

SRI VENKATESWARA COLLEGE OF ENGINEERING
(Autonomous – Affiliated to Anna University)
Pennalur, Sriperumbudur 602 117
DEPARTMENT OF AUTOMOBILE ENGINEERING

15.07.2021

Sub: Report on Six day faculty development programme on “Applied Thermodynamics”

The Department of Automobile Engineering organized a Six Day Faculty Development Programme (FDP) on "Applied Thermodynamics" from 03.05.2021 to 08.05.2021 (through online-Google Meet Platform) with the approval and sponsorship of Rs 7,500/- from the management of SVCE. A Registration fee was collected as Rs. 300/- from each participant for the above program.

The Programme was inaugurated by Mr. I.Meenakshi Sundaram, CTO-Amalgamations Group. He delivered inaugural address about the “Recent Internal Combustion Engines Present and Future Trends”.

GENERATIONS OF IC ENGINES **2**

Generation	CO2 reduction / FE improvement	Electronics Content	Key Technologies	Example Vehicle
TBI Euro IV	130 g/km, 25 mpg (10-12 kmpl)	Low	EMS, Sensors, VVT, MPFI Injector, OBD II	2000 Camry
Euro IV to Euro VI	95 g/km, 38-42 mpg (14-15 kmpl)	Medium	High pressure CR, Thermal mgmt, GDI, Electric pump, Emission closed control loop, VCOF, Plezo Injector	2000 Camry
Euro VI & Beyond	~75 g/km, 54.5 mpg (23kmpl)	High	PO Hybrid systems, Cylinder Deactivation	2020 Camry, Porsche

(Technology Evolution)

EMISSION & FE BENEFITS + VARIATION REDUCTION

- Medium Electronics
- Dependence on Mechanical systems
- High Electronics with S/W controls
- Removal of many mechanical systems

Mr. I.Meenakshi Sundaram, delivering Inaugural Address of FDP ((through online-Google Meet Platform)

Twelve lecture sessions sessions covering all the major topics on Applied Thermodynamics . These technical lectures are handled by Dr.J Venkatesan, Profeassor & Head of Department of Automobile Engineering/SVCE, Dr.K Pitchandi, Professor, Department of Mechanical Engineering/SVCE, Dr. P . Raghu, Assistant Professor, Department of Mechanical Engineering/SVCE, Mr. A . Balasubramanian, Assistant Professor/SVCE, Mr. A.K Boobalasantilraj, Assistant Professor/ SVCE, Mr. G. Suresh, Delphi-TVS, Dr. S. Vedharaj, NIT, Trichy, Dr .

V . Gnanamoorthy, AU College of Engineering-Villupuram, Mr. M. Srinivasan & Mr. N. S. Prasad CVRDE, DRDO delivered a technical lecture on Applied Thermodynamic syllabus.

Fundamentals of Internal Combustion Engines

A. K. Boobalaseshthilraj
Assistant Professor
Department of Automobile Engineering
Sri Venkateswara College of Engineering

svce.ac.in | 34.06.2022 | Applied Thermodynamics | 04.06.2022

Boobalaseshthilraj Aut

Mr. A.K Boobalaseshthilraj, delivering a session in FDP

Internal Combustion Engines - 4 Stroke - SI

Starting position

1. Intake
a. piston starts moving down
b. intake valve opens
c. air-fuel mixture gets in

2. Compression
a. piston moves up
b. both valves closed
c. air-fuel mixture gets compressed

VENKATESAN J AUT

Dr.J Venkatesan, delivering lecture in FDP

Six Day Faculty Development Programme on APPLIED THERMODYNAMICS

Air Compressors

Dr P.Raghu
Assistant Professor
Department of Mechanical Engineering
Sriperumbudur-602117



RAGHU P MEC

Dr. P.Raghu , delivering lecture in FDP

STEAM AND STEAM BOILER - An Introduction



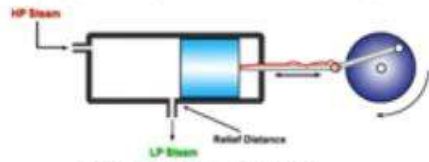
PITCHANDI K Mec

Dr.K Pitchandi, delivering lecture in FDP

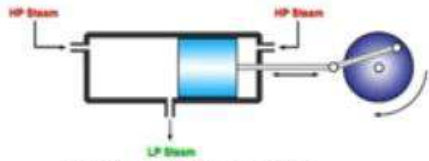
Conversion of heat to work



- ❑ First commercial device invented to convert heat to work – **Steam Engine** (James Watt, 1765) – it played a major role in accelerating the industrial revolution



Single acting Steam Engine



Double acting Steam Engine

5/6/2021

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Dr. S. Vedharaj, NIT, Trichy delivering a lecture in FDP



Sri Venkateswara
College of
Engineering

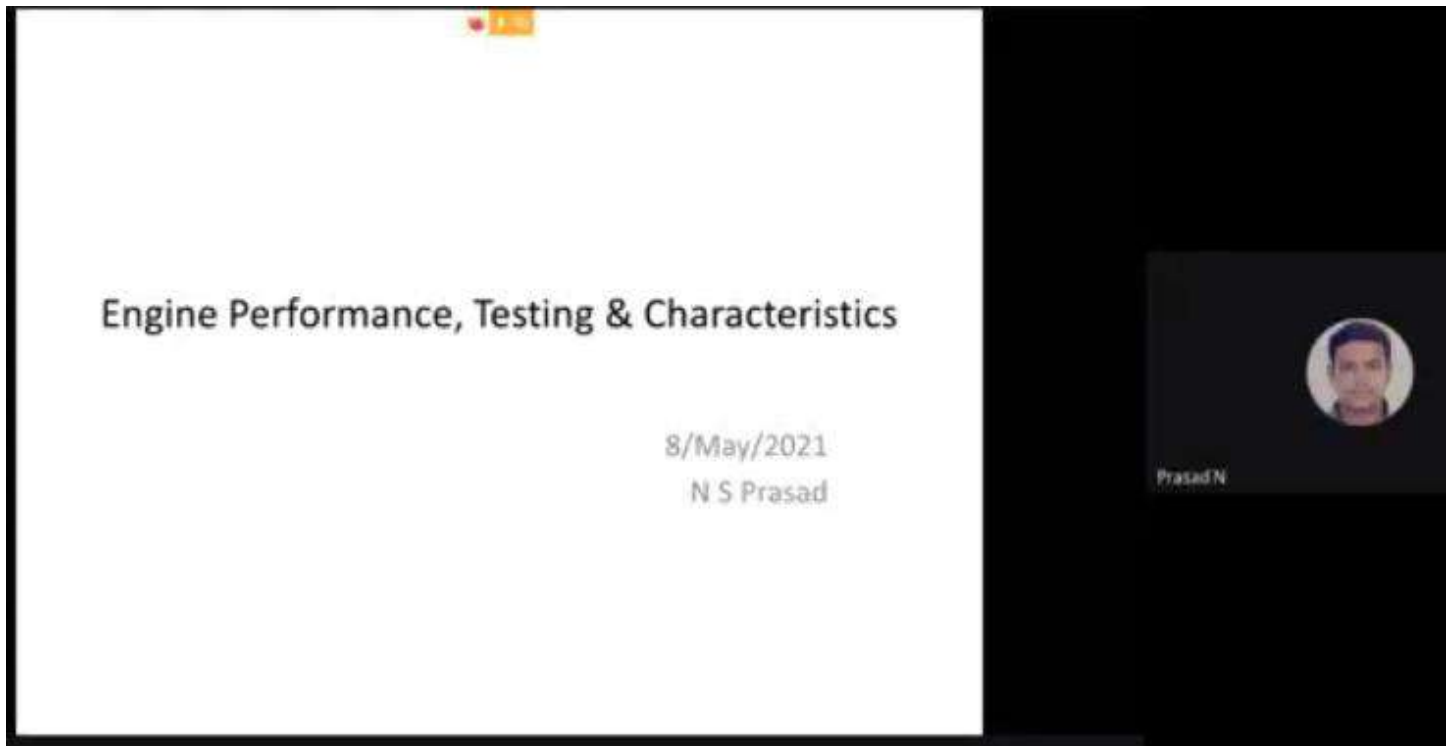
PSYCHROMETRY

A. Balasubramanian
Assistant Professor
Department of Automobile Engineering
SVCE

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Mr. A. Balasubramanian, SVCE, delivering a lecture in FDP



Mr. N. S. Prasad CVRDE, DRDO delivering a lecture in FDP

This programme was organized in view of upgrading the knowledge of teachers working in affiliated Institutions of Anna University and other Universities in the field of Applied Thermodynamics. Nine external faculty members and Thirteen internal faculty members participated in FDP.

Feedback from Participants

The participants expressed their full satisfaction through feedback. The lecture sessions were very much appreciated by the participants. The programme was very well received by the participants.

We express our heartfelt thanks to the management of SVCE for giving an opportunity and support to conduct the programme smoothly.

Details of amount sanctioned and spent are given below:

- Amount sponsored by SVCE : Rs. 7500.00
- Honorarium paid by SVCE : Rs. 4500.00
- Amount received through registration from 9 external participants : Rs. 2700.00
- **Total amount spent by SVCE = 4500 - 2700 = Rs.1800/-**

The amount paid as honorarium through NEFT by SVCE for the FDP

S. No.	External Speaker -details	Amount in Rupees
1	Mr. G. Suresh, Delphi TVS	1,500
2	Dr. S. Vedharaj, NIT Trichy	1,500
3	Dr. V. Gnanamoorthy, AU College of Engineering- Villupuram.	1,500
	Total Rs.	4,500

Sl No	Coordinator Name	Designation	College Name
1	Dr. J. Venkatesan	Professor & Head	Sri Venkateswara college of Engineering
2	Mr. G. Ravi	Assistant Professor	Sri Venkateswara college of Engineering
3	Mr. A.K. Boobalaseshthilraj	Assistant Professor	Sri Venkateswara college of Engineering

List of Participants

S. No	Participant Name	Designation	College Name
1	Dr.P.MOHAMED SHAMEER	ASSOCIATE PROFESSOR	V V COLLEGE OF ENGINEERING
2	Mr. R. BLESSING SAM RAJ	ASSISTANT PROFESSOR	J.N.N INSTITUTE OF ENGINEERING
3	Mr. R. NIRMAL KUMAR	ASSISTANT PROFESSOR	C. ABDUL HAKEEM COLLEGE OF ENGINEERING AND TECHNOLOGY
4	Mr. SENTHIL R	ASSISTANT PROFESSOR	C.ABDUL HAKEEM COLLEGE OF ENGINEERING AND TECHNOLOGY
5	Mr. HARIGARAN A	ASSISTANT PROFESSOR	UNIVERSITY COLLEGE OF ENGINEERING TINDIVANAM
6	Mr. JISHAD K	ASSISTANT PROFESSOR	MEA ENGINEERING COLLEGE
7	Dr A. SANGEET SAHAYA JEYANGEL	ASSISTANT PROFESSOR	ANNA UNIVERSITY - MIT CAMPUS
8	Mr. M. RAJAMURUGU	ASSISTANT PROFESSOR	BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY
9	Mr. C.DHANESH	ASSISTANT PROFESSOR	S.A.ENGINEERING COLLEGE
10	Dr. A.M. ANANDHAN	ASSOCIATE PROFESSOR	SVCE
11	Mr. P.K. PRAVEEN KUMAR	ASSISTANT PROFESSOR	SVCE
12	Mr. KARTHIC KUMAR	ASSISTANT PROFESSOR	SVCE
13	Mr. R. KALYANASUNDAR	ASSISTANT PROFESSOR	SVCE
14	Dr. S. PREMNATH	ASSOCIATE PROFESSOR	SVCE
15	Mr. A. BALASUBRAMANIAN	ASSISTANT PROFESSOR	SVCE
16	Mr. RAMANJANEYULU KOLLA	ASSISTANT PROFESSOR	SVCE
17	Mr. A.K. BOOBALASENTHILRAJ	ASSISTANT PROFESSOR	SVCE
18	Mr. R. SAKTHIVEL	ASSISTANT PROFESSOR	SVCE
19	Mr. G. RAVI	ASSISTANT PROFESSOR	SVCE
20	Dr. V. GANESH	ASSOCIATE PROFESSOR	SVCE
21	Mr. K. PAULDURAI	ASSISTANT PROFESSOR	SVCE
22	Mr. J. DHANABAL	ASSISTANT PROFESSOR	SVCE

SIX Days FDP on Applied Thermodynamics

Duration: 03.5.2020-08.05.2021

List of Faculty Members and Topics Covered

Sl. No	Date / Day	09.00 AM to 11 AM	11.05 AM to 01.05 PM
1	03.05.2021 Monday	Internal Combustion Engines Present and Future Trends Mr. I.Meenakshi Sundaram, CTO Amalgamations Group	Fundamentals of Internal Combustion Engines Mr. A.K Boobalaseshthilraj / SVCE
2	04.05.2021 Tuesday	Impact of Clean Energy and effect of BS IV Norms in India Mr. G. Suresh/Delphi-TVS	Gas Power Cycles Dr. J. Venkatesan / SVCE
3	05.05.2021 Wednesday	Air Compressors Dr. P . Raghul / SVCE	Refrigeration Dr. J. Venkatesan / SVCE
4	06.05.2021 Thursday	Steam and Gas Turbines Dr. S. Vedharaj, NIT, Trichy	Steam Nozzles and Boilers Dr. K. Pitchandi / SVCE
5	07.05.2021 Friday	Combustion and Emissions Dr . V . Gnanamoorthy/ AU College of Engineering-Villupuram	Psychrometry Mr. A . Balasubramanian /SVCE
6	08.05.2021 Saturday	IC engines Performance Mr. M. Srinivasan CVRDE, DRDO	Valedictory function Air Conditioning Dr. R. Saravanan/ CG, AU



Dr. J. Venkatesan

FDP Coordinator

Head of the Department

Department of Automobile Engineering

Sri Venkateswara College of Engineering

Pennalur, Sriperumbudur Taluk-602 117

Tamil Nadu, India

REGISTRATION FORM

Six Day Faculty Development Programme on APPLIED THERMODYNAMICS

03rd to 08th May 2021

1. Name:
2. Age and DoB:
3. Designation:
4. Name of the Institution:
5. Address for Communication:
6. Official Address:
E-mail:
Phone:
7. Professional Experience(in years)
Industry: Teaching:

Signature of the Applicant

DECLARATION

The information furnished by me is true to the best of my knowledge. I agree to abide by the rules and regulation governing the FDP. If selected, I shall attend the program for the entire duration.

Date :

Place :

Signature of the Applicant

SPONSORSHIP

Dr./Mr./Ms.

an employee of our institution is hereby allowed to attend the FDP on "Applied Thermodynamics". He / She will be permitted to attend the program for the entire duration, if selected.

Signature of the HoD/Principal

Date :

Place :

Registration form can be sent by post/email.

Email/Mobile:

boobal@svce.ac.in / 9865828126
gravi@svce.ac.in / 9962706036
jvenkat@svce.ac.in / 9444339292

Six Day Faculty Development Programme

on

APPLIED THERMODYNAMICS

Coordinator

Dr. J. Venkatesan

Co-Coordinators

Mr. G. Ravi
Mr. A.K. Boobalanthiraj



Organized by

Department of Automobile Engineering

SVCE | Sri Venkateswara
College of
Engineering

(Autonomous - Affiliated to Anna University)
Pennalur, Sriperumbudur (Tk) - 602 117
Tamil Nadu, India
Phone: 044 27152000, Ext. 450, 454

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ABOUT THE COLLEGE

Sri Venkateswara College of Engineering (SVCE), a premier autonomous institution, was started in the year 1985 and is managed by Sri Venkateswara Educational and Health Trust. The college conducts 11 UG Programmes, 8 PG Programmes in Engineering / Technology. The programme are approved by AICTE and affiliated to Anna University, Chennai. The college is accredited by National Assessment and Accreditation Council (NAAC). The college is situated in a quiet environment about 37 km from Chennai and situated on Chennai-Bangalore National Highway (NH4) at Pennalur, in Sriperumbudur taluk, Kancheepuram district.

ABOUT THE DEPARTMENT

The department of Automobile Engineering was established in the year 1999 with a mission to educate and impart technical knowledge to the students to become globally competent in the field of Automobile Engineering. It has well-qualified and self motivated faculty members with relevant experience in their area of specialization.

The department is equipped with most modern and state-of-the-art laboratories like Engine testing, Automotive components, Automotive Electrical and Electronics, Vehicle Maintenance and Re-conditioning, 2 & 3 Wheeler, Automotive Fuels and Lubricants, CAD/CAM, etc. The department is also equipped with 2/3/4 Wheeler Chassis Dynamometer to simulate the vehicle in on-road condition. The department provides consultancy services to research scholars and automotive industries in the field of engine performance and emission testing using alternate fuels with the help of advanced instruments like AVL Pressure pickup, Angle encoder and Data acquisition system. The department is accredited by NBA.

ABOUT THE FDP

The FDP is approved and supported by SVCE. This programme will be useful for the young faculty members handling subjects in the field of Thermal Engineering.

TOPICS TO BE COVERED

- Internal Combustion Engines
- Gas Power Cycles
- IC Engine Performance
- Steam Nozzles and Boilers
- Steam and Gas Turbines
- Air Compressors
- Refrigeration
- Psychrometry and Air Conditioning

RESOURCE PERSONS

- Experts From SVCE, IITM & ANNA UNIVERSITY

REGISTRATION FEE

Registration Fee: Rs. 300/-

- The registration form can be downloaded from college web site, www.svce.ac.in. The registration is restricted to 30, with first come first basis.

PAYMENT DETAILS

Account Number : 467302331
Bank : INDIAN BANK
Branch : Sriperumbudur
IFSC CODE : IDBI0005080

REGISTRATION LINK

<https://forms.gle/aQz2xfsSaxXQUp6X9>

ORGANIZING COMMITTEE

CHIEF PATRON: Dr. A.C. Muthiah
Chairman-Governing
Council, SVEHT

PATRON: Dr. M. Sivanandham
Secretary
SVEHT

CHAIR: Dr. S. Ganesh
Valdyanathan
Principal, SVCE

CO CHAIR: Dr. J. Venkatesan
HoD-Automobile Engg.

COORDINATOR:
Dr. J. Venkatesan
Professor
Department of Automobile
Engineering

CO-COORDINATORS:
Mr. G. Ravi
Assistant Professor
Department of Automobile
Engineering
Mr. A.K. Boobalanthiraj
Assistant Professor
Department of Automobile
Engineering

VENUE: Online

IMPORTANT DATES:

Submission of Application : 25.04.2021

Intimation of selection : 26.04.2021

Confirmation by Participants : 27.04.2021

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