

DEPARTMENT OF CIVIL ENGINEERING – RESEARCH PROJECTS UNDERTAKEN & RESEARCH PROGRAMS ORGANISED

Title	Objective(s)	Principal Investigator	Co-Investigators (as per the order in the proposal)	Funding agency / organization and scheme	Details of Sanction			Status	Out comes of the project
					File no.	Amount	Period		
Use of Agro Residual and Industrial Wastes in the Development of Ultra High Performance Concrete	<p>To understand the microstructure of UHPC so as to assess what results to such a high strength and high performance nature.</p> <p>To include industrial and agricultural wastes in the production of ultra-high performance concrete.</p> <p>To regularize the mix design procedure for ultra-high performance concrete.</p> <p>To evaluate the mechanical and structural behavior of the produced modified ultra-high performance concrete in order to make it available for practical applications in construction industry.</p> <p>To study the impact resistance characteristics which makes it suitable for defense purpose</p> <p>To characterize the shrinkage behavior of UHPC</p>	Dr.K. Arunachalam,	Dr. M. Kottaisamy Professor, Department of Chemistry, TCE, Madurai – 625 015.	AICTE- RPS	20/AICTE/RIFD/RPS (POLICY-II) 64/2012-2013	Rs 22.91 Lakhs	2013-2016	Ongoing	<p>Infrastructure created</p> <p>New courses introduced</p> <p>M.E. Thesis</p> <p>PhD thesis</p> <p>Consultancy Publications</p>
Study on Influence of Industrial By – Products on Modified Reactive Powder Concrete (MRPC)	<p>To explore the production process of RPC utilizing local available materials in India.</p> <p>To understand the microstructure of RPC so as to assess what results to such a high strength and high performance nature.To include industrial and agricultural wastes in the production of RPC</p> <p>To use industrial waste fibers like scrap from lathes, steel wire from wire winding industry etc., in the production of RPC. To develop the mix design procedure for RPC</p> <p>To characterize the microstructure and chemical composition of RPC with different material composition, curing and heating regimes.To investigate the mechanical and structural behaviour of the produced modified RPC in order to make it available for practical applications in construction industryTo examine the durability aspects such as shrinkage and water permeability behaviour of RPC</p>	Dr.K. Arunachalam	Ms. M. Vigneshwari Assistant Professor, Department of Civil Engineering, TCE, Madurai – 625 015.	UGC - MRP	MRP- MAJOR-CIVI-2013-39052	Rs. 10, 40,000	2015-2018	Ongoing	<p>Infrastructure created</p> <p>New courses introduced</p> <p>M.E. Thesis</p> <p>PhD thesis</p> <p>Consultancy Publications</p>

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<p>Innovative applications of FRP composites in strengthening of concrete filled steel tubular (CFST) sections under flexure</p>	<p>To assess the feasibility of strengthening square concrete filled steel tubular sections subjected to compression and to develop or predict the suitable wrapping scheme of FRP to enhance the structural behaviour of it.</p>	<p>Dr.M.C.Sundarraja</p>	<p>Nil.</p>	<p>UGC, New Delhi – Major Research Project</p>	<p>F.35-112/2008 (SR) dated 20.03. 09</p>	<p>Rs.6.83 Lakhs</p>	<p>2009-2013</p>	<p>Completed</p>	<p>Infrastructure created B.E and M.E theses Ph.D work Publications</p>
<p>Strengthening of Concrete Filled Steel Tubular (CFST) Members in Compression using Advanced FRP Composites</p>	<p>To assess the feasibility of strengthening square concrete filled steel tubular sections subjected to flexural loading and to develop or predict the suitable wrapping scheme of FRP to enhance the structural behaviour of it.</p>	<p>Dr.M.C. Sundarraja</p>	<p>Nil</p>	<p>DST, New Delhi – Fast Track Projects for Young Scientists</p>	<p>SR/FT/ET-019/2009 dated July 03, 2009</p>	<p>Rs. 12.87 Lakhs</p>	<p>2009-2013</p>	<p>Completed</p>	<p>Infrastructure created B.E and M.E theses Ph.D work Publications</p>

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<p>Environmental Monitoring on Water and Soil quality and Creating Awareness & Updating of Environmental and Social Assessment report for river basins</p>	<p>To collect, document primary and secondary data of the water resources infrastructure created in the IAMWARM project and analyse these data for socio economic impact assessment</p>	<p>Dr. K. Arunachalam Dr. S. Chandran Dr. T. Vel Rajan</p>	<p>--</p>	<p>WRO, PWD - IAMWA RM</p>	<p>DL/ 2011-12</p>	<p>Rs. 49.92 Lakhs</p>	<p>2011- 2012</p>	<p>Completed</p>	<p>Socio economic welfare of the society</p>
<p>Research study for the reuse of Wastewater(Industrial & Domestic) for irrigation in Tirunelveli Corporation</p>	<p>To assess the potential of reuse of wastewater generated in Tirunelveli corporation</p>	<p>Dr. K. Arunachalam Dr. S. Chandran Dr. T. Vel Rajan</p>	<p>--</p>	<p>WRO, PWD - IAMWA RM</p>	<p>2DL/ 2012-13</p>	<p>Rs.13 Lakhs</p>	<p>2013</p>	<p>Ongoing</p>	<p></p>

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Name of the coordinator (s)	Details			Topics covered	Details of experts	Sponsors	Participants	
	Title	Place	Period				External	Internal
Dr.K.Arunachalam Dr.S.Arul Mary	2day Workshop on Non Destructive Evaluation of RC Structures	TCE, MDU	19-20 Dec. 2013	Forensic Engineering and Introduction to NDT on RC structures NDT for corrosion monitoring Microwave applications in NDT	Er. M. Suyambulingam Chief Bridge Engineer,Southern Railways Er. S.P. Srinivasan Structural Consultant Dr. N. Ganesan, NIT, Calicut Dr. V. Saraswathy, CECRI, Karaikudi Dr. S. Arulmary, TCE	TEQUIP	12	30
Dr.S.Arul Mary Er.MM.Ghosh	FDP on Structural Steel Design using LSM	TCE	12-14 March 2014	Unrestrained Beams Beam columns Design with hollow sections Plate Girders	Dr. S. Arul Jeyachandran, IITM, Chennai Dr. S. Arulmary, TCE Er. Manas Mohon Ghosh Asst. Gen Manager, INSDAG, Kolkata	INSDAG & TCE	4	30
Jointly organized by Department of Civil Engg., TCE, Madurai and UltraTech Cement Ltd.	TEQIP sponsored workshop on “Concrete Mix Design”	TCE, Madurai	17.12. 2013	Parameters in Mix Design, Codal provisions, Special additives in concrete – properties and uses, Mix design procedures	Dr. Jolly Annie Peter, SERC, Chennai, Mr. Jayashanker, UltraTech Cement Ltd, Chennai, Mr. Sivakumar, ICOMAT, Chennai	TEQIP	10	13
Department of Civil Engg., TCE, Madurai	TEQIP sponsored workshop on “Utilization of Solid Wastes in Concrete”	TCE, Madurai	16.12. 2013	Types of wastes in concrete – properties, uses on the theme “waste a useful resource”	Dr. Natarajan, NIT, Trichy, Dr. V. Saraswathy & Dr. R. Selvaraj, CECRI, Karaikudi, Dr. K. Arunachalam, TCE, Madurai	TEQIP	10	15
Pedagogy Team of	6 series of	TCE,	During	Elements of OBE	Pedagogy Team &	TEQIP	----	200

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TCE, Madurai	workshops on "Outcome Based Education for faculty of TCE, Madurai	Madurai	2014		Dr. Baskar, TCE, Madurai			faculty members of TCE, Madurai
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