

A PROJECT REPORT
ON
**“ANALYSIS OF MECHING OVER
BRITTLE METAL”**

SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE
DEGREE MTECH
IN MECHANICAL ENGINEERING

SUBMITTED BY

GAURAV KUMAR

ROLL NO. – 171030225001

GUIDED BY

GAURAV YADAV

SUBMITTED TO THE HEAD OF MECHANICAL DEPARTMENT



JS UNIVERSITY SHIKOHABAD

(Established by the Gov. of UP and recognized as per section 2(f) of UGC Act, 1956)

Session (2018 – 2019)





JS UNIVERSITY SHIKOHABAD

(Established by the Gov. of UP and recognized as per section 2(f) of UGC Act. 1956)

CERTIFICATE

This is to certify that the project report entitled “Analysis of machining over the brittle metal” was successfully completed by student of fourth semester MTECH in Mechanical Engineering.

Gaurav Kumar

Roll no. – 171030225001

In partial fulfillment of the requirements for the award of Degree MTECH in Mechanical Engineering and submitted to the department of Mechanical Engineering of JS University, Shikohabad work carried out during a period for the academic session 2018-2019 as per curriculum.

Name of Guide

Name of HOD

Gourav Yadav

Jitendra Kumar

External Examiner

Director

PERFORMANCE TESTING OF FOUR STROKE PETROL
ENGINE USING BIO-FUEL

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

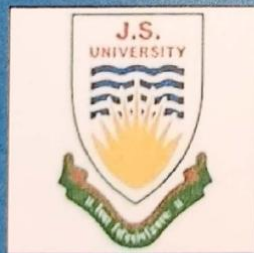
Master of Technology
in
Mechanical Engineering

By

JAYNESH KUMAR

(171030225002)

Under the Supervision of
Mr. JITENDRA KUMAR
(Assistant Professor)



Department of Mechanical Engineering


J.S. UNIVERSITY


Shikohabad, Firozabad (U.P.) INDIA

MAY 2019

CERTIFICATE

Certified that **JAYNESH KUMAR** (Roll No.-171030225002) has carried out the research work presented in this thesis entitled “**PERFORMANCE TESTING OF FOUR STROKE PETROL ENGINE USING BIO-FUEL**” for the award of **Master of Technology** from J.S.University, Shikohabad a under my supervision. The thesis embodies results of original work, and studies are carried out by the student himself and the contents of the thesis do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/ Institution.


Co-Guide Signature,
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(Assistant Professor)
[J.S.University, shikohabad Firozabad]


Guide Signature
(Mr. JITENDRA KUMAR)
(Assistant Professor)
[J.S.University, shikohabad Firozabad]

Date: 04/06/19

Date: 04/06/19

POWER GENERATION FROM WASTE HEAT OF
POWER PLANT

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

Master of Technology
in
Mechanical Engineering

By
KM. LATA
(171030225003)

Under the Supervision of
Mr. JITENDRA KUMAR
(Assistant Professor)



Department of Mechanical Engineering


J.S. UNIVERSITY

Shikohabad, Firozabad (U.P.) INDIA


MAY 2019

CERTIFICATE

Certified that **KMLATA** (Roll No.-171030225003) has carried out the research work presented in this thesis entitled "**POWER GENERATION FROM WASTE HEAT OF POWER PLANT** " for the award of **Master of Technology** from J.S.University, Shikohabad a under my supervision. The thesis embodies results of original work, and studies are carried out by the student himself and the contents of the thesis do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/ Institution.



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Date: 06/04/19

Date:

DESIGN AND FABRICATION OF DOUBLE SLOPE
SOLAR STILL

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

Master of Technology
in
Mechanical Engineering

By
SONENDRA SINGH
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Under the Supervision of
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Department of Mechanical Engineering
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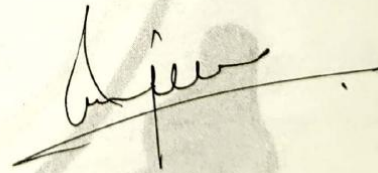
DECLARATION
CERTIFICATE

I hereby declare that the submitted my coursework and that to best of my knowledge and
Certified that **SONENDRA SINGH** (Roll No.-171030225004) has carried out the research
work presented in this thesis entitled "**DESIGN AND FABRICATION OF DOUBLE SLOPE
SOLAR STILL**" for the award of **Master of Technology** from J.S.University, Shikohabad a
under my supervision. The thesis embodies results of original work, and studies are carried out by
the student himself and the contents of the thesis do not form the basis for the award of any other
degree to the candidate or to anybody else from this or any other University/ Institution.

Co-guide signature,
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(Assistant Professor)

[J.S.University,shikohabad Firozabad]



Guide Signature
(Mr. SANJEEV KUMAR)

(Assistant Professor)

[J.S.University, shikohabad Firozabad]

Date:

Date: 04/08/19

ANALYSIS AND OPTIMIZATION OF FLOW PATTERN
INVESTIGATION FOR STAGGERED CIRCULAR
PIPE IN A CROSS FLOW

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

Master of Technology
in
Mechanical Engineering

By
YOGENDRA SINGH
(171030225006)

Under the Supervision of
Mr. SANJEEV KUMAR
(Assistant Professor)



Department of Mechanical Engineering
J.S. UNIVERSITY
Shikohabad, Firozabad (U.P.) INDIA
MAY 2019

CERTIFICATE

Certified that **YOGENDRA SINGH** (Roll No.-171030225006) has carried out the research work presented in this thesis entitled "*Analysis and Optimization of Flow Pattern Investigation for staggered circular Pipe in a cross flow*" for the award of **Master of Technology** from J.S.University, Shikohabad a under my supervision. The thesis embodies results of original work, and studies are carried out by the student himself and the contents of the thesis do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/ Institution.

Co-guide signature

(Mr. JITENDRA KUMAR)

(Assistant Professor)

[J.S.University, shikohabad Firozabad]

Date: 04/06/19

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[J.S.University, shikohabad Firozabad]

Date: 04/06/19



J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.

A

DISSERTATION REPORT

ON

**A NUMERICAL FLUTTER PREDICTOR FOR 3D AIRFOILS USING THE
ONERA DYNAMIC STALL MODEL**

Submitted in partial fulfillment of the requirement for the award of Degree of

MASTER OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Under the Supervision of

Mr. Jitendra Kumar

ASSISTANT PROFESSOR



SUBMITTED BY-

PANKAJ KUMAR

Roll No.-171030225008

(Session:2018-2019)



J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.



CERTIFICATE

This is to certify that thesis entitled, “ A NUMERICAL FLUTTER PREDICTOR FOR 3D AIRFOILS USING THE ONERA DYNAMIC STALL MODEL” submitted by **PANKAJ KUMAR** in the partial fulfillment of the requirement for the award of Master of Technology in Mechanical Engineering during the session of 2018-2019 in the department of Mechanical Engineering Shikohabad (Uttar-Pradesh).

It is authenticate work carried out by him under my supervision and guidance. To the best of my knowledge, the matter embodied in this thesis has not submitted to any other University/ Institute for award of any Degree or Diploma.

Mr. Jitendra Kumar
Assistant Professor
Department of Mechanical Engineering
J S UNIVERSITY SHIKOHABAD



J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.

A

DISSERTATION REPORT

ON

A Simplified Fluid Dynamics Model of Ultrafiltration

Submitted in partial fulfillment of the requirement for the award of Degree of

MASTER OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Under the Supervision of

Mr. Sanjeev Kumar Verma

ASSISTANT PROFESSOR



SUBMITTED BY-

SWARAJ SINGH

Roll No.-171030225009

(Session:2018-2019)



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CERTIFICATE

This is to certify that thesis entitled, “ A Simplified Fluid Dynamics Model of Ultrafiltration” submitted by **SWARAJ SINGH** in the partial fulfillment of the requirement for the award of Master of Technology in Mechanical Engineering during the session of 2018-2019 in the department of Mechanical Engineering Shikohabad (Uttar-Pradesh).

It is authenticate work carried out by him under my supervision and guidance. To the best of my knowledge, the matter embodied in this thesis has not submitted to any other University/ Institute for award of any Degree or Diploma.

Mr. Sanjeev Kumar Verma
Assistant Professor
Department of Mechanical Engineering
J S UNIVERSITY SHIKOHABAD



J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.

A

DISSERTATION REPORT

ON

**Mechanical Design and Analysis: High-Precision Microcontact Printhead
for Roll-to-Roll Printing of Flexible Electronics**

Submitted in partial fulfillment of the requirement for the award of Degree of

MASTER OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Under the Supervision of

Mr. RajHans Kumar

ASSISTANT PROFESSOR



SUBMITTED BY-

VED PRAKASH

Roll No.-171030225014

(Session:2018-2019)



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CERTIFICATE

This is to certify that thesis entitled, “ Mechanical Design and Analysis: High-Precision Microcontact Printhead for Roll-to-Roll Printing of Flexible Electronics” submitted by **VED PRAKASH** in the partial fulfillment of the requirement for the award of Master of Technology in Mechanical Engineering during the session of 2018-2019 in the department of Mechanical Engineering Shikohabad (Uttar-Pradesh).

It is authenticate work carried out by him under my supervision and guidance. To the best of my knowledge, the matter embodied in this thesis has not submitted to any other University/ Institute for award of any Degree or Diploma.

Mr. RajHans Kumar
Assistant Professor
Department of Mechanical Engineering
J S UNIVERSITY SHIKOHABAD



J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.

A

DISSERTATION REPORT

ON

A Study on Latent Thermal Energy Storage (LTES) using Phase Change Materials

Submitted in partial fulfillment of the requirement for the award of Degree of

MASTER OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Under the Supervision of

Mr. Jitendra Kumar

ASSISTANT PROFESSOR



SUBMITTED BY-

DEVENDRA SINGH
Roll No.-171030225015

(Session:2018-2019)



J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.



CERTIFICATE

This is to certify that thesis entitled, “ A Study on Latent Thermal Energy Storage (LTES) using Phase Change Materials” submitted by **DEVENDRA SINGH** in the partial fulfillment of the requirement for the award of Master of Technology in Mechanical Engineering during the session of 2018-2019 in the department of Mechanical Engineering Shikohabad (Uttar-Pradesh).

It is authenticate work carried out by him under my supervision and guidance. To the best of my knowledge, the matter embodied in this thesis has not submitted to any other University/ Institute for award of any Degree or Diploma.

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J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.

A

DISSERTATION REPORT

ON

Analysis of Low-Induction Rotors for Increased Power Production

Submitted in partial fulfillment of the requirement for the award of Degree of

MASTER OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Under the Supervision of

Mr. Sanjeev Kumar Verma

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SUBMITTED BY-

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(Session:2018-2019)



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CERTIFICATE

This is to certify that thesis entitled, “ Analysis of Low-Induction Rotors for Increased Power Production” submitted by **SHERSINGH** in the partial fulfillment of the requirement for the award of Master of Technology in Mechanical Engineering during the session of 2018-2019 in the department of Mechanical Engineering Shikohabad (Uttar-Pradesh).

It is authenticate work carried out by him under my supervision and guidance. To the best of my knowledge, the matter embodied in this thesis has not submitted to any other University/ Institute for award of any Degree or Diploma.

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Assistant Professor
Department of Mechanical Engineering
J S UNIVERSITY SHIKOHABAD



J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.

A

DISSERTATION REPORT

ON

High Speed Flow Simulation in Fuel Injector Nozzles

Submitted in partial fulfillment of the requirement for the award of Degree of

MASTER OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Under the Supervision of

Mr. RajHans Kumar

ASSISTANT PROFESSOR



SUBMITTED BY-

HIMANSHU RAJ

Roll No.-171030225017

(Session:2018-2019)



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CERTIFICATE

This is to certify that thesis entitled, “ High Speed Flow Simulation in Fuel Injector Nozzles” submitted by **HIMANSHU RAJ** in the partial fulfillment of the requirement for the award of Master of Technology in Mechanical Engineering during the session of 2018-2019 in the department of Mechanical Engineering Shikohabad (Uttar-Pradesh).

It is authenticate work carried out by him under my supervision and guidance. To the best of my knowledge, the matter embodied in this thesis has not submitted to any other University/ Institute for award of any Degree or Diploma.

Mr. RajHans Kumar
Assistant Professor
Department of Mechanical Engineering
J S UNIVERSITY SHIKOHABAD



J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.

A

DISSERTATION REPORT

ON

Calculation of Scalar Isosurface Area and Applications

Submitted in partial fulfillment of the requirement for the award of Degree of

MASTER OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Under the Supervision of

Mr. RamManohar Singh Yadav

ASSISTANT PROFESSOR



SUBMITTED BY-

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(Session:2018-2019)



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CERTIFICATE

This is to certify that thesis entitled, “ Calculation of Scalar Isosurface Area and Applications” submitted by **VICHITRA MANI PANDEY** in the partial fulfillment of the requirement for the award of Master of Technology in Mechanical Engineering during the session of 2018-2019 in the department of Mechanical Engineering Shikohabad (Uttar-Pradesh).

It is authenticate work carried out by him under my supervision and guidance. To the best of my knowledge, the matter embodied in this thesis has not submitted to any other University/ Institute for award of any Degree or Diploma.

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J. S. UNIVERSITY, SHIKOHBAD, FIROZABAD, U.P.

A

DISSERTATION REPORT

ON

**Design and Testing of a Foundation Raised Oscillating Surge Wave
Energy Convgy Converter**

Submitted in partial fulfillment of the requirement for the award of Degree of

MASTER OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

Under the Supervision of

Mr. RajHans Kumar

ASSISTANTPROFESSOR



SUBMITTEDBY-

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Roll No.-171030225020

(Session:2018-2019)



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CERTIFICATE

This is to certify that thesis entitled, “ Design and Testing of a Foundation Raised Oscillating Surge Wave Energy Convgy Converter” submitted by **CHANDRESH** in the partial fulfillment of the requirement for the award of Master of Technology in Mechanical Engineering during the session of 2018-2019 in the department of Mechanical Engineering Shikohabad (Uttar-Pradesh).

It is authenticate work carried out by him under my supervision and guidance. To the best of my knowledge, the matter embodied in this thesis has not submitted to any other University/ Institute for award of any Degree or Diploma.

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