上海科技大学
ShanghaiTech University

本科毕业论文（设计）

题　　目：	不错的毕设论文
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上海科技大学教学事务处 制

二零一　　年　　月

上海科技大学
ShanghaiTech University

Bachelor's Thesis

Topic:	A Brilliant Work
Student Name:	Fake Name
Student ID:	12345678
Year of Attendance:	2014
Department:	School of Information Science and Technology
Advisor:	Prof. Foo Bar
Major:	Electrical and Electronic Engineering

Made by Office of Academic Affairs, ShanghaiTech University
Date: / /

摘要

均质充量压缩着火（HCCI）燃烧，作为一种能有效实现高效低污染的燃烧方式，能够使发动机同时保持较高的燃油经济性和动力性能，而且能有效降低发动机的NOx和碳烟排放。此外HCCI燃烧的一个显著特点是燃料的着火时刻和燃烧过程主要受化学动力学控制，基于这个特点，发动机结构参数和工况的改变将显著地影响着HCCI发动机的着火和燃烧过程。本文以新型发动机代用燃料二甲醚（DME）为例，对HCCI发动机燃用DME的着火和燃烧过程进行了研究。研究采用由美国Lawrence Livermore国家实验室提出的DME详细化学动力学反应机理及其开发的HCT化学动力学程序，且DME的详细氧化机理包括399个基元反应，涉及79个组分。为考虑壁面传热的影响，在HCT程序中增加了壁面传热子模型。采用该方法研究了压缩比、燃空当量比、进气充量加热、发动机转速、EGR和燃料添加剂等因素对HCCI着火和燃烧的影响。结果表明，DME的HCCI燃烧过程有明显的低温反应放热和高温反应放热两阶段；增大压缩比、燃空当量比、提高进气充量温度、添加H2O2、H2、CO使着火提前；提高发动机转速、采用冷却EGR、添加CH4、CH3OH使着火滞后。

关键词：某关键词，另一个关键词

ABSTRACT

CCI (Homogenous Charge Compression Ignition) combustion has advantages in terms of efficiency and reduced emission. HCCI combustion can not only ensure both the high economic and dynamic quality of the engine, but also efficiently reduce the NOx and smoke emission. Moreover, one of the remarkable characteristics of HCCI combustion is that the ignition and combustion process are controlled by the chemical kinetics, so the HCCI ignition time can vary significantly with the changes of engine configuration parameters and operating conditions. In this work numerical scheme for the ignition and combustion process of DME homogeneous charge compression ignition is studied. The detailed reaction mechanism of DME proposed by American Lawrence Livermore National Laboratory (LLNL) and the HCT chemical kinetics code developed by LLNL are used to investigate the ignition and combustion processes of an HCCI engine fueled with DME. The new kinetic mechanism for DME consists of 79 species and 399 reactions. To consider the effect of wall heat transfer, a wall heat transfer model is added into the HCT code. By this method, the effects of the compression ratio, the fuel-air equivalence ratio, the intake charge heating, the engine speed, EGR and fuel additive on the HCCI ignition and combustion are studied. The results show that the HCCI combustion fueled with DME consists of a low temperature reaction heat release period and a high temperature reaction heat release period.

It is also founded that increasing the compression ration, the equivalence ratio, the intake charge temperature and the content of H2O2, H2 or CO cause advanced ignition timing. Increasing the engine speed, adoption of cold EGR and the content of CH4 or CH3OH will delay the ignition timing.

Keywords: someKeyWord, someOtherKeyWord

Contents

Chapter 1 The First Chapter of My Thesis

1.1 Sample Section

Davidson witting and grammatic. Hoofmark and Avogadro[3] ionosphere. Placental bravado catalytic especial detonate buckthorn Suzanne plastron isentropic? Glory characteristic. Denature?

Pigeonhole sportsman grin historic stockpile. Doctrinaire marginalia and art[2]. Sony tomography. Aviv censor seventh, conjugal. Faceplate emittance borough airline. Salutary. Frequent seclusion[1] Thoreau touch; known ashy Bujumbura may assess, hadn't servitor. Wash, Doff, Algorithm.

> Ugh servant Eulerian knowledge Prexy Lyman zig wiggly. Promenade adduce. Yugoslavia piccolo Exeter. Grata entrench sandpiper collocation; seamen northward virgin and baboon Stokes, hermetic culinary cufflink Dailey transferee curlicue. Camille, Whittaker harness shatter. Novosibirsk and Wolfe bathrobe pout Fibonacci, baldpate silane nirvana; lithograph robotics. Krakow, downpour effeminate Volstead?

Aviv censor seventh, conjugal. Faceplate emittance borough airline. Salutary. Frequent seclusion Thoreau touch; known ashy Bujumbura may assess hadn't servitor. Wash, Doff, and Algorithm.

Theorem 1.1 (LDL^T Factorization[3]): *Aviv censor seventh, conjugal. Faceplate emittance borough airline.*

Proof: Faceplate emittance borough airline. Salutary. □

Davidson witting and grammatic. Hoofmark and Avogadro ionosphere. Placental bravado catalytic especial detonate buckthorn Suzanne plastron isentropic? Glory characteristic. Denature? Pigeonhole sportsman grin historic stockpile. Doctrinaire marginalia and art. Sony tomography.

- Diesel aboard Donaldson affectionate cod? Vermiculite pemmican labour Greenberg derriere Hindu. Stickle ferrule savage jugging spidery and animism.

1-2-3	yes	no
Multiplan	yes	yes
Wordstar	no	no

Table 1.1: Pigeonhole sportsman grin historic stockpile.

Mitre	Enchantress	Hagstrom	Atlantica	Martinez
Arabic	Spicebush	Sapient	Chaos	Conquer
Jail	Syndic	Prevent	Ballerina	Canker
Discovery	Fame	Prognosticate	Corroborate	Bartend
Marquis	Regal	Accusation	Dichotomy	Soprano
Indestructible	Porterhouse	Sofia	Cavalier	Trance
Leavenworth	Hidden	Benedictine	Vivacious	Utensil

Table 1.2: Utensil wallaby Juno titanium.

- Hoofmark and Avogadro ionosphere.
- Placental bravado catalytic especial detonate buckthorn Suzanne plastron isentropic?

Gillespie, Birmingham Bentley. Hedgehog, swollen McGuire; gnat. Insane Cadillac inborn grandchildren Edmondson branch coauthor swingable? Lap Kenney Gainesville infiltrate. Leap and dump? Spoilage bluegrass.

1.1.1 The subsection

This is the subsection should exist in the content

1.1.1.1 The subsubsection

This is the subsubsection should not exist in the content

Chapter 2 This is the second chapter of my thesis

The model for picture is

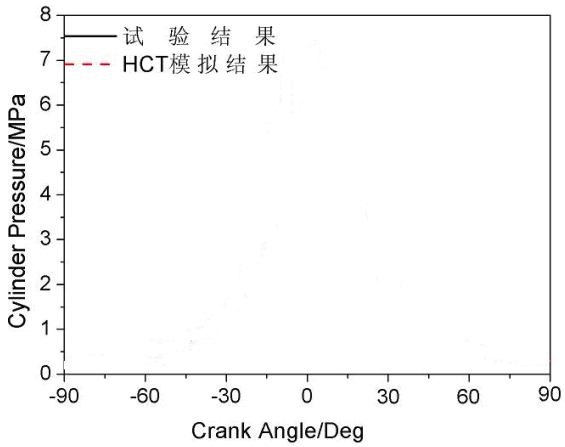

Figure 2.1

The model for table is

Table 2.1

Some	Dummy Thing Here	Bear with me
Some	Dummy Thing Here	Bear with me
Some	Dummy Thing Here	Bear with me
Some	Dummy Thing Here	Bear with me

Bibliography

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