

REPORT ON “STUDENT CHEMICAL ENGINEERING CONGRESS 2010 (SCHEMCON 2010)”

The 6th annual session of Student Chemical Engineering Congress “ SCHEMCON 2010” on the theme “Process Industries and Sustainable Development” was organized by IChE-RVR&JCCE Student chapter(Under Indian Institute of Chemical Engineers, Waltair regional centre), Department of Chemical Engineering, R.V.R & J.C. College of Engineering, Guntur during 24th-25th September 2010. The Chief Guest for the Inaugural function Sri.D.P.Misra, Director, TATA Consultancy Engineers Ltd, Mumbai Inaugurated SCHEMCON 2010 and delivered the Inaugural address on “Indian Chemical Industry”. He said that Indian chemical industry is 12th largest in world and 3rd largest in Asia. The turn over of Indian Chemical Industry (including Pharma) is \$65 bn in 2009 and the market is expected to grow to \$75 bn by 2011. He informed that Indian chemical Industry is manufacturing 57% Basic chemicals and 47% specialty, fine and knowledge chemicals. He stated that the input cost of raw materials and product quality improvement are the major problems of petroleum refineries. He suggested that by changing the feed stocks for the production and exploring new crude oil sources, cost of raw materials and production can be reduced and the value of products can be increased by upgrading the low value/ surplus products such as Naphtha to Petrochemicals, Black oils to distillates, pet coke to petrochemicals / fertilizers.

Presiding over the Inaugural function Prof.V.K.Srivastava, president, Indian Institute of Chemical Engineers said that, Student CHEMCON acts as a source of encouragement and self confidence to young minds, considered as the most fertile ground for the generation of original and creative ideas. He informed that the Indian chemical industry is facing a lot of problems due to the lack of proper funds and encouragement from the government and at the same time most of the students are not interested in pursuing research programs. He delivered that Indian industries at present are utilizing fossil fuel sources for energy requirement and this leads to shortage of fuel sources for Future generations, and the students, researchers and industrialists have to concentrate on the utilization of non conventional energy sources such as solar, wind, tidal, Nuclear energies etc . Every student should learn the issues related to the natural resources like earth, sea, atmosphere, air etc to maintain comfortable living conditions.

Welcoming the Guests Dr.K.Basavapunnaiiah, President, Nagarjuna Education society and RVR & JC College of Engineering said that Sustainable development contains social, cultural, environmental and economic aspects and takes worldwide and long term perspectives into account. He wished that seminar shall be a grand success. Sri.R.Gopala Krishna, Secretary and Correspondent explained about the day by day growth of the college. He added that Sustainable development is not a fixed state of harmony, but a process of change in which the exploration of resources, the direction of investments, the orientation of technological development and industrial change are made consistent with future as well as present needs. He is of the opinion that the Sustainable Development is the development that meets the needs of the present generations with out compromising the ability of future generations to meet their needs. He hoped that the seminar will enlighten recent developments in Chemical Engineering Research and also uphold human values.

Dr.A.Sudhakar, Principal, R.V.R & J.C.College of Engineering said that the academicians, the budding chemical engineers and entrepreneurs of process industries together have to discuss the technical advancements that will cause little or no harm to the environment. The organizing secretary SCHEMCON 2010 and Head, Department of Chemical engineering Dr.M.Venkateswara Rao, said that **631 plus 4 UK students from 73 Colleges** covering all parts of the country besides more than a 75 faculty members and IChE Council Members participated in the Congress. He thanked the Managements, Principals and Heads of the Departments of various Engineering Colleges and Organizations for their encouragement by sponsoring the faculty, students and professionals for participation in the congress and hoped that the participants will utilize this opportunity by their active participation and fulfill the objective with which the SCHEMCON 2010 was organized.

Dr.N.Subrahmanyam, Professor (Retd.),M S University of Baroda, Vadodara, Gujarat delivered a plenary lecture on “A Brief History of Chemical Engineering”. He said that Chemical Engineering is broadly classified as the study of ‘Unit operations’ involving physical changes and “Unit Processes” involving Chemical/Biochemical changes. He added that application of chemical engineering principles; one comes across in thousands in day to day life and in Nature too. The discipline is broad based and that is its main strength. He stated that presently, Chemical Engineering in India looks very healthy, promising, energetic and evolving. The chemical Industry is taking a great leap forward through special economic zones (SEZs and PCPIRS). He said that Chemical Engineering is spreading into new areas like Green Technology, Biotechnology, nanotechnology etc, and it is getting difficult to define this discipline. He advised the students to concentrate on the development of Biotechnology and Catalytic Processes for replacing the conventional waste generating chemical technologies. He is of the opinion that Sustainability should be the Vision and Mission of the Indian Chemical Engineering for the next two decades.

Prof. K.S.Gandhi, Professor, Department of Chemical Engineering, IISc, Bangalore has delivered a lecture on “Advise to Young Chemical Engineer “. He said that chemical engineering is a discipline that is borderless with all sciences, especially chemistry and molecular biology. He stated that use of a combination of balances, rate laws and thermodynamics is unique to Chemical Engineering. He advised the students to learn principles of sciences, and to absorb fundamentals of Chemical Engineering to manage diversity of many fields.

Dr.P.K.Bhattacharya, professor, Department of Chemical Engineering, IIT Kanpur has delivered a lecture on” Typical Liquid mixtures Separations through Pervaporation: An emerging Membrane Based Technology”.

Dr. Sudip Kumar Das, professor & Head, Department of Chemical Engineering, University of Calcutta delivered a lecture on “Chemical Process Safety must in Chemical Engineering Curriculum.

Three hundred and ten Technical papers (Both oral and poster) were presented in seven parallel sessions on both days covering Chemical and Allied areas like Computational Fluid Dynamics, Transport Phenomena, Separation Technologies, Energy Engineering ,Environmental Engineering and in such other latest topics by the participants in this congress.

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In addition to Technical paper presentations Elocution, Technical Quiz competitions were also conducted in two phases. On 24.09.2010 prelims were organized in both the activities and finals were organized on 25.09.2010. In the evening of 24th September the participants enjoyed with the Cultural programs organized by the cultural committee of the College.

The following four participants presented their work for M P Chary Memorial Medal Award.

1. Dr. Pavankumar Aduri , Reliance Industries Limited, Mumbai
Topic: Can Green Chemistry and Technologies Save Our Earth?
2. Dr.T.Sunil Kumar,Asst. Professor, Department of Chemical Engineering, RVR & JC College of Engineering, Guntur.
Topic: Interfacial patterns-Instability as the mechanism of their formation
3. Dr.B.Sivaprakash, Asst. professor, Department of Chemical Engineering, Annamalai University, Annamalai Nagar, Tamilnadu
Topic: Mathematical Analysis of Multiple Interactive Microbial Populations-A Unified Approach for Modeling and Simulation
4. Dr. Tarun Kumar Naiya, Asst. Professor, Department of Petroleum Engineering, ISM, Dhanbad – 826 004
Topic: Studies on the removal of heavy metals using natural, waste and chemical adsorbents

Panel of Judges

1. Prof. PST Sai, Department of Chemical Engineering, IIT(M),Chennai
2. Prof.P.V.Ravi Kumar,Principal, Sri Prakash Engineering College,Tuni, East Godavari(Dt.)A.P
3. Sri Praveen Saxena, Director & CEO, Blast Carboblocks Pvt.,Ltd., Mumbai
4. Dr.K.Balakoteswara Rao, Principal, MIC Engineering College, Krishna (Dt.)A.P

Based on the quality of work and presentation, the panel of Judges recommended Dr.T.Sunil Kumar for M P Chary Memorial Medal Award.

The following four UK students participated in SCHEMCON 2010 representing IChemE (Institute of Chemical Engineers, UK) under IChE-ICHE student exchange program and presented their papers

1. George Cunningham, University of Edinburgh, Scotland presented the paper on “Chemical Engineering (IAESTE) Internship in China”
2. Sheena Garg, University of Auckland, New Zealand presented the paper on “Protein Adsorption on Magnesium Implants”
3. Mark Williams-Wynn, University of KwaZulu-Natal, South Africa presented the paper on “Investigation into the Wall Effects in a Percolation”
4. Megan Cater, University of Sydney, Australia presented the paper on “Kurnell Recycled Water Design and Cost Sensitivity Analysis”

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The Chief Guest of the valedictory function Prof.P.K.Bhattacharya, IIT, Kanpur elucidated the students that the Chemical Engineering is a broad area that utilizes the principles of all basic sciences such as mathematics, chemistry and physics and students must be strong in these areas. He added that Chemical Engineering is a branch of engineering where there is a maximum scope for research. Presiding over the function Sri J. Murali Mohan, Managing Director, Jocil Ltd., Guntur underlined the importance of various shades of Chemical Engineering in sustainable development. The Guest of honour Sri Praveen Saxena, Director & CEO, Blast Carboblocks Pvt. Ltd., appreciated the theme of the seminar and the way it was organized. At the end of the seminar everyone was happy that they had either contributed meaningfully or learnt something useful.

SCHMCON 2010 WINNERS LIST

The first, second and third prizes were presented to the winners of all 14 Technical paper presentation sessions as well as for Elocution and Technical Quiz. Among the boys Mr.K.S.Bharadwaj, Department of Chemical Engineering, AU College of Engineering, Visakhapatnam, Andhra Pradesh and in girls Ms S.Sruthi of Sri Venkateswara College of Engineering, Sriperembur, Tamilnadu are the toppers in Technical paper presentations

PAPER PRENTATION SESSIONS

24-09-10

Session No.	Paper No.	Result	Name of the Students	Name of the Institute
1	109	First	Anoop Uchagawkar & Ritu Kedia	Meer's Maharashtra Academy of Engineering, Pune, Maharashtra
	110	Second	G.S. Srinivas & M.Sravan	Dept. of Chemical Engineering, A.U. College of Engineering, Visakhapatnam
	108	Third	K.Srinivasan & R.Prashanth	A.C. College of Technology Anna University, Chennai
2	205	First	Gaurav Mahesh Mehta & Chandrashekar O. Shahane	Jawaharlal Darda Institute of Engineering and Technology, Yavatmal, Maharashtra
	202	Second	Shubhajit Sarkar	GGs Indraprastha University, New Delhi
	206	Third	S.Vignesh & T.K.Premannanth	Department of Chemical Engineering, St. Joseph's College of Engineering, Chennai

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3	310	First	M.Virudagiri & V.Sathiyaraj	Anna University, Tiruchinapalli, Tamilnadu
	333	Second	V.Navya Vani & G.Kavitha	Dept. of Chemical Engineering, A.U. College of Engineering, Visakhapatnam
	311	Third	Bhargav A. Thakkar & Pankaj C. Thakkar	Chemical Engineering, Department, Dharamsinh Desai University, Nadiad, Kheda (Taluk & Dt.) Gujarat
4	418	First	Sitara Vardaman & S.Sruthi	Sri Venkateswara College of Engineering, Sriperumbudur, Tamilnadu
	416	Second	Avinash Srivastava & Abishek Prakash Shukla	VIT University, Vellore, Tamilnadu
	413	Third	V.Arthi & K.Gayathri Lashmi	Dept. of Chemical Engineering SSN College of Engineering, Chennai
5	507	First	Kola Sindhu Sri & A.Pavani	Sri Venkateswara University College of Engineering, Tirupathi
	531	Second	U.Prianya & P.S.S. Susheera	Dept. of Biotechnology, ANITS, Bhimunipatnam, Visakhapatnam
	514	Third	G.Asresh & M.U.Tanveer	School of Chemical Engineering, Vignana's University, Vadlamudi, Guntur(Dt.)
6	606	First	M.Manoj & S.Narmadha	Sri Venkateswara College of Engineering, Sriperumbudur, Tamilnadu
	715	Second	Ch. Phaniradha Krishna & G.Sudeer Kumar	School of Chemical Engineering, Vignana's University, Vadlamudi, Guntur(Dt.)
	604	Third	B.Ravi Kumar & P.Prasanth	Dept. of Chemical Engineering, A.U. College of Engineering, Visakhapatnam
7	819	First	B.S.Nandha Kumar & Mohammed Abrar.H	St. Joseph's College of Engineering, Chennai
	815	Second	B.Padmapujitha & G.Siva Rama Krishna	Dept. of Chemical Engineering, A.U. College of Engineering, Visakhapatnam
	807	Third	Divya Kannan & Vineetha K Namboodri	St. Joseph's College of Engineering, Chennai

25-09-10

1	116	First	Sai Shirish Deo	Chemical Engineering Group, BITS Pilani , K.K. Birla Goa Campus, Goa
	128	Second	S.Prasanna, M.Arivazagan & N.Shankaranandan	Dept. of Chemical Engineering, Annamalai University, Annamalai Nagar.Tamilnadu
	127	Third	P.Bhagyaraj	Dept. of Biotechnology, ANITS, Bhiminipatnam, Visakhapatnam
2	225	First	Rituparna Samanta	Jadavpur University, Kolkata
	230	Second	Sandeep Kaul & Vishal Tuli	Dr. B.R.Ambedkar National Institute of Technology, Jalandhar, Punjab
	231	Third	Girish G.V	Siddaganga Institute of Technology, Tumkur, Karnataka
3	320	First	R.Prashanth & M.Rajkamal	A.C. College of Technology Anna University, Chennai
	318	Second	Priyanka & Manish Khandelwal	VIT University , Vellore,Tamilnadu
	329	Third	Ramesh Burugalpalli	Department of Chemical Engineering, NIT , Suratkal, Karnataka
4	431	First	Neha U Navgahare & Dhanunjay H Mahale	K.K.Wagh Institute of Engineering Education and Research
	422	Second	Iyeswaria .K.B	St. Joseph's College of Engineering, Chennai
	424	Second	Ritesh Shanker	Department of Chemical Engineering, Manipal Institute of Technology, Manipal, Karnataka
	425	Third	K.Divya	Dept. of Biotechnology, KL University, Vaddeswaram, Guntur(Dt.) Andhra Pradesh
5	530	First	Shetanshu Dikshit & Shashanki Khanna	VIT Unversity, Vellore, Tamilnadu
	520	Second	Gulkota Madhushalini Mounica	Singareni Collieries Womens Degree College, Kottagudam, Kammam(Dt.)A.P.

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	527	Third	G.Venkata Rajeev & B.Siva Rama Krishna	Dept. of Chemical Engineering, A.U. College of Engineering, Visakhapatnam
6	740	First	Arit Seal	Jadavpur University, Kolkata
	724	Second	Ponsubbiah.S. Nadar	Datta Megha College of Engineering, Airoli, Mumbai
	639	Third	Gopu Ranjit & S.V.N. Ayyappa	J.N.T.University College of Engineering(A), Anantpur
7	841	First	Md. Amjad & K.S. Bharadwaj	Dept. of Chemical Engineering, A.U. College of Engineering, Visakhapatnam
	922	Second	Y.Venkateswara Rao	Dept. of Chemical Engineering, Annamalai University, Annamalai Nagar, Tamilnadu
	921	Third	Koustuv Ray	Jadavpur University, Kolkata

Names of the first ten winners in Paper Presentation:

S.No.	Name of the student	Name of the Institute	email ID
1	K.S.Bharadwaj	Department of Chemical Engineering, A.U. College of Engineering, Visakhapatnam	bharadwaj1729@gmail.com
2	S.Sruthi	Sri Venkateswara College of Engineering, Sriperambur, Tamilnadu	sruthi_s27@yahoo.co.in Phone No. 09003120090.
3	A.Pavani	Department of Chemical Engineering, Sri Venkateswara University College of Engineering, Tirupathi	pavanianumala@gmail.com
4	S.Narmada	Sri Venkateswara College of Engineering, Sriperambur, Tamilnadu	narmadha.25@gmail.com
5	M.Manoj	Sri Venkateswara College of Engineering, Sriperambur, Tamilnadu	narmadha.25@gmail.com (Co-author)
6	Sitara Vadaraman	Sri Venkateswara College of Engineering, Sriperambur, Tamilnadu	sitaraveda@gmail.com
7	Md.Amjad	Department of Chemical Engineering, A.U. College of Engineering, Visakhapatnam	amjad.haleema@gmail.com
8	Kola Sindhu Sri	Department of Chemical Engineering, Sri Venkateswara University College of Engineering, Tirupathi	sssindhusri@gmail.com
9	Anoop Uchagawkar	Department of Chemical Engineering, Maharashtra Academy of Engineering, Alandi, Pune	munchyanoop11@gmail.com
10	Ritu Kedia	Department of Chemical Engineering, Maharashtra Academy of Engineering, Alandi, Pune	munchyanoop11@gmail.com (Co-author)

ELOCUTION

S.No.	Result	Name of the Student	Name of the Institute
1	First	Ritu Kedi	Department of Chemical Engineering ,Meer's Maharastra Academy of Engineering, Pune, Maharastra
2	Second	P.K.Chaitanya	Department of Chemical Engineering ,GMR Institute of Technology, Rajam, Srikakulam(Dt.) Andhra Pradesh
3	Third	K.Divya	Department of Biotechnology, KLUniversity, Vaddeswaram, Guntur(Dt.) Andhra Pradesh

TECHNICAL QUIZ

S.No.	Result	Name of the Students	Name of the Institute
1	First	S.Chandrika & Y.Modini	Department of Chemical Engineering, NIT, Warangal, Andhra Pradesh
2	Second	Abishak Prakash Shukla Avinash Srivastav	Department of Chemical Engineering, VIT University, Vellore,Tamilnadu
3	Third	Y.E.Praveen Sastry M.A.S.Karthik	Department of Chemical Engineering, University College of Technology, Osmania University, Hyderabad