



# G.V.P. COLLEGE OF ENGINEERING (Autonomous)

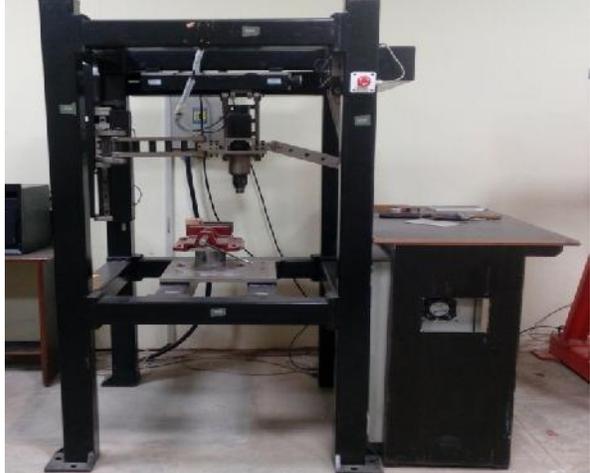
(Approved by AICTE, Affiliated to JNTU-Kakinada)

Madhurawada, Visakhapatnam – 530 048

## MECHANICAL ENGINEERING DEPARTMENT

### RESEARCH FACILITIES AVAILABLE

S.No.	Name of the Equipment (Hardware)
1.	<p><i>GMAW Machine with Rotating Arc Mechanism</i></p> 
2.	<p><i>Parallel Kinematic Machine (2 – DOF)</i></p> 
3.	<p><i>Metallurgical Microscope for Micro-Structural Analysis with all necessary Software</i></p> 

<p>4.</p>	<p><i>Computerized VCR Engine with Gas Analyzer, Smoke Meter &amp; Injection Timing Kit</i></p>		  
<p>6.</p>	<p><i>Translational Parallel Kinematic Machine (3 – DOF)</i></p>		
<p>7.</p>	<p><i>Vibration Analyzer (FFT )</i></p>		

8	<i>Pin/Ball On Disc Apparatus For Measurement Of Friction And Wear By Varying Temperature, Sliding Speed &amp; Load</i>	
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## **LIST OF SOFTWARES AVAILABLE**

- **ALTAIR HYPERMESH**
- **UNIGRAPHICS-NX**
- **NISA**
- **PRO-E WILDFIRE**
- **MASTERCAM**
- **ANSYS**
- **CATIA V5**
- **IRON CAD**



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### MECHANICAL ENGINEERING DEPARTMENT

## CONSULTANCY PROJECTS

S. No.	Title of the Project	Funding Agency	Name of the PI	Status	Academic Year	Total Rs. Lakhs
1	Optimal Design of Diesel Generator Foundation	DRDO	Dr. S. Ramakrishna & Prof. Rao Tatavarthy	Completed	04-06-2012	6.72
2.	Modelling and Finite element analysis of bearing housing and estimation of stiffness in X and Y directions And ANSYS training	Powertherm Engg Pvt ltd Hyderabad	Dr. S. Ramakrishna	Completed	29-07-2015	1.10
3.	Vibration Study and Diagnosis of Turbo Blower-3	Mideast Integrated Steels Limited Jajpur, Orissa	Dr. S. Ramakrishna	Completed	10-08-2015	0.30
4.	Failure investigation of 500 MW set at Rihand Thermal Power Station, Sonebhadra Uttar Pradesh	PROTOCOL, Insurance Surveyors & Loss Assessors Pvt. Ltd, Noida, India	Dr. S. Ramakrishna K. V.Bhaskara Sarma And Prof. J. S Rao	Completed	30-09-2015	6.0
5.	Analyzing the vibrations of motor generator set with all required instruments.	Nval Dockyard VSKP	Dr. S Ramakrishna & K. V.Bhaskara Sarma	Completed	10-03-2016	0.30
6.	Load Dependent Vibrations Study on 77 Mw TGSet at	BhushanSteel Limited Orissa	Dr. S Ramakrishna & K. V.Bhaskara Sarma	Completed	23-06-2016	2.00
Total						16.42

## R&D PROJECTS

S. No.	Title of the Project	Funding Agency	Name of the Scheme	Amount	Name of the PI	Name of the CI	Status Completed/ In Progress	Sanctioned date	Date of Completion
<b>2017-2018</b>									
1	“Green and Sustainable machining of “hard to machine materials” using Graphene based Self Lubricating cutting tools and cutting fluids”	DST (SERB)	Early Career Research Award	25.56Lakhs	Dr.Amrita Maddamsetty	--	In Progress	02-08-2017	On going
<b>2016-2017</b>									
2.	Experimental evaluation of quantitative values of frictional coefficients	DRDO/ GTRE	RPS	9 Lakhs	Dr. S.Rama Krishna		In Progress	30-11-2016	On going

## 2014-2015

3.	Investigates the effect of compression ratio, exhaust gas recirculation, air turbo charging and injection timing on the performance and exhaust gas emissions of a diesel engine fuelled with biodiesel –An Experimental study	AICTE	RPS	5.88 Lakhs	Dr. B.Govinda Rao		In Progress	19-3-2015	On going
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## 2012-2013

4	Design and Development of special purpose CNC machine for 2-D contour machining and other application	AICTE	RPS	12.00 Lakhs	Prof Pilaka V Murthy	Prof. A.B.K.Rao Sri Sanjay Darvekar	On going	01-09-2012	On going
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## 2011-2012

5	Modernization of Thermal Engineering Lab	AICTE	MODROBS	10.00 Lakhs	Dr. B.Govinda Rao	P.V Vinay	Completed	31-03-2011	01-07-2012
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## 2010-2011

6.	Detailed studies on effect of ball milling grinding parameters on particle size of tungsten nano powder and develop an empirical model relating various parameters with final particle siz.	DRDO		4.97 Lakhs	Dr. Pilaka Murthy		Completed	28-03-2011	29-04-2012
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## 2007-2008

7.	Modernization of CAD/CAM and robotics laboratory with industry relevant mechatronics	AICTE	MODROBS	8.50 Lakhs	Dr. A.B.K. Rao		Completed	27-02-2008	03-08-2009
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### **MECHANICAL ENGINEERING DEPARTMENT**

# **PG(CAAD) STUDENTS PROJECTS DONE IN INDUSTRY/ INSTITUTE**

<b>S.No</b>	<b>Roll No</b>	<b>Title of the Project</b>	<b>Project done in Industry / Institute</b>
1	14131D1603	Shafting Analysis of a Fleet Support Vessel	BHPV
2	13131D1603	Strength Analysis on composite propeller for underwater applications	NSTL



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### PG(CAD/CAM) STUDENTS PROJECTS DONE IN INDUSTRY/ INSTITUTE

S.No	Roll No	Title of the Project	Project done in Industry / Institute
1	15131D0411	Effect of lead angle and rotational speed of Ball Nose tool on surface roughness and vibration in 5-Axis CNC machine	NSTL Visakhapatnam
2	14131D0407	Design and Analysis of a Composite Propeller	Hindustan Shipyard Ltd.
3	13131D0415	Experimental Investigation of mechanical properties of Hot-Dip Galvenised steel-process parameters optimization for coating weight	Aarti Strips Pvt. Ltd., Nepal
4	12131D0402	Design and Analysis of rotor blade of paddle feeder in coal handling unit	Tata Robins Fraser Ltd., Jamshedpur
5	11131D0405	Design and Failure analysis of twin boom stacker gear box output shaft in Visakhapatnam steelplant	vizag steelplant
6	10131D0414	Optimization of Turbine blade for improving fatigue life	BHEL Hyderabad
7	10131D0404	DesIGN aND Analysis of adaptable traverse beam for handling steel ladle in steel melting shop-II at vizag steelplant	vizag steelplant
8	10131D0405	Design, Analysis and Fabrication of Test Rig for propeller development	NSTL Visakhapatnam
9	10131D0409	Estimation of Hydrodynamic coefficients of submerged bodies using CFD	NSTL Visakhapatnam



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### MECHANICAL ENGINEERING DEPARTMENT

#### PG(THERMAL ENGINEERING) STUDENTS PROJECTS DONE IN INDUSTRY/ INSTITUTE

S.No	Roll No	Title of the Project	Project done in Industry / Institute
1	13131D2109	Experimental and theoretical studies on thermal signatures from a ship hull using a scale model	NSTL
2	13131D2104	Experimental and theoretical studies on exergy analysis of a PEM fuel cell	A.U.
3	15131D2101	Thermal performance of thermosiphon – An experimental analysis	JNTU-H
4	15131D2110	Theoretical and experimental studies on thermal performance of a closed loop pulsating heat pipe	JNTU-H
5	15131D2109	Experimental study on heat transfer in nanofluid flow in a hairpin heat exchanger with twisted tape inserts	JNTU-H
6	14131D2103	Heat transfer enhancement using magnetic/water nano fluid in a hair pin heat exchanger-An experimental investigation	JNTU-H
7	14131D2111	CFD Analysis on the performance of pulsating heat pipe for different working fluid	JNTU_H
8	13131D2105	Experimental analysis of double pipe heat exchanger with twisted tape inserts	JNTU-H
9	13131D2108	Heat transfer enhancement in horizontal tube by forced convection with insets	JNTU-H
10	13131D2112	Analysis of a condenser used in thermal power plant for possible augmentation in the heat transfer	Dr. NTPS Vijayawada
11	13131D2113	Thermal performance and analysis of natural draft cooling tower	NTPC
12	13131D2101	Performance enhancement of Visakhapatnam steelplants Thermal power plant by energy audit of boiler	VIZAG STEELPLANT
13	13131D2102	CFD Analysis of two pass double pipe heat exchanger with $FE_3O_4$ /water nanofluid	

