

Assoc. Prof. DURSUN MURAT SEKBAN

Personal Information

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International Researcher IDs

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Education Information

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği, Turkey 2012 - 2018

Postgraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği, Turkey 2009 - 2012

Undergraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Gemi İnşaatı Mühendisliği, Turkey 2005 - 2009

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Sürtünme Karıştırma İşleminin Bir Gemi İnşa Çeliğinin Yapısal Ve Mekanik Özelliklerine Etkilerinin İncelenmesi ve Bu Çeliğin Sürtünme Karıştırma Kaynak Yöntemi İle Birleştirilmesi, Karadeniz Technical University, Sürmene Deniz Bilimleri Fakültesi, Gemi İnşaatı ve Gemi Makineleri Mühendisliği, 2018

Postgraduate, D Kesit Köpük Dolgulu Tüp Monte Edilmiş Fiberglass Tekne/Bot İmalatı, Karadeniz Technical University, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği, 2012

Research Areas

Naval Architecture and Marine Engineering, Ship Construction, Metallurgical and Materials Engineering, Material science and engineering, Mechanical Properties, Joining and Cutting, Structure-Property Relationship, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Karadeniz Technical University, Sürmene Deniz Bilimleri Fakültesi, Gemi Makinaları İşletme Mühendisliği, 2022 - Continues

Assistant Professor, Karadeniz Technical University, Sürmene Deniz Bilimleri Fakültesi, Gemi Makinaları İşletme

Academic and Administrative Experience

Head of Department, Karadeniz Technical University, Sürmene Deniz Bilimleri Fakültesi, Gemi Makinaları İşletme Mühendisliği, 2024 - Continues

Faculty Board Member, Karadeniz Technical University, Sürmene Deniz Bilimleri Fakültesi, Gemi Makinaları İşletme Mühendisliği, 2024 - Continues

Deputy Head of Department, Karadeniz Technical University, Sürmene Deniz Bilimleri Fakültesi, Gemi Makinaları İşletme Mühendisliği, 2021 - Continues

Deputy Director of the Center, Karadeniz Technical University, Rektörlük, Uzaktan Eğitim Uygulama ve Araştırma Merkezi, 2021 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Determination of formability behavior of steel used in ships by various methods**
SEKBAN D. M., UZUN YAYLACI E., Oezdemir M. E., YAYLACI M.
STRUCTURAL ENGINEERING AND MECHANICS, no.2, pp.189-196, 2024 (SCI-Expanded)
- II. **Impact of 316L Stainless Steel on Microstructural and Mechanical Properties of AA5083/316L Metal Matrix Composites**
SEKBAN D. M.
JOM, 2024 (SCI-Expanded)
- III. **Formability behavior of AH-32 shipbuilding steel strengthened by friction stir process**
SEKBAN D. M., UZUN YAYLACI E., Özdemir M. E., ÖZTÜRK Ş., YAYLACI M., Panda S. K.
Theoretical and Applied Fracture Mechanics, vol.132, 2024 (SCI-Expanded)
- IV. **Investigating Formability Behavior of Friction Stir-Welded High-Strength Shipbuilding Steel using Experimental, Finite Element, and Artificial Neural Network Methods**
SEKBAN D. M., UZUN YAYLACI E., Özdemir M. E., YAYLACI M., Tounsi A.
Journal of Materials Engineering and Performance, 2024 (SCI-Expanded)
- V. **Effect of Friction Stir Process on Mechanical Properties and Bottom Section Ultimate Strength of Ship Steel**
SEKBAN D. M.
Journal of Materials Engineering and Performance, 2024 (SCI-Expanded)
- VI. **The contact problem of the functionally graded layer resting on rigid foundation pressed via rigid punch**
Yaylacı M., Abanoz M., Yaylacı E. U., Ölmez H., Sekban D. M., Birinci A.
STEEL AND COMPOSITE STRUCTURES, vol.43, no.5, pp.661-672, 2022 (SCI-Expanded)
- VII. **Evaluation of the contact problem of functionally graded layer resting on rigid foundation pressed via rigid punch by analytical and numerical (FEM and MLP) methods**
YAYLACI M., Abanoz M., Yaylacı E. U., ÖLMEZ H., SEKBAN D. M., BİRİNCİ A.
ARCHIVE OF APPLIED MECHANICS, vol.92, no.6, pp.1953-1971, 2022 (SCI-Expanded)
- VIII. **Determination of port-induced exhaust gas emission amounts and investigation of environmental impact by creating emission maps: Sample of Trabzon port**
KÖSE S., SEKBAN D. M., ÖZKÖK M.
INTERNATIONAL JOURNAL OF SUSTAINABLE TRANSPORTATION, vol.16, no.3, pp.258-268, 2022 (SSCI)
- IX. **Effects of Heat Treatment and Severe Plastic Deformation on Microstructure, Mechanical Properties and Midsection Ultimate Strength of Shipbuilding Steel**
SEKBAN D. M.
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.30, no.10, pp.7805-7816, 2021 (SCI-Expanded)

- X. **Effect of stress-strain curve changing with equal channel angular pressing on ultimate strength of ship hull stiffened panels**
SEKBAN D. M., ÖLMEZ H.
STRUCTURAL ENGINEERING AND MECHANICS, vol.78, no.4, pp.473-484, 2021 (SCI-Expanded)
- XI. **Optimization of strength, ductility and wear resistance of low-carbon grade A shipbuilding steel by post-ECAP annealing**
DEMİRTAŞ M., SEKBAN D. M.
METALLURGICAL RESEARCH & TECHNOLOGY, vol.118, no.2, 2021 (SCI-Expanded)
- XII. **Friction Stir Welding of Low-Carbon Shipbuilding Steel Plates: Microstructure, Mechanical Properties, and Corrosion Behavior**
SEKBAN D. M., Aktarer S. M., PÜRÇEK G.
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.9, pp.4127-4140, 2019 (SCI-Expanded)
- XIII. **Microstructure, mechanical properties and formability of friction stir welded dissimilar materials of IF-steel and 6061 Al alloy**
AKTARER S. M., SEKBAN D. M., KÜÇÜKÖMEROĞLU T., PÜRÇEK G.
INTERNATIONAL JOURNAL OF MINERALS METALLURGY AND MATERIALS, vol.26, no.6, pp.722-731, 2019 (SCI-Expanded)
- XIV. **Investigation of microstructure and mechanical properties of friction stir welded dissimilar St37/St52 joints**
Ipekoglu G., KÜÇÜKÖMEROĞLU T., AKTARER S. M., SEKBAN D. M., Cam G.
MATERIALS RESEARCH EXPRESS, vol.6, no.4, 2019 (SCI-Expanded)
- XV. **Formability of friction stir processed low carbon steels used in shipbuilding**
Sekban D. M., Akterer S. M., Saray O., Ma Z. Y., Purcek G.
JOURNAL OF MATERIALS SCIENCE & TECHNOLOGY, no.1, pp.237-244, 2018 (SCI-Expanded)
- XVI. **Microstructural and Mechanical Evolution of a Low Carbon Steel by Friction Stir Processing**
SEKBAN D. M., Aktarer S. M., Zhang H., Xue P., Ma Z., PÜRÇEK G.
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.8, pp.3869-3879, 2017 (SCI-Expanded)
- XVII. **Impact toughness of friction stir processed low carbon steel used in shipbuilding**
SEKBAN D. M., AKTARER S. M., XUE P., MA Z. Y., PÜRÇEK G.
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.672, pp.40-48, 2016 (SCI-Expanded)
- XVIII. **Microstructure, mechanical properties and formability of friction stir processed interstitial-free steel**
SEKBAN D. M., Saray O., AKTARER S. M., PÜRÇEK G., MA Z. Y.
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.642, pp.57-64, 2015 (SCI-Expanded)
- XIX. **Effect of two-pass friction stir processing on the microstructure and mechanical properties of as-cast binary Al-12Si alloy**
AKTARER S. M., SEKBAN D. M., Saray O., KÜÇÜKÖMEROĞLU T., MA Z. Y., PÜRÇEK G.
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.636, pp.311-319, 2015 (SCI-Expanded)

Articles Published in Other Journals

- I. **Investigation Mechanical Properties of Shipbuilding Steel Joined By Submerged Metal Arc Welding And Gas Metal Arc Welding Methods**
Sekban D. M., Kılıcaslan R.
Karadeniz Fen Bilimleri Dergisi, vol.13, no.3, pp.1107-1116, 2023 (Peer-Reviewed Journal)

- II. **Emphasizing the importance of using cold-ironing technology by determining the share of hotelling emission value within the total emission**
Köse S., Sekban D. M.
TRANSPORTATION SAFETY AND ENVIRONMENT, vol.4, no.2, 2022 (ESCI)
- III. **CHARACTERIZATION OF WELDING ZONE OF SHIPBUILDING STEEL UNDERWATER WELDED AT DIFFERENT DEPTHS**
SEKBAN D. M., NACAR A.
Journal of Naval Sciences and Engineering, vol.17, no.2, 2021 (Peer-Reviewed Journal)
- IV. **Örtülü Elektrod Ark Kaynağı ve Gazaltı Kaynağı Kullanılarak Birleştirilen Gemi İnşa Çeliğinde Kaynak Bölgesinin İyapı Ve Mekanik Özelliklerinin Karşılaştırmalı Olarak İncelenmesi**
Akkaya A. R., SEKBAN D. M.
Gemi ve Deniz Teknolojisi, vol.218, 2020 (Peer-Reviewed Journal)
- V. **EFFECT OF DIFFERENT ABUTMENT MATERIALS ON STRESS DISTRIBUTION IN PERIPHERAL BONE AND DENTAL IMPLANT SYSTEM**
Terzi M., GÜVERCİN Y., ATEŞ S. M., SEKBAN D. M., YAYLACI M.
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, vol.38, no.3, pp.1495-1507, 2020 (ESCI)
- VI. **EŞ KANALLI AÇISAL PRESLEME (EKAP) UYGULANAN GEMİ İNŞA ÇELİĞİNİN İÇYAPI VE MEKANİK ÖZELLİKLERİNİN İNCELENMESİ**
SEKBAN D. M.
Mühendislik Bilimleri ve Tasarım Dergisi, vol.8, no.1, pp.240-251, 2020 (Peer-Reviewed Journal)
- VII. **Effect of Notch Position on Impact Toughness of Friction Stir Processed Low Carbon Steel**
SEKBAN D. M., AKTARER S. M., MA Z. Y., PÜRÇEK G.
GMO JOURNAL OF SHIP AND MARINE TECHNOLOGY, no.207, pp.1-8, 2017 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Examination of Welding Methods Used in Shipbuilding In Terms of Harmful Emissions**
Sekban D. M.
2nd International Congress on Ship and Marine Technology (GMO-SHIPMAR 2021), İstanbul, Turkey, 16 September 2021, pp.635-639
- II. **Effect of Friction-Stir Processing on the Microstructure, Mechanical and Corrosion Behavior of a Low Carbon Steel Used in Ship Panel Construction**
SEKBAN D. M., PÜRÇEK G.
3rd International Conference on Advanced Engineering Technologies (ICADET), Bayburt, Turkey, 19 - 21 September 2019, pp.1
- III. **Impact Toughness of Single Pass Equal Channel Angular Pressed Low Carbon Shipbuilding Steel**
SEKBAN D. M.
3rd International Conference on Advanced Engineering Technologies (ICADET), Bayburt, Turkey, 19 - 21 September 2019, pp.2
- IV. **Effect of Ultrafine-Grained Formation on Tribological Properties of Low Carbon Shipbuilding Steel**
Sekban D. M.
4th Iron&Steel Symposium, Karabük, Turkey, 4 - 06 April 2019, pp.46-48
- V. **Effect of Friction Stir Processing on Ultimate Strength of Ship Hull Girder Plates Estimated by Finite Element Analysis**
SEKBAN D. M., ÖLMEZ H., AKTARER S. M., KÖSE E., PÜRÇEK G.
3rd INTERNATIONAL SYMPOSIUM ON NAVAL ARCHITECTURE AND MARITIME, İstanbul, Turkey, 24 - 25 April 2018, pp.175-184
- VI. **Mechanical Properties of Friction Stir Welded Dissimilar Structural Steels**
KÜÇÜKÖMEROĞLU T., AKTARER S. M., SEKBAN D. M., İpekoğlu G., Çam G.
European Congress and Exhibition on Advanced Materials and Process (EUROMAT 2017), Selanik, Greece, 18 - 22

September 2017, pp.9

- VII. **Joining of Marine Steels by Severe Plastic Deformation-Induced Friction Stir Welding**
SEKBAN D. M., PÜRÇEK G., AKTARER S. M., KÜÇÜKÖMEROĞLU T.
European Congress and Exhibition on Advanced Materials and Process (EUROMAT 2017), Selanik, Greece, 18 - 22 September 2017, pp.5
- VIII. **Microstructure and Mechanical Properties of Fine-Grained Dual Phase 800 Steel Processed by Friction Stir Processed**
Aktarer S. M., Küçükömeroğlu T., Sekban D. M., Pürçek G.
European Congress and Exhibition on Advanced Materials and Process (EUROMAT 2017), Thessaloniki, Greece, 18 - 22 September 2017, pp.11
- IX. **Improvement the wear behavior of low carbon steels by friction stir processing**
SEKBAN D. M., AKTARER S. M., YANAR H., Alsaran A., PÜRÇEK G.
13th International Conference on Tribology (ROTRIB), Galati, Romania, 22 - 24 September 2016
- X. **Impact Toughness of Friction Stir Processed Low Carbon Steel**
SEKBAN D. M., AKTARER S. M., MA Z. Y., PÜRÇEK G.
1. Uluslararası Gemi ve Deniz Teknolojisi Kongresi (GMO-SHIPMAR 2016), İstanbul, Turkey, 8 - 09 December 2016, pp.1-8
- XI. **Microstructural Evolution Of Friction Stir Processed Low Carbon Steels**
SEKBAN D. M., AKTARER S. M., KÜÇÜKÖMEROĞLU T., PÜRÇEK G.
16. International Material Symposium (IMSP'2016), Denizli, Turkey, 12 - 14 October 2016, pp.205
- XII. **Combined Effect of Heat Treatment and Friction Stir Processing on the Microstructure and Mechanical Properties of Low Carbon Steels Used in Shipbuilding**
SEKBAN D. M., AKTARER S. M., PÜRÇEK G.
18th Metallurgy and Materials Congress (IMMC 16), İstanbul, Turkey, 29 September - 01 October 2016, pp.3
- XIII. **Improvement the Wear Behavior Of Low Carbon Steels By Friction Stir Processing**
SEKBAN D. M., AKTARER S. M., YANAR H., Alsaran A., PÜRÇEK G.
The 13th International Conference on Tribology (ROTRIB'16), Galati, Romania, 22 - 24 September 2016, pp.4
- XIV. **Effect of friction stir processing on tribological properties of Al-Si alloy**
AKTARER S. M., SEKBAN D. M., YANAR H., PÜRÇEK G.
The 13th International Conference on Tribology (ROTRIB'16), Galati, Romania, 22 - 24 September 2016, pp.5
- XV. **The Effect of Process Parameters on Microstructural Properties of Severe Plastically Deformed Dual Phase 600 Steel Via Friction Stir Processes**
Aktarer S. M., SEKBAN D. M., KÜÇÜKÖMEROĞLU T.
13th Junior EUROMAT 2016, Lausanne, Switzerland, 10 - 14 July 2016, vol.1, no.1, pp.53
- XVI. **Formability of Friction Stir Processed Dual Phase 600 Steel**
SEKBAN D. M., Aktarer S. M., KÜÇÜKÖMEROĞLU T.
13th Junior EUROMAT 2016, Lausanne, Switzerland, 10 - 14 July 2016, vol.1, no.1, pp.26
- XVII. **Formability of IF-Steel Sheets Severe Plastically Deformed by Friction-Stir Processing**
SEKBAN D. M., AKTARER S. M., SARAY O., KUCUKOMEROGLU T., PURCEK G.
IISS 15, Karabük, Turkey, 1 - 03 April 2015, pp.425-429
- XVIII. **'Effect of Friction-Stir Processing on the Structure and Mechanical Properties of a Low Carbon Steel Used in Ship Panel Construction**
SEKBAN D. M., PURCEK G., AKTARER S. M., KUCUKOMEROGLU T.
IISS 15, Karabük, Turkey, 1 April - 03 July 2015, pp.81-84
- XIX. **Enhancements in mechanical properties of friction stir processed eutectic Al-12Si alloy**
AKTARER S. M., SEKBAN D. M., SARAY O., KÜÇÜKÖMEROĞLU T., PÜRÇEK G.
NanoSPD-6 (Nanomaterials by Severe Plastic Deformation), Metz, France, 30 June - 04 July 2014, pp.4
- XX. **Köpük Dolgulu Tüp Monte Edilmiş Bir Kompozit Teknede Oluşan Ek Darbe Direnci ve Denizcilik Analizi**
SEKBAN D. M., KÖSE E., ÖLMEZ H.
Gemi İnşaatı ve Deniz Teknolojisi Teknik Kongresi, İstanbul, Turkey, 13 - 14 December 2012, pp.121-130

XXI. Gemilerin yapısal modelleme ve analizlerinin sonlu elemanlar yöntemi ile gerçekleştirilmesi

ÖLMEZ H., PEŞMAN E., SEKBAN D. M.

Gemi İnşaatı ve Deniz Teknolojisi Teknik Kongresi 2012, İstanbul, Turkey, 13 - 14 December 2012, pp.355-364

Supported Projects

BERİGEL M., BAHÇEKAPILI E., SEKBAN D. M., İMAMOĞLU M. B., FİŞ ERÜMİT S., BOZTAŞ G. D., KABLAN Y., AYAZ A., GÜLPINAR SEKBAN D. Ü., TERZİ F., et al., Project Supported by Higher Education Institutions, AKILLI KAMPÜS BAĞLAMINDA BÜYÜK VERİ ÜRETİMİ VE YÖNETİMİ, 2023 - Continues

Sekban D. M., TUBITAK Project, Geliştirilecek Yeni Nesil Toroidal Pervane Tasarımının Maliyet ve Verim Analizlerinin Gerçekleştirilmesi , 2024 - 2025

Sekban D. M., TUBITAK Project, Limanlarda Faaliyet Gösteren Römotkörlerin Emisyon Faktörlerinin Belirlenmesi, 2024 - 2025

Sekban D. M., TUBITAK Project, Gemi İnşaatı Panel Hattında Birleştirme Yöntemi Olarak Sürtünme Karıştırma Kaynağı Makinesinin Geliştirilmesi, 2021 - 2022

Köse E., Industrial Thesis Project, D Kesit Köpük Dolgulu Tüp Monte Edilmiş Fiberglass Tekne Bot İmalatı, 2010 - 2011

Scientific Refereeing

ADVANCES IN MECHANICAL ENGINEERING, Journal Indexed in SCI-E, February 2022

MATERIALS LETTERS, Journal Indexed in SCI-E, January 2022

MATERIALS LETTERS, Journal Indexed in SCI-E, December 2021

MATERIALS LETTERS, Journal Indexed in SCI-E, December 2020

ADVANCES IN MECHANICAL ENGINEERING, Journal Indexed in SCI-E, December 2019

Metrics

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H-Index (Scopus): 13

Congress and Symposium Activities

European Congress and Exhibition on Advanced Materials and Process (EUROMAT 2017), Attendee, Thessaloniki, Greece, 2017

1. Uluslararası Gemi ve Deniz Teknolojisi Kongresi (GMO-SHIPMAR 2016), Attendee, İstanbul, Turkey, 2016

International Conference On Advances In Automotive Technologies 2016, Attendee, İstanbul, Turkey, 2016

18th Metallurgy and Materials Congress (IMMC 16), Attendee, İstanbul, Turkey, 2016

16. International Material Symposium (IMSP'2016), Attendee, Denizli, Turkey, 2016

The 13th International Conference on Tribology (ROTRIB'16), Attendee, Galati, Romania, 2016

FEMS Junior EUROMAT 2016, Attendee, Lausanne, Switzerland, 2016

9. Kaynak Teknolojisi Ulusal Kongre ve Sergisi, Attendee, Ankara, Turkey, 2015

International Iron Sciences Symposium (IISS 15), Attendee, Karabük, Turkey, 2015

International Material Symposium (IMSP'2014), Attendee, Denizli, Turkey, 2014

NanoSPD-6, Attendee, Metz, France, 2014

Gemi İnşaatı ve Deniz Teknolojisi Teknik Kongresi 2012, Attendee, İstanbul, Turkey, 2012