



# Rubber Compounding Technology

VENUE - HOTEL SAVERA

12-14 March 2019, Chennai, India

This 3-day training program on "Rubber Compounding Technology" is aimed to address technical needs of every rubber compounder. The content covers about raw materials and selection, equipment needed, formulation development with reference to property requirement, cost optimization, case studies, product failures etc. This program is suitable for both well-experienced and less-experienced persons related to rubber compounding.

## Course Outline

- Rubber Compound and Compounding
- Compounding Recipes and Use
- Compound Processing Plant Equipment
  - Open Mill Mlxing
  - Mixing in Closed Chamber - Banbury, Intermix, Kneader etc.
  - Basic Tests of Processed compounds, Mooney Viscosity, Rheometric Study and Scorch
- Components of the Recipes
  - Elastomers (Rubber and Rubber Like Materials)
  - Chemical Plasticisers (Peptising Agents)
  - Vulcanisation Agents : Sulfur, Non sulfur, Metal Oxide, Peroxide, Resin Curing
  - Accelerators
  - Accelerator Activators
  - Antidegradants
  - Retardants and Scorch Inhibitors
  - Fillers and Extenders : Black Filler & Non Black Filler
  - Plasticisers
  - Blowing Agents
  - Abrasives
  - Colourants
  - Flame Retardants
  - Internal Lubricants
- Vulcanisation Conditions
  - Effect of Thickness
  - Effect of Temperature
  - Effect of Thermal Stability
- Vulcanisation Techniques and Different types of Presses
  - Compression Moulding
  - Transfer Moulding
  - Injection Moulding
  - Open Cure
  - Continuous Vulcanisation
- Compound Design
  - Selection of Ingredients
  - Compatibility - The Solubility Parameter Concept
  - Compounding to meet processing requirements
    - Viscosity Control
    - Nerve Control
    - Tackiness and Stickiness
    - Concept of Scorching
  - Compounding to meet Vulcanisate Properties
    - Hardness and Modulus
    - Breaking Strength
    - Tear Strength
    - Abrasion
    - Heat Build Up
    - Degradation Resistance
    - Resistance to Gas Permeation
  - Compounding for Bonding to Non Rubber Substrates
    - Bonding with Metals
    - Bonding to Textiles
  - Compounding to improve Failure Properties

- Compounding Case Studies
  - Passenger Radial Tyre Tread Compound
  - Automotive Weather Strip
  - Tyre Curing Bladder
  - Hose Inner Tube
  - Oil Seal
- Compound Cost Optimization Approach
- Compound Data Management

## Trainers

**Dr. Samar Bandyopadhyay:** Dr. Samar Bandyopadhyay has completed M. Tech Degree in Plastics and Rubber Technology from University of Calcutta. Received Ph.D degree during December 2007 from Mohan Lal Sukhadia University Udaipur, Rajasthan, India. He joined HASETRI in 1992 and worked for more than 23 years. He has worked as Head (R&D) of PidiLite Industries Ltd. at Dahej, Gujarat for one and half years. Currently working as Business Head in Pukhraj Additives LLP. He is a Guest Faculty in the field of Polymer Science and Technology of University of Calcutta, Mohanlal Sukhadia University, Udaipur and Vidya Bhawan Polytechnic, Udaipur. He is the Honorary Secretary of Indian Rubber Institute (IRI) Rajasthan Branch. Participated as faculty in PGDIRI – DIRI National Level Crash Course for Rajasthan and Karnataka branch for a number of times. He is a Lead Assessor of National Accreditation Board of Testing and Calibration Laboratories (NABL) in the field of Testing and Proficiency Test Programme. He is a Fellow Member of Institute of Engineers (India) Ltd. and Indian Rubber Institute. He has in his credit 60 numbers of Technical papers and 3 book chapters.

**Mr. S. Vasudeva Rao:** PROFESSIONAL: Total 37 Years of Experience, Vikrant Tyres – 18 Years and JK Tyres – 19 Years. Worked in various technical positions in tyre manufacturing; Active member of India Rubber Institute and Contributed development of "Rubber Processing" for PGD-IRI Students; Currently Rubber Industry Consultant. EDUCATION: Diploma In Rubber Technology – 1979; LPRI from Plastic & Rubber Institute : Institute of Materials, London, U K, 1983; Served as Lead auditor in J K Tyres for the audit of Raw Material Vendors for more than 25 yrs.

## Registration Fee:

- Indian Companies : 25,000 Rs / Person
- Overseas Companies : 750 US\$ / Person

### Remarks :

- GST 18% applies on registration fee.
- Payment is required with registration.
- Registration fee includes training documents, lunch and refreshments
- Early Bird Registration: 10% discount on registration received with payment before 31 December 2018
- Group Registration: 10% discount for group of 3 or more delegates from the same organization.

## Registration Procedure

- Please download registration form at [www.4S-Resources.com](http://www.4S-Resources.com) and send the form to Mrs. Sirisha Matsa ([4s.customerservice@gmail.com](mailto:4s.customerservice@gmail.com))
- Performa Invoice will be issued upon receipt of registration form.

## Venue - Hotel Saveria

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## To Register, Please Contact

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