

Research Activity Report (June 2015- Dec 2015)

1. Research activities of the faculty members:

Number of faculty in the Department	:	39
Number of faculty with Ph D qualification	:	10
Number of faculty pursuing Ph D	:	15

A). Papers published by the faculty members in National and International Journals:

Sl. No.	Name of Faculty	Title of the paper	Name of the Journal	Date
1	K.Pitchandi	Mechanical Characteristics of woven banana and glass fiber epoxy composites.	Applied Mechanics and Materials,	June 2015
2	K.Pitchandi	Evaluation on mechanical properties of woven aloe vera and sisal fibre hybrid reinforced epoxy composites	Bulletin of Material Science.	Sept 2015
3	K.Pitchandi	Influence of inlet velocity of air and solid particle feed rate on holdup mass and heat transfer characteristics in cyclone heat exchanger	Journal of Mechanical Science and Technology	Oct 2015
4	N.Muthukrishnan	Optimisation of cutting parameters on machining Micro alloy steel (mas 38mnsivs5) by desirability Analysis	Journal of the Balkan Tribological Association	Oct 2015
5	N.Muthukrishnan	Analysis on surface roughness in abrasive water jet machining of Aluminum	Progress in Industrial Ecology	Nov 2015
6	R.Ramesh	Study of Free Vibration Characteristics of Carbon Epoxy based Composite Beams	Applied Mechanics and Materials	Nov 2015
7	T.Raja	Defence Surveillance Robot With Automatic Docking System	International Journal of Applied Engineering Research	Nov 2015
8	T.Raja	An Automated System For Tile Defects Detection In Conveyor Using ANN And PLC	International Journal of Applied Engineering Research	Nov 2015
9	S.Saravanan	Effect of Exhaust Gas Recirculation (EGR) on Performance and Emissions of a Constant Speed DI Diesel Engine Fueled with Pentanol/diesel Blends	Fuel	Aug 2015
10	S.Saravanan	Effect of EGR at Advanced Injection Timing on Combustion Characteristics of Diesel Engine	Alexandria Engineering Journal	June 2015
11	S. Ramesh Babu	Modeling and simulation of industrial coal fired boiler	Applied Mechanics and Materials	June 2015
12	S. Ramesh Babu	Determination of Material Parameters during Superplastic Forming of AZ31B Magnesium Alloy at Elevated Temperatures in Uniaxial Tensile Test	Applied Mechanics and Materials	July 2015

13	R.Murugan	Investigation on Mechanical Behaviour and Vibration Characteristics of Thin Walled Glass/Carbon Hybrid Composite Beams Under Fixed-Free Boundary Condition	Mechanics of Advanced Materials and Structures	Dec 2015
14	S.Ilaiyavel	Optimization of operating parameters on wear behavior of Manganese Phosphate Coated Die steel	Applied Mechanics and Materials	Aug 2015
15	S.Ilaiyavel	Tribological Studies of Ti-Al-N Hard-Faced Coatings Evaluated with Ball-Cratering Test Method	Journal of the Chinese Society of Mechanical Engineers	Nov 2015
16	M. Mohandass	Influence of Cooling Rate on Fatigue Behaviour of Eutectic Al-Si (A413) Alloy Casting	Applied Mechanics and Materials	Aug 2015
16	C.Senthamaraikannan	Comparative Study on Vibration characteristics of Straight and Curved beam of box shaped cross section subjected under Cantilever end condition	International Journal of Applied Engineering Research	Nov 2015
17	S. Ponnuvel	Influence of Multi-Walled Carbon Nanotubes on Circularity of Drilled Holes In Epoxy/Glass Fabric Polymeric Composite	International Journal of Applied Engineering Research	Aug 2015
18	M.Gajendran	Performance of Latent Heat Solar Thermal Energy Storage system using various Heat Transfer Fluid	Applied Mechanics and Materials	June 2015
19	M.Gajendran	Influence of Nanofluids as the Heat Transfer Fluid in Solar Thermal Energy Storage System	TERI Information Digest on Energy	June 2015
20	M.Gajendran	Performance of latent heat solar thermal energy storage system	International Journal of Applied Engineering Research	July 2015
21	M.Gajendran	Effect of various nanofluids on Performance of Latent Heat Solar Thermal Energy Storage system	International Journal of Applied Engineering Research	July 2015
22	M.Gajendran	Application of solar thermal energy storage system for the enhancement of marine heavy fuel oil systems	Journal of Chemical and Pharmaceutical Research	Aug 2015
23	S.Natarajan	Lean Homogeneous Combustion of E-diesel using external mixture formation technique	Alexandria Engineering Journal	June 2015
24	S.Natarajan	Experimental Study on NOx reduction in CI Engine fuelled with Bio diesel (Cottonseed methyl ester Blends) using Selective Catalytic reduction (SCR) system with Anova analysis	Applied mechanics and materials	Aug 2015
25	S.Natarajan	Computational Analysis of an Early direct injected HCCI Engine with Turbo charger using Bio ethanol and diesel blends	Applied mechanics and materials	Nov 2015
26	S.Natarajan	Study of Emission Characteristics of the SCR System on CI Engine fuelled with Diesel ethanol blends and an Optimised Urea injection System	Applied mechanics and materials	Nov 2015

27	S.Natarajan	Experimental Study on Diesel fuelled Premixed Charge Compression ignition Engine	International Journal of Applied Engineering research	Nov 2015
28	P. Raghu	A review of macroscopic and microscopic spray characteristic of vegetable oil biodiesel/blends in DI diesel engine	International Journal of Applied Engineering Research	July 2015
29	P. Raghu	Experimental study of mixture formation in biodiesel spray with preheated fuel	International Journal of Applied Engineering Research	July 2015
30	P. Raghu	Experimental Investigation on Spray Characteristics of Diesel, Biodiesel and its blends by Varying Chamber Pressure	International Journal of Applied Engineering Research	Aug 2015
31	P. Raghu	Experimental study on diesel engine to analyse the spray characteristics of biodiesel by varying injection pressure	International Journal of Applied Engineering Research	Aug 2015
32	P. Raghu	Experimental study on spray characteristics of biodiesel and diesel under ambient temperature conditions	International Journal of Applied Engineering Research	Aug 2015
33	P.Raghu	Spray characteristics of diesel and derivatives in direct injection diesel engines with varying injection pressures	Journal of Mechanical Science and Technology	Oct 2015
34	P.Raghu	Study of spray characteristics of biodiesel using dimensionless analysis under non evaporating conditions	Transactions of Mechanical Engineering	Oct 2015
35	P.Raghu	Spray characteristics of diesel and biodiesel fuels for various injection timings under non evaporating conditions	Applied mechanics and materials	Nov 2015
36	P.Raghu	Effect of various injection pressures on spray characteristics of Karanja Oil Methyl Ester (KOME) and Diesel in a DI Diesel Engine	Applied mechanics and materials	Nov 2015
37	A.Kumaraswamy	Performance Evaluation of Compression Ignition Direct Injection Diesel Engine on Dual Fuel Mode with Mango Oil Methyl ester biofuel	International journal of Vehicle structures and Systems	Oct 2015
38	S.Arumugam	Effect of Combustion Chamber in a DICI Engine fuelled with Corn Oil Methyl Ester	Journal of Chemical and Pharmaceutical Research	June 2015
39	S.Arumugam	Performance and Emissions of A DICI Engine With Biodiesel For Various Combustion Chamber Geometry	International Journal of Applied Engineering Research	Aug 2015
40	S.Arumugam	Effect of Performance and Emission for Re-entrant and Toroidal combustion chambers in a DICI Engine	International Journal of Applied Engineering Research	Aug 2015
41	S.Arumugam	Empirical Simulation of Spherical Combustion Chamber Geometry in a DICI Engine	Journal of Chemical and Pharmaceutical Sciences	Sep 2015
42	S.Arumugam	Effect of Re-Entrant and Toroidal Combustion chamber in a DICI	Applied Mechanics and	Nov 2015

		Engine	Materials	
43	G.Manikandaraja	Numerical study on energy absorbing characteristics of Thin-Walled tube under axial and oblique impact.	Alexandria Engineering Journal	Dec 2015
44	M.Arul kumar	Design and analysis of electronic controller based robot arm	Applied Mechanics and Materials	Nov 2015

B). Papers presented by the faculty members in National and International conferences/ symposiums/ workshops: Nil

S. No.	Name of Faculty	Title of the paper	Name of the Conference/ symposium/ workshop	Date

C). National and International Conferences/ symposiums/ workshops attended by the Faculty members :

Sl. No.	Name of Faculty	Name of the Conference/ symposium/ workshop	Place	Date
1	G Manigandaraja	Advances in Computational Methods for Simulation of Transport Processes in Engineering	SVCE	24-26 June 2015

2) Departmental research activities:

A). Symposium, Conferences, Workshop and Guest lectures Conducted:

Sl. No.	Name of the Event	Place	Period	Funding Agency	National/ International	Convener and Faculty In charge
1	Ignition 2K15	SVCE	31-8-15	SVCE	National	R.Murugan
2	Green belt training	SVCE	2,9,16,23, 30 Aug 2015	SVCE	National	S.Gopinath
3	Green belt training (Bio-Tech)	SVCE	29, Aug, 3,4,10,11 Sept 2015.	SVCE	National	S.Gopinath
4	Green belt training (industry)	SVCE	1 Nov 2015	SVCE	National	S.Gopinath

B) Ongoing funded projects in the in the Department:

Sl. No.	Name of the Project	Funding Agency	Period & Amount Sanctioned	Coordinators	Status of the project
1	Experimental investigation of effect on fuel spray characteristic of direct injection diesel engine fueled with biodiesel	AICTE – Under RPS	2013 – 2016 / 16 lakhs	Dr. K.Pitchandi Mr. P.Raghu	Ongoing
2	ANN modeling of pulsed metal inert gas[P-MIG]welding of magnesium alloy joints	AICTE – Under RPS	2013 -2016 / 18 lakhs	Dr. N.Muthukrishnan Mr.V Gurusamy	Ongoing
3	Investigation of vibration characteristics of nana silica/micro rubber reinforced carbon fiber composites structural beams	AICTE – Under RPS	2013 -2016 / 9.72 lakhs	Dr. R.Ramesh Mr. C.Senthamarai Kannan	Ongoing
4	Machining and modeling of fiber reinforced polymer composites	AICTE – Under RPS	2013 - 2016 12.25 Lakhs	Dr.T.Raja Mr. V.Sridharan	Ongoing

C). Projects submitted to Funding Agencies by the Department:

Sl. No.	Name of the Project	Funding Agency	Period & Amount applied	Coordinators
	Nil			

D). Research centre status of the department:

Yes, our department research center status was renewed up to June 2017

3) **Student Research Activities:**

1) A). List of projects carried out by the students in the department as in house and Industrial project:

B). Research Publications by students in National and International Journal:

Sl. No.	Name of Student	Title of the paper	Journal Name	Date
1	Siddharth.B	Study of Free Vibration Characteristics of Carbon Epoxy based Composite Beams	Applied Mechanics and Materials	Nov 2015
2	K.Boomika	Defence Surveillance Robot With Automatic Docking System	International Journal of Applied Engineering Research	Nov 2015
3	M.Gokila	An Automated System For Tile Defects Detection In Conveyor Using ANN And PLC	International Journal of Applied Engineering Research	Nov 2015
4	Vijul Shah Shyam M P	Modeling and simulation of industrial coal fired boiler	Applied Mechanics and Materials	June 2015
5	R.Sheshathri , VR.Alagu Sundram	Optimization of operating parameters on wear behavior of Manganese Phosphate Coated Die steel	Applied Mechanics and Materials	Aug 2015
6	L.Radha swamy	Comparative Study on Vibration characteristics of Straight and Curved beam of box shaped cross section subjected under Cantilever end condition	International Journal of Applied Engineering Research	Nov 2015
7	A.Avinash	Lean Homogeneous Combustion of E-diesel using external mixture formation technique	Alexandria Engineering Journal	June 2015
8	M. Ayyappan	Performance of latent heat solar thermal energy storage system	International Journal of Applied Engineering Research	July 2015
9	M.Kowshik Dhev R.Seshadri	Experimental Study on NOx reduction in CI Engine fuelled with Bio diesel (Cottonseed methyl ester Blends) using Selective Catalytic reduction (SCR) system with Anova analysis	Applied mechanics and materials	Aug 2015
10	A.U.Meenakshi Sundaeswaran, S.Arun Kumar	Computational Analysis of an Early direct injected HCCI Engine with Turbo charger using Bio ethanol and diesel blends	Applied mechanics and materials	Nov 2015
11	R.Seshadri Kamesh A.Avinash	Study of Emission Characteristics of the SCR System on CI Engine fuelled with Diesel ethanol blends and an Optimised Urea injection System	Applied mechanics and materials	Nov 2015
12	M.Kavin Robert	Experimental Study on Diesel fuelled Premixed Charge Compression ignition Engine	International Journal of Applied Engineering research	Nov 2015
13	M. Senthamil Selvan	A review of macroscopic and microscopic spray characteristic of vegetable oil biodiesel/blends	International Journal of Applied Engineering	July 2015

		in DI diesel engine	Research	
14	R Srinivasan Gowtham	Experimental study of mixture formation in biodiesel spray with preheated fuel	International Journal of Applied Engineering Research	July 2015
15	A.Devaraj N.Srihari T.Sakthidasan	Experimental Investigation on Spray Characteristics of Diesel, Biodiesel and its blends by Varying Chamber Pressure	International Journal of Applied Engineering Research	Aug 2015
16	M.Arventh P.Maheskumar	Performance and Emissions of A DICI Engine With Biodiesel For Various Combustion Chamber Geometry	International Journal of Applied Engineering Research	Aug 2015
17	N.Vasudevan P.Saravanan	Effect of Performance and Emission for Re-entrant and Toroidal combustion chambers in a DICI Engine	International Journal of Applied Engineering Research	Aug 2015
18	M. Arventh	Effect of Combustion Chamber in a DICI Engine fuelled with Corn Oil Methyl Ester	Journal of Chemical and Pharmaceutical Research	June 2015
19	P.Maheskumar	Empirical Simulation of Spherical Combustion Chamber Geometry in a DICI Engine	Journal of Chemical and Pharmaceutical Research	Sept 2015
20	M.Arventh P.Maheshkumar	Effect of Re-Entrant and Toroidal Combustion chamber in a DICI Engine	Applied Mechanics and Materials	Nov 2015
21	V Sathosh Kumar	Numerical study on energy absorbing characteristics of Thin-Walled tube under axial and oblique impact.	Alexandria Engineering Journal	Dec 2015
22	S Amudhan	Design and analysis of electronic controller based robot arm	Applied Mechanics and Materials	Nov 2015

C). Research Presentations by students in National and International Conferences/ symposiums/ workshops:

S. No.	Name of Student	Title of the paper	Name of the Conference/ symposium/ workshop	National/ International	Venue	Date

D) National and International Conferences/ symposiums/ workshops attended by the students:

S. No.	Name of Student	Name of the Conferences/ symposiums/ workshops	National/ International	Venue	Date

4) Sponsorship details of faculty and students:

I) Sponsorship for faculty members:

A) Faculty sponsored for presentation in National Conferences/ symposiums/ workshops:

S. No	Name of the Faculty	Date	Title of the Paper	Name of the Conferences/ symposiums/ workshops	Venue	Sponsorship Amount(Rs.)

B) Faculty sponsored for presentation in International Conferences/ symposiums/ workshops: Nil

S.No	Name of the Faculty	Date	Title of the Paper	Name of the Conferences/ symposiums/ workshops	Venue	Sponsorship Amount(Rs.)

C) Faculty sponsored for attending national Conferences/ symposiums/ workshops: Nil

S. No	Name of the Faculty	Date	Name of the Conference/ symposium/ workshop	Venue	Sponsorship Amount (Rs.)

II) Sponsorship for Students:

A) Students sponsored for presentation in National Conferences/ symposiums/ workshops:

Sl. No	Name of the Faculty	Date	Title of the paper	Name of the Conference/ symposium/ workshop	Venue	Sponsorship Amount(Rs.)

B). Students sponsored for presentation in International Conferences/ symposiums/ workshops:

Sl. No.	Name of the Faculty	Date	Title of the paper	Name of the Conference/ symposium/ workshop	Venue	Sponsorship Amount(Rs.)

C). Students sponsored for attending national Conferences/ symposiums/ workshops: Nil

S.No	Name of the Faculty	Date	Name of the Conference/ symposium/ workshop	Venue	Sponsorship Amount(Rs.)

5) **Research cell(s) /area(s) of research in the department:**

Faculty members carry out research in the following fields

Fluid Mechanics & Machinery, Heat & Mass transfer, Thermodynamics, Composites, Machinability study, Optimization, Tribology, Mechanical behaviour of Engineering Materials, Vibration, I C engines, Heat transfer equipments, Super plastic formation, Friction stir welding, Non-ferrous metal joining processes, metal matrix composites, tribological characterization, multi-layer coating, FEM, Material Characterization, Surface Engineering, Polymeric Materials, Metal Casting, Fluid Power, Mechatronics.

6) **Consultancy work in the department:**

Thermal Engineering lab = Rs.27000 (Rupees Twenty seven thousand only)

7) **Patent information:** _____

Research Coordinator

Head of the Department