



TEZ SAVUNMA SINAVI DUYURU FORMU

Form 02

I- ÖĞRENCİ BİLGİLERİ

Adı ve Soyadı : ZEKİ MERT BARUT

Numarası : 239052

Anabilim Dalı : Makina Mühendisliği

Programı : ☒ Yüksek Lisans ☐ Doktora ☐ Bütünleşik Doktora

LİSANSÜSTÜ TEZ
SAVUNMASI

II- SINAV BİLGİLERİ

Tezin Başlığı : Cooling Analysis of a Long Distance Bus Cabin using Experimental and Numerical Methods

Tez Özeti : Vehicle manufacturers are on a continuous challenge of increasing the fuel efficiency of their vehicles. Considering the energy withdrawn, air conditioning units stands as an important component to be investigated in order to increase the overall efficiency of vehicles. In this study, the computational fluid dynamics (CFD) model of a half section of a long distance bus cabin is numerically validated by the experimental data obtained from a full scale bus tested in a climatic chamber. In the numerical methods, a transient analysis is conducted using ANSYS Fluent® numerical solver with employing realizable k-ε method and boussinesq approximation under the considerations of time-dependent temperature boundary conditions at the inlets, convection boundary conditions at the window and adiabatic walls. The results, however, indicate that the consideration of heat absorbed by the seat materials, convective heat transfer and conductive heat transfer from the walls are of great importance in the validation of a cabin cooling procedure under transient conditions.

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Sınav Yeri : Makine Mühendisliği Seminer Salonu

Not: Tez savunma sınav duyurusu, anabilim dalı başkanlığınca ilgili bölümün duyuru panosunda ve/veya internet sitesinde ilan edilir.

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