

CIHAT ENSARIOGLU, PhD

Research fields:

- Determination and improvement of machinability in metal cutting operations
- Optimization of manufacturing parameters of metal foams
- Reinforcement of impact absorbers with metal foams
- Determination and improvement of energy absorption performance in impact absorption components



Keywords: metal cutting, machinability, aluminum foams, manufacturing parameters, reinforcement with aluminum foam, crash-box, crash tests, impact absorption

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PROJECTS

1. Project Coordinator

Project Title : Investigating Reinforcement of Aluminum Foams with Fibers

Original Title : Aluminyum Kopuk Metallere Lif Katkisinin Incelenmesi

Grant Period : 2017 December 28 - ...

Funded by : Uludag University Scientific Research Project Coordination Unit - UU BAP

Grant No : HDP(MH)-2017/48)

2. Project Member

Project Title : Development of an Aluminum Foam Reinforced Bumper Beam, Fulfilling the Crash Regulations

Original Title : Arac Carpisma Kriterlerini Saglayan Aluminyum Kopuklu Carpma Traversi Gelistirilmesi

Grant Period : 2016 May 25 - ...

Funded by : Uludag University Scientific Research Project Coordination Unit - UU BAP

Grant No : TDAP(MH)-2016/1

3. Project Consultant

Project Title : Development of an Aluminum Foam Reinforced Bumper Beam, Fulfilling the Crash Regulations

Original Title : Arac Carpisma Kriterlerini Saglayan Aluminyum Kopuklu Carpma Traversi Gelistirilmesi

Grant Period : 2015 September 01 - 2017 March 01

Funded by : Scientific and Technological Research Council of Turkey (TUBITAK) (TEYDEB 1501)

Grant No : 3150096

Executed by : TOFAS FIAT

4. Project Member

Project Title : Determination of Secondary Phases in Aluminum Foam Alloys and Investigation of Their Effects on the Machining of These Materials

Original Title : Aluminyum Kopuk Alasimlarinda Ikincil Fazlarin Tespiti ve Malzemenin Islenebilirliğine Etkilerinin Incelenmesi

Grant Period : 2013 October 01 - 2014 October 01

Funded by : Uludag University Scientific Research Project Coordination Unit - UU BAP

Grant No : KUAP(M) 2013/54

5. Project Member

Project Title : Investigating the Effects of Alloying Elements and Manufacturing Parameters on Machinability and Physical Properties of Aluminum-Based Foams, Produced by Powder Metallurgical Route

Original Title : Alasim Elementlerinin ve Uretim Parametrelerinin Toz Metalurjisi Yontemi ile Uretilecek Aluminyum Esasli Kopuklerin Islenebilirliğine ve Fiziksel Ozelliklerine Etkilerinin Incelenmesi

Grant Period : 2011 February 01 - 2014 June 01

Funded by : Uludag University Scientific Research Project Coordination Unit - UU BAP

Grant No : UAP(M) 2011/30

INTERNATIONAL ARTICLES

1. D. MURAT, C. ENSARIOGLU, N. GURSAKAL, A. ORAL, M.C. CAKIR. **2018**. "Investigation of tool wear using Response Surface Methodology in hard turning", *Gazi Universitesi Muhendislik-Mimarlik Fakultesi Dergisi*, doi:<http://dx.doi.org/10.17341/gummfd.05378>. (Article in Press) (Original title: "Sert malzemelerin tornalanmasinda takim asinmasinin tepki yuzeyi metodolojisi ile incelenmesi")

2. D. MURAT, C. ENSARIOGLU, N. GURSAKAL, A. ORAL, M. CEMAL CAKIR. 2017. "Surface roughness analysis of greater cutting depths during hard turning", *Materials Testing*, 59(9): 795-802.
3. M.C. CAKIR, A. BAYRAM, K. K. KIRCALI, C. ENSARIOGLU. 2011. "Effects of microstructure on machinability of ductile iron", *Proceedings of the Institution of Mechanical Engineers Part B-Journal of Engineering Manufacture*, 225(2): 297-304.
4. M.C. CAKIR, C. ENSARIOGLU, I. DEMIRAYAK. 2009. "Mathematical modeling of surface roughness for evaluating the effects of cutting parameters and coating material", *Journal of Materials Processing Technology*, 209(1): 102-109.

NATIONAL ARTICLES

1. C. ENSARIOGLU and M.C. CAKIR. 2008. "An expert system approach for determining machinability and tool parameters in turning operations" (Original title: "İslenebilirlik ve tornalama işlemlerinde takım parametrelerinin belirlenmesi için bir uzman sistem yaklaşımı"), *Machinery MakinaTek*, 125(3): 136-140.
2. C. ENSARIOGLU and M.C. CAKIR. 2005. "Machinability of titanium and its alloys: Part I-II" (Original title: "Titanyum ve alaşımlarının işlenebilirlik etudu: Bolum I-II"), *Muhendis ve Makina*, 46(546-547): 21-27.

INTERNATIONAL PROCEEDINGS

1. C. ENSARIOGLU, B. GULCIMEN CAKAN, H. KOLUK, M. REIS, H. CELIK, A. UGUZ, M.C. CAKIR. 2018. "Reinforcement of a thermoplastic crash-box with aluminum foam and tie beams", Oral Presentation, *Academic Conference on Engineering, IT and Artificial Intelligence (AC-EITAI 2018)*, 10-13 August, Prague, Czechia, pp 425-434.
2. B. GULCIMEN CAKAN, M. REIS, C. ENSARIOGLU, H. KOLUK, H. YENI, A. UGUZ, M.C. CAKIR. 2018. "The effect of aluminium foam reinforcement on crashworthiness of thermoplastic crash-boxes" (Original title: "Termoplastik carpisma kutularında alüminyum kopuk takviyesinin carpisma karakteristigine etkisi"), Oral Presentation, *The 18th International Conference on Machine Design and Production (UMTIK 2018)*, 03-06 July, Eskisehir, Turkey.

3. **C. ENSARIOGLU**, B. GULCIMEN CAKAN, H. KOLUK, M. REIS, L. AKSEL, A. UGUZ, M.C. CAKIR. **2018**. “Development of a thermoplastic crash-box reinforced with aluminum foam”, Oral Presentation, *International 9th Automotive Technologies Congress (OTEKON 2018)*, 07-08 May, Bursa, Turkey, pp 1682-1690.
4. B. GULCIMEN CAKAN and **C. ENSARIOGLU**. **2017**. “Numerical modelling of aluminum foam for comparing foam-filled, partially foam-filled and empty crash-boxes”, Oral Presentation, *International Conference on Engineering Technologies (ICENTE 2017)*, 07-09 December, Konya, Turkey, pp 757-762.
5. C. AKSOY, Y. KINAS, **C. ENSARIOGLU** and M.C. CAKIR. **2017**. “Development of an automation system for improving the deburring process in engine oil sump production” (Original title: “Motor yağ karteri üretiminde capak alma sürecinin iyileştirilmesi amacıyla bir otomasyon sisteminin geliştirilmesi”), Oral Presentation, *International Symposium on Machining (UTIS 2017)*, 02-04 November, Antalya, Turkey, pp 421-431.
6. **C. ENSARIOGLU**, B. GULCIMEN CAKAN, H. KOLUK, M. REIS, M. YILMAZ, L. AKSEL, H. YENI, H. CELIK, O. COLPAN, S.E. POLAT, K. OZDEMIR, A. UGUZ and M.C. CAKIR. **2017**. “Performance comparison of a commercial thermoplastic crash-box and an aluminum foam-filled aluminum crash-box”, Oral Presentation, *International Automotive and Vehicle Technologies Conference (AVTECH 2017)*, 06-07 October, Istanbul, Turkey.
7. C. AKSOY, D. GULER, **C. ENSARIOGLU** and M.C. CAKIR, **2016**. “Run-out comparison for different types of tool holders: An experimental study” (Original title: “Farkli tipte takım tutucuların kâcılık âcisinden deneysel olarak karsılaştırılması”), Oral Presentation, *International Symposium on Machining (UTIS 2016)*, 03-05 November, Istanbul, Turkey, pp 386-393.
8. **C. ENSARIOGLU** and M.C. CAKIR. **2015**. “Investigating the influence of alloying elements on the foamability and the morphology of aluminum foams”, Oral Presentation, *The Advances in Materials and Processing Technologies (AMPT 2015)*, 14-17 December, Madrid, Spain.

NATIONAL PROCEEDINGS

1. **C. ENSARIOGLU** and M.C. CAKIR. **2014**. “Machinability of aluminum foams: Investigations on the effects of cutting parameters and alloying elements” (Original title: “Alüminyum kopuklerin işlenebilirliği: Kesme faktörlerinin ve alaşım elementlerinin etkisi üzerine incelemeler”), Oral Presentation, *Ulusal Talaslı İmalat Sempozyumu (UTIS 2014)*, 23-25 October, Bursa, Turkey, pp 21-36.

2. **C. ENSARIOGLU**, B. HEPYASAR and M.C. CAKIR. **2012**. "Investigation of the machinability of tempered steels in drilling operations" (Original title: "Delik delme islemlerinde islah celiklerinin islenebilirliginin incelenmesi"), Oral Presentation, *Ulusal Talasli Imalat Sempozyumu (UTIS 2012)*, 04-05 October, Ankara, Turkey.
3. A. ORAL, M.C. CAKIR, E. BUDAK and **C. ENSARIOGLU**. **2010**. "Reduction of the initial wear in turning operations" (Original title: "Tornalama islemlerinde baslangic asinmasin azaltılması"), Oral Presentation, *Ulusal Talasli Imalat Sempozyumu (UTIS 2010)*, 01-02 October, Konya, Turkey.
4. **C. ENSARIOGLU** and M.C. CAKIR. **2007**. "An expert system approach in metal cutting operations for determining the cutting parameters and machinability" (Original title: "Talasli imalat islemlerinde kesme parametrelerinin ve islenebilirligin belirlenmesi icin bir uzman sistem yaklasimi"), Oral Presentation, *IV. Makina Tasarim ve Imalat Teknolojileri Kongresi (MATIT 2007)*, 24-25 November, Konya, Turkey.
5. **C. ENSARIOGLU**, M.C. CAKIR and K. CAVDAR. **2006**. "Application of Theory of Inventive Problem Solving (TRIZ) into the field of Design for Assembly (DFA)" (Original title: "Yenilikci-yaratıcı sorun cozme tekniginin (TRIZ) montaj icin tasarim alanina uygulanmasi"), Oral Presentation, *1. Ulusal Tasarim Imalat ve Analiz Kongresi (TIMAK 2006)*, 26-28 April, Balikesir, Turkey, pp 11-18.
6. **C. ENSARIOGLU**, M.C. CAKIR and O. KUCUK. **2005**. "A software developed on Theory of Inventive Problem Solving (TRIZ)" (Original title: "Yenilikci-yaratıcı sorun cozme yaklasimi (TRIZ) uzerine hazirlanmis bir yazilim"), Oral Presentation, *III. Makina Tasarim ve Imalat Teknolojileri Kongresi (MATIT 2005)*, 16-17 September, Konya, Turkey.