# بسم الله الرحمن الرحيم


MONA MAGHRABY

# شبكة المعلومات الجامعية

# التوثيق الالكتروني والميكروفيلم

MONA MAGHRABY

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التوثيق الإلكتروني والميكروفيلم

# جامعة عين شمس

# التوثيق الإلكتروني والميكروفيلم

# قسم

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***MONA MAGHRABY***

# A NOVEL PROCESSING APPROACH FOR BETTER ADDED VALUE OF MIDDLE PETROLEUM CUTS

By

**Rabab Ali Ahmed Abdel Meguid**

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of

**MASTER OF SCIENCE**

in

**CHEMICAL ENGINEERING**

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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**Title of Thesis:**

# A Novel Processing Approach for Better Added Value of Middle Petroleum Cuts


**Key Words:**

Jet Fuel A/A1, Blending, ASTM, Middle Petroleum cuts, and Fuel Pool



**Summary:**

The aviation industry is placing heavy demands on Jet Fuel and therefore putting risk of maintaining a sufficient supply to cover this expansion. The aim of this research is to study the characteristics of blending Naphtha with Kerosene compared to Jet Fuel specifications. So as to prove that blending of Naphtha with Kerosene can used for increasing Jet Fuel supply. The obtained results revealed that a blend of 10% Heavy Naphtha/90% Kerosene by weight presented the nearest characteristics to Jet Fuel A1. This may have worldwide implications as a financial saving while providing similar Jet Fuel properties.

# Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Date:

Signature:

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Rabab Ali Ahmed
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# Nomenclature

| Symbol | Description |
|---|---|
| API | American Petroleum Institute |
| ASTM | American Society for Testing and Materials |
| AVGAS | Aviation Gasoline |
| FCC | Fluid Catalytic Cracking |
| IATA | International Air Transport Association |
| MSDS | Material Safety Data Sheet |
| RVP | Reid Vapour Pressure |
| SI | Standard International Metric |
| VGO | Vacuum Gas Oil |
| VR | Vacuum Residue or Resid |