

MECHANICAL ENGINEERING DEPARTMENT

Funded Projects

Ongoing Projects

Sr.No	Title of the Project	Sanctioning Authority	Date of Approval	Amount Rs. in Lakhs
1	Fabrication and Testing Hybrid Vehicle	DST	2008-2009	9.33
2	Modeling and Analysis of Series of Hybrid Drive Train	GUJCOST	2008-2009	4.96
3	Development of a dispersion model for radionuclids for Motichar lake at Kakrapara nuclear power station	BRNS	2009-2010	23.34
4	Stochastic Hygrothermal Buckling response of Piezoelectric Laminated Composite Plates based on Micro- Mechanical Model	D.S.T	July 2010	4.5
5	Towards development of an upward swirl can type gas turbine combustor	ARDB	16.10.2010	18.73
6	Process parameter optimization of submerged arc welding using advanced optimization techniques	GUJCOST	December 2010	4.04
7	Environmentally Conscious Design and Manufacturing of Products – Application of MADM Methods	DST and BMWF Austria	March 2011	8.0
8	Development of Decision Support Models for Environmentally Conscious Design & Manufacturing of Products	D.S.T	01.03.2011	3.86
9	Investigations on Metal Removal Rate in Electro Discharge Machining Process under Orbital Tool Movement	D.S.T	July 2011	15.35
10	Investigation on bending forces and friction co-efficient during continuous bending of conical shells on 3-roller bending machine	D.S.T	Oct. 2011	Project approved/ Grant Awaited
11	Design, Development and Investigation on Two Stage GM Type Pulse Tube Cryocooler for 10 K Application	D.S.T	Oct. 2011	Project approved/ Grant Awaited

Completed Projects

Sr.No	Title of the Project	Sanctioning Authority	Date of Approval	Amount Rs. in Lakhs
PROJECTS UNDER THRUST AREA				
1	Education & Training Center for CAD-CAM	M.H.R.D	13.10.1989	10.0
2	Education & Training Center for Alternate Source of Energy	M.H.R.D	13.10.1993	10.0
3	Center for Robotics& Artificial Intelligence	A.I.C.T.E	03.01.1996	10.0
4	Development of Cryogenics Laboratory	M.H.R.D	11.03.1997	15.0
UNDER MODERNIZATION AND REMOVAL OF OBSOLESCENCE				
1	Machine Tool Laboratory (phase I)	M.H.R.D	16.01.1987	10.0
2	Machine Tool Laboratory (phase II)	M.H.R.D	03.09.1987	05.0
3	Workshop (phase I)	M.H.R.D	31.01.1989	15.0
4	Engine Laboratory	M.H.R.D	14.09.1989	26.0
5	Workshop (phase II)	M.H.R.D	12.02.1991	12.0
6	Foundry Laboratory	M.H.R.D	27.02.1992	15.0
7	Vibration & Dynamics Laboratory	M.H.R.D	27.02.1992	10.0
8	Modernization of machine Tool Laboratory	M.H.R.D	20.03.1998	6.50
9	Workshop (phase III)	M.H.R.D	31.03.2000	10.0
PROJECTS UNDER NETWORK SCHEME				
1	Development Fluid Mech.& Fluid Power Lab (phase 1)	M.H.R.D	10.03.1987	05.0
2	Development Fluid Mech.& Fluid Power Lab (phase 1)	M.H.R.D	25.01.1989	2.50
3	Development & Investigation of a sterling Cryogenerator	M.H.R.D	02.03.1988	2.50
4	Development of Heat Power Laboratory Phase – I & II	M.H.R.D	17.11.1989	05.0
5	Metal forming Laboratory	M.H.R.D	22.01.1992	2.50
RESEARCH GRANTS				
1	Cooling of Casting Laboratory	M.H.R.D		05.0
2	Development of Energy Management system for Process industry	M.H.R.D	15.03.1991	03.0
3	Development of Solar powered Electrical vehicles	Surat Engg. EduRes. Soc	17.06.1995	2.50
4	Investigations on Performance Characteristics of squeeze Film damper	A.I.C.T.E	03.01.1996	05.0
5	Theoretical & Experimental investigations of Bending Process	A.I.C.T.E	11.03.1997	05.0
6	Development & Investigation of Pulse tube refrigerator for 1 watt capacity at 80K applications	D.S.T	24.02.1997	12.47
7	Education & training centre for alternate	M.H.R.D	1998-2000	9.0

	sources of energy (Ph. II)			
8	Analytical and experimental investigations on multicylinder hydrogen fuelled engine	M.H.R.D	2003-2004	9.0
9	Design, Development and Experimental Investigations on annular type combustion chamber for small gas turbine applications	M.H.R.D	2004-2005	20.0
10	Development of Fuzzy Multiple Attribute Decision Support Systems and their Applications to the Problems of Manufacturing Environment	C.S.I.R	25.11.2006	6.38
11	Prediction of Machine Setting Parameters and Roller Configuration For Continuous Bending of Conical Shells on 3-Roller Bending Machine	D.S.T	25.09.2007	27.96
12	Prediction of machine setting parameters and roller configuration for continues bending of conical shell on 3-roller bending machine	D.S.T	25.09.2007	27.96
13	Development of a Proto Type Thermo acoustic Primer Mover	B.R.N.S	July 2007	15.00
14	Development of an Intelligent System for Selection of Materials for Press Tool Components	D.S.T	12.05.2008	3.50
15	Development of facilities: (a)Helium Leak Detector, (b)Liquid Nitrogen plant, (c) Pulse Tube Cryo Generator and (d) Hot wire anemometer for PG students	D.S.T under FIST	26.05.2008	1.4 Crore
16	Design, Development and Investigation of Pulse Tube Nitrogen Liquefier of Around 1 Litre / Hours capacity	D.S.T	2004-2009	35.77
17	Parameter Optimization of Submerged arc welding of modified Cr-Mo Steels	GUJCOST	December 2010	4.15
18	Computational Intelligence and Modern Heuristics on Automation and Robotics	D.S.T and RFBR Russia	20.09.2010	4.0
INDUSTRY - INSTITUTION INTERACTION				
1	Cooling of Casting Laboratory	M.H.R.D	25.03.1988	4.15