





SAEINDIA Southern Section
Toptech Program

# Design for Manufacturing and Assembly (DFMA)

On 1<sup>st</sup> & 2<sup>nd</sup> September 2015 at Hotel Radha Regent, Chennai

Time: 9.00 A.M to 5.00 P.M

## **About the Course**

Quality, Cost and Delivery (QCD) are the key elements which make a product successful in the global competitive scenario. Design For Manufacturing and Assembly (DFMA) is a set of guidelines developed to ensure that a product is designed so that it can be easily and efficiently manufactured and assembled with a minimum of effort, time, and cost. DFMA will help designers to build quality into robust design at least cost. In addition to achieving quicker product development and reducing cost of product development, DFMA also ensures that the transition from the design phase to the production phase is as smooth and rapid as possible.

## **Course prerequisites**

The course is designed for engineers in industry as well as academia who are engaged in developing products/ processes applying the principles of DFMA to achieve, cost advantage and time to market. It is preferable that the participants are engaged in teaching/ design and development of products and processes.

## **Course Objectives**

To focus on set of guidelines developed to ensure that a product is designed so that it can be easily & efficiently manufactured and assembled with minimum effort, time and cost.

## **Benefits of Attending the Course**

- Evaluate Design Efficiency of Assembly
- Learn Design guide lines for different manufacturing processes
- Understand and appreciate about concurrent costing
- Learn design concepts for achieving Poka-Yoke

#### **Course Content**

- DFMA Introduction & Comparable Paradigms
- Design For Assembly
- Selection of Materials
- Design for Process Capability
- Product Design For Manual Assembly
- Design Guidelines for Manufacturing
  - Castings
  - Forgings
  - Machining
  - Molded Plastic Parts
  - Sheet Metal Parts
  - Pressure Die Castings
- Design For Environment
- Design For Poka-Yoke
- Concurrent Costing
- Demo of DFMA software

#### Who should attend?

Managers, Engineers, Middle Management and technical personnel involved in the functions of Design and Development of engineering products comprising moulded parts, sheet metal parts and cast parts

## **Program Agenda**

DAY & DATE	I Session	Break	II Session	Break	III Session	Break	IV Session
	Pretest on						Design for
Tuesday,	DFMA		Design for	L	Selection of		
1st September 2015	DFMA	_	Assembly		Materials		Process  Capability
	Introduction	Т		U		Т	
		_			DFM of Plastic		
	DFM of PDC	Е	DFMA Software	N	Parts and	Е	Concurrent Costing
Wednesday,	DI WI OI F DC		Demo		DFM of Sheet		Concurrent Costing
2nd September		Α	By M/s.	С	Metal Parts	А	
2015	DFM of Forgings		D-Espat Pvt. Ltd., Chennai	н	Design for Environment	-	Post Test and
	and DFM of Machinings		Chemiar	-11	and Design for Poka-Yoke		Feedback

## Speaker:

#### Mr. G. V. GURUSHANKAR

Guest Faculty at School of Postgraduate Studies, Nettur Technical Training Foundation, Bangalore

#### Qualification:

- BE (Mech) from Bangalore University 1970
- ME (M/c Design) Bangalore University 1972
- M.Sc (CAE & FEM) Cranfield University (UK) 1987

## Work Experience:

- 5 years with GTRE as Senior Scientific Officer, Bangalore
- 5 years as Senior R&D Engr at M/s. Jyothi Ltd. at Vadodara & BHEL R&D, Hyderabad.
- 12 years with Sundaram Clayton as R&D Manager, Chennai.
- 8 years consultancy experience in England, Venzeula & Libya
- 12 years teaching and training experience in CAE, Product Design & Analysis at NTTF, Bangalore and Caledonian College of Engineering, Muscat, Oman

### Mr. SHRIDHAR, M. BAGALKOT

Faculty at School of Postgraduate Studies, Nettur Technical Training Foundation, Bangalore since April 2013.

## Qualification:

BE (Mech) from Bangalore University - 1986

## Work Experience:

- 9 years with Government Tool Room & Training Centre, Bangalore
- 24 Years with HMT, Bangalore, rising to the position of Head of Design Department, Die Casting & Plastics Machinery Division
- 6 years with Eigen Engineering, a unit of KDDL Ltd. as Head Tool Engineering
- Training at Citizen, Japan & Acira & AGIE, Switzerland
- He has rich experience in design and manufacture of Press Tools, Moulds, Die Casting Dies, Gauges and Jigs & Fixtures.
- He has conducted numerous training programmes on GD&T, Jigs & Fixtures, DFMA, Sheet Metal Component Design & Processing, Die Casting Die Design, Plastic Part Design & Processing and other related subjects.

#### **About SAEINDIA Southern Section**

SAEINDIA Southern Section is a premier society that serves the cause of mobility engineering. It is a unique society that includes professional engineers who serve different OEMS and Suppliers, academia as well as budding engineers who aspire to be part of the professionally attractive field of mobility engineers. We believe that Mobility Engineering is a knowledge rich field and that learning and sharing can be fun and rewarding. To this end, SAEISS organizes several events throughout the year, runs programme that enrich and engage and conducts lectures and symposia. It is a part of SAEINDIA.

SAEINDIA is a Premier Professional society that serves the Mobility Engineering Community engaged in the design, manufacture and service of self-propelled vehicles and systems that move in land, sea, air and space. It is an affiliate society of SAE International which is head quartered in USA and has a glorious record of over 100 years of service to the mobility community.

## **About Toptech Program**

#### **Theory Content**

- > Explaining the basic concepts
- ➤ Relating to physical products / parameters
- Limited Mathematics
  - Support with tables and graphs as applicable
- ➤ Graphic representations
- Reference to more reading material

## **Application Content**

• Published case examples and Case examples from the institute and Industry presentations

#### **Tools Content**

- Tools that are helpful for application of concepts
  - Equipment, & Hardware & Software
- Explanation and Demonstration
- Presentation& Hand-holding by Tool vendor

# **Benefit of the Participant**

Benefit of the Participant	Non-Member	Member	Faculty Advisor
	₹ 13,000	₹ 10,000	₹ 4,000
Free Membership with Magazine	Yes	No	No
Discount for next program	Yes	No	No
Course materials with Softcopy	Yes	Yes	Yes
Networking Lunch with Tea & Snacks	Yes	Yes	Yes
Delegate Kits (File, Notepad, Pen)	Yes	Yes	Yes
Certificate	Yes	Yes	Yes
T-Shirt	Yes	Yes	No

Please Note: Including Tax

# Pay course fee through DD/Cheque or Transfer to our account

Name of the account holder	SAEINDIA Southern Section Toptech		
Bank Account Number	32506111653		
Bank Name & Branch	State Bank of India, Kottur, Chennai		
MICR Number of the Bank	600002023		
IFSC Code of the Bank	SBIN0001669		
PAN No.	AABAS2734H		

Please send the completed registration form along with cheque / demand draft drawn in favour of "SAEINDIA Southern Section Toptech" payable at Chennai



RUNNING INTO FUTURISTIC AUTOMOTIVE WORLD

# **DELEGATE REGISTRATION FORM**

Name			
Designation			
Company/College			
Address			
E-Mail ID			
Telephone			
Mobile			
T-Shirt Size	L	XL	XXL
			Signature

Dr. S. Senthilkumar / Toptech Program Champion

**To Contact** 

Mr. S. ILANGOVAN

SAEINDIA Southern Section

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# **Regular Participants to SAEISS TOPTECH from**



















































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## **Top Company Supporting to SAEISS TOPTECH from**

- Ashok Leyland
- Baja Auto Ltd
- Brakes India Ltd
- CSEG,India
- CVRDE
- EON Free Zone, Cluster C, Wing 1
- Ford India Pvt Ltd
- h2e Power Systems Pvt. Ltd
- Hyundai Motor India Engineering
- Indian Army
- Indian Oil Corporation Limited,
- IP Rings Ltd
- John Deere India Pvt Ltd
- Kendrion (Pune) Private Limited
- LGB-Corporate
- LMS -A Siemens Business
- Mahindra & Mahindra Ltd
- Mahindra & Mahindra Ltd. (Truck & Bus Division).
- Mahindra Reva Electric Vehicles Pvt. Ltd
- Maruti Suzuki India Itd
- Meritor HVS (India) Limited
- Moog India Technology Center Pvt. Ltd,
- NIT, Jaipur
- Pricol Limited
- Rane Brake Lining Limited
- Rane TRW Steering Systems
- Renault Nissan

- Robert Bosch Engineering and Business
   Solutions Limited
- Roots Industry India Ltd
- Satyam-Venture engineering services Pvt ltd, Hyderabad
- Shivas Auto Components Private
   Limited
- Simpson & co Ltd
- SKF Technologies (India) Pvt. Ltd
- Sona Koyo Steering Systems Ltd
- Sri & Sri Consultants, Chennai
- SubrosLimiited
- TAFF
- Tata Motors Ltd, Pune
- TATA TECHNOLOGIES LTD
- Technology Information Forecasting & Assessment Council (TIFAC), New Delhi
- The Automotive Research Association of India
- Turbo Energy Limited
- TVS Motor Company Ltd
- TVU Rheihland India Pvt ltd
- Valeo India Private Limited
- VANAZ ENGINEERS LTD
- VE Commercial Vehicles Ltd
- Walchand Institute of Technology,
   Solapur
- Wheels India Ltd, Chennai

## **Top Academics Supporting**

- Agni College of Technology, Chennai
- Amaljyothi College of Engineering, Kottayam
- Amrita School of Engineering Coimbatore, Coimbatore
- Aurora's Engineering College Bhongir, Nalgonda
- Aurora's Scientific and Technological & Research Academy, Hyderabad
- Birla Institute of Technology & Science, Hyderabad
- BSA Cresent Engineering College, Chennai
- C. Abdul Hakeem College of Engg& Technology, Vellore
- ChaitanyaBharathi Institute of Technology, **Hyderabad**
- ChristuJyoti Institute of Technology & Science, Jangaon
- CMR College of Engineering and Technology, **Hyderabad**
- College of Engineering -Trivandrum, Thiruvananthapuram
- Dhanalakshmi Srinivasan Engineering College, Perambalur
- Faculty of Science & Tech., IFHE University, **Hyderabad**
- GokarajuRangaraju Institute of Engineering & Technology, Hyderabad
- Hindustan University, Chennai
- Hindusthan College of Engg. & Technology, Coimbatore
- Jeppiaar Institute of Technology, Sriperumbudur
- JNTUH College of Engineering, Hyderabad
- Karunya University, Coimbatore
- KLN College of Engineering, Madurai
- KPR Institute of Engineering & Technology, Coimbatore
- Kumaraguru College Of Technology, Coimbatore
- Madras Institute of Technology, Chennai
- Malabar College Of Engineering And Technology, **Thrissur**
- ullet Mar Ephraem College of Engineering and Technology, ullet Vellore Institute of Technology , Chennai Marthandam,
- Methodist College of Engg. & Technology, Hyderabad
- MLR Institute of Technology , Hyderabad
- Mookambigai College of Engineering, Pudukkottai
- MVSR Engineering College , Hyderabad
- National Institute Of Technology, calicut

- PadmasriDr.B.V. Raju Inst. Of Technology, Narsapur, Medak (Dist)
- Panimalar Engineering College, Chennai
- Panimalar Inst. Of Technology, Chennai
- Rajalakshmi Engineering College, Chennai
- Rajiv Gandhi College of Engineering, Sriperumbudur
- Ramco Institute of Technology, Rajapalayam
- RMK Engineering College, Tiruvallur
- RVS Educational Trust's Group of Institutions, Dindigul
- Saingits College of Engineering, Kottayam
- Sastra University, Thanjavur
- Sathyabama University, Chennai
- Saveetha Engineering College, Chennai
- SBM College of Engineering and Technology, Dindigul
- Sengunthar Engineering College, Erode
- SreeVidyanikethan Engineering Collleg, Tirupati
- Sri Eshwar College of Engineering, Coimbatore
- Sri Krishna College of Engineering & Technology, Chennai
- Sri Shakthi Institute of Engineering & Technology, Coimbatore
- Sri Venkateswara College of Engineering, Sriperumbudur
- Sri Vishnu Engineering College for Women, **Bhimavaram**
- SRM University, Chennai
- St. Martins Engineering College, Secunderabad
- St. Peters Engineering College, Hyderabad
- Tamilnadu College of Engineering, Coimbatore
- Turbomachinery Institute of Technology & Sciences, **Hyderabad**
- Vardhaman College of Engineering , Hyderabad
- Vasavi College of Engineering, Hyderabad
- Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College, Chennai
- Vel Tech University, Chennai
- Velammal Institute of Technology, Chennai
- Vellore Institute of Technology, Vellore
- Meenakshi Sundarrajan Engineering College, Chennai Veltech High Tech Dr. RangarajanDrSakunthala Engineering College, Chennai
  - VimalJyothi Engineering College, Kannur