp.56-62, 2003 (Peer-Reviewed Journal)
- XI. **AA-6101 Alaşımının yüksek gerilim çiplak havai hatlarında AAAC iletkeni olarak kullanımı**
 KARABAY S., ZEREN M., YILMAZ M.
 METALURJİ, no.132, pp.56-62, 2003 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Mekanik Titreşimler Cilt 1**
 KARABAY S.
 Birsen Yayınevi, 2017
- II. **Mekanik Titreşimler Cilt 2**
 KARABAY S.
 Birsen Yayınevi, 2017

Refereed Congress / Symposium Publications in Proceedings

- I. **DH36 Çelik Bir Yapı Üzerinde İletilebilirlik Yaklaşımı ile Hasar Tespit Metodolojisinin Uygulanması**
 KARA M., YARAR E., KARABAY S.
 ASES International Health, Engineering and Sciences Congress, Turkey, 07 May 2022
- II. **KAĞIT İŞLETMELERİNDE KESTİRİMCİ BAKIM UYGULAMALARI ve TİTREŞİM ANALİZİ**
 Dereoğlu F., YARAR E., KARABAY S.
 International Marmara Sciences Congress (Spring) 2020, 19 - 20 June 2020
- III. **Micro Diameter Aluminum Conductor Wire Manufacturing for Advanced Technology Application**
 ERTÜRK A. T., Ocak N., KARABAY S., Akyüz O., GÜVEN E. A.
 9. ULUSLARARASI ALUMİNYUM SEMPOZYUMU, İstanbul, Turkey, 10 - 11 October 2019, vol.1, pp.341-343
- IV. **Optimization of Cutting Parameters with Taguchi Method for Drilling of Composites**
 Yarar E., Vatansever F., Ertürk A. T., Karabay S.
 IV. International Academic ResearchCongress (INES), Antalya, Turkey, 30 October - 03 November 2018
- V. **SUPERPLASTIC FORMING OF ALUMINUM ALLOYS**
 VATANSEVER F., ERTÜRK A. T., KARABAY S.
 3rd International Energy and Engineering Congress and Exhibition (UEMK 2018), Gaziantep, Turkey, 18 - 19 October 2018, pp.338-343
- VI. **DESIGN and ANALYSIS of a MAGNETORHEOLOGICAL DAMPER**
 Olcay E., ERTÜRK A. T., VATANSEVER F., KARABAY S.
 3rd International Energy and Engineering Congress and Exhibition (UEMK 2018), Gaziantep, Turkey, 18 - 19 October 2018, pp.329-337
- VII. **Effect of Cooling Rate on the Microstructural and Mechanical Properties of Aluminum Alloys**
 ERTÜRK A. T., VATANSEVER F., KARABAY S.
 3rd International Conference on Engineering Technology and Applied Sciences (ICETAS), Üsküp, Macedonia, 17 -

21 July 2018, pp.31

- VIII. **The Effect of Ultrasonic Melt Treatment on the Microstructural and Mechanical Properties of Aluminum Alloys**
VATANSEVER F., ERTÜRK A. T., KARABAY S.
3rd International Conference on Engineering Technology and Applied Sciences (ICETAS), 17 - 21 July 2018, pp.32
- IX. **EXPERIMENTAL STUDY ON ULTRASONIC ASSISTED DRILLING OF AA6061-T6**
YARAR E., KARABAY S.
II. INTERNATIOANL ACADEMIC RESEARCH CONGRESS, 18 - 21 October 2017
- X. **THE EFFECTS OF ULTRASONIC ASSISTED DRILLING ON TOOL WEAR**
YARAR E., KARABAY S.
II. INTERNATIONAL ACADEMIC RESEARCH CONGRESS, 18 - 21 October 2017
- XI. **Forgability of Aluminum 7075 Alloy in Closed Die**
YARAR E., GÜVEN E. A., BALCI E., KARABAY S., ELTUT S. B.
II. INTERNATIONAL ACADEMICRESEARCH CONGRESS, 18 - 21 October 2017
- XII. **Yüksek Sıcaklıklarda Dayanımı Artırılmış Alüminyum İlekten İmalatı**
ERTÜRK A. T., GÜVEN E. A., KARABAY S., Uncu Ü. G., Binbuğa İ.
8.Alüminyum Sempozyumu, İstanbul, Turkey, 5 - 06 October 2017, vol.1, pp.286-289
- XIII. **The effects on the surface roughness of Tool coating in Drilling of AA6061-T6**
YARAR E., KARABAY S., GÜVEN E. A.
III International Conference on Engineering an Natural Science, Budapest, Hungary, 3 - 07 May 2017, vol.2, pp.546
- XIV. **Grain Refinement Of AA2014 Aluminum Alloy Using Ultrasonic Vibration**
VATANSEVER F., GÜVEN E. A., ERTÜRK A. T., KARABAY S.
III International Conference on Engineering an Natural Sciences, Budapest, Hungary, 3 - 07 May 2017, vol.2, pp.248
- XV. **Effect of Ultrasonic Melt Treatment on the Hardness of AA7075 Aluminum Alloy**
VATANSEVER F., ERTÜRK A. T., GÜVEN E. A., KARABAY S.
III International Conference on Engineering an Natural Sciences, Budapest, Hungary, 3 - 07 May 2017, vol.2, pp.177
- XVI. **Forging Analysis Of AA2014 Alloy Under Different Conditions By Using Finite Elements Method**
GÜVEN E. A., YARAR E., KARABAY S.
III International Conference on Engineering an Natural Science, Budapest, Hungary, 3 - 07 May 2017, vol.2, pp.238
- XVII. **Noise Vibration Harshness Analysis of a Light Truck Driveshaft and Improving with Six Sigma Approach**
ERTÜRK A. T., KARABAY S., BAYNAL K., Korkut T.
6th International Advances in Applied Physics and Materials Science Congress & Exhibition (APMAS2016), 1 - 03 June 2016
- XVIII. **Ultrasonic Assisted Drilling of Aluminium 7075 T6**
Yarar E., Karabay S.
International Conference on Engineering and Natural Sciences, Sarajevo, Bosnia And Herzegovina, 24 - 28 May 2016
- XIX. **Performance testing of an optical ground wire composites designed and manufactured for transmission lines and telecommunication systems**
KARABAY S., GÜVEN E. A., ERTÜRK A. T.
20th Jubilee Conference On Materials and Technology, 18 - 20 October 2012
- XX. **Transmisyon Hatlarında Kullanılan Çelik Telli Mamullerin Rotary Ekstrüzyon Yöntemiyle Ömürlerinin Artırılması**
KARABAY S., GÜVEN E. A., ERTÜRK A. T.
International Iron Steel Symposium, Karabük, Turkey, 2 - 04 April 2012, vol.2, pp.651-658

Supported Projects

KARABAY S., Project Supported by Higher Education Institutions, MANYETOROLOJİK SÖNÜM ELEMANI GELİŞTİRİLMESİ,

2018 - 2019

KARABAY S., ERTÜRK A. T., VATANSEVER F., GÜVEN E. A., Project Supported by Higher Education Institutions, ALÜMİNYUM VE ALAŞIMLARININ GAZ GİDERME İŞLEMİNDE ULTRASONİK TİTREŞİMLERİN KULLANILMASI, 2017 - 2018

KARABAY S., Project Supported by Higher Education Institutions, ALÜMİNYUM ALAŞIMLARININ İÇ YAPISININ İNCELTİLMESİ İŞLEMİNİN OPTİMİZE EDİLMESİ, 2016 - 2017

KARABAY S., Project Supported by Higher Education Institutions, ULTRASONİK TİTREŞİM UYGULAMALI DELME PROSESLERİNE TİTREŞİM, KUVVET VE YÜZYEY ANALİZLERİ, 2015 - 2016

KARABAY S., Project Supported by Higher Education Institutions, Ultrasonik titreşimlerin kesme parametrelerine etkisi, 2013 - 2014

Metrics

Publication: 60

Citation (WoS): 240

Citation (Scopus): 289

H-Index (WoS): 8

H-Index (Scopus): 9

Non Academic Experience

Türkkablo A.O.

ODTÜ/ISILMAREN