

Preface

The Proceedings of the International Conference on Advances in Materials and Manufacturing Engineering (ICAMME2014) disseminates the knowledge between the Scientists, Engineers and Technocrats in the field of Materials and Manufacturing. After the cautious review by Technical Committee consisting of experts in the field, 193 papers are selected for final Publication in this volume. The conference was successfully held in Sri Sairam Group of Institutions, Chennai, India on 19th & 20th December 2014. Around 400 researchers participated in the conference. We have received more than 300 articles, among that 193 were selected by our expert reviewers. These selected articles were presented in our conference. In this connection we have categorized in to twenty chapters.

Potential topics are addressed in this conference about various areas in Manufacturing and Materials Engineering providing a forum to exchange ideas and to discuss on emerging issues of Mechanical Engineering. The highlight of the conference includes Paper Presentation, invited Guest lectures, Panel discussion with recommendation which will be forwarded to the funding and government agencies for implementation.

We would like to thank the people who have contributed to the success of the conference, especially our Chairman MJF. Ln. Leo Muthu and our CEO Mr. Sai Prakash Leo Muthu of Sri Sairam group of Institutions. Our sincere thanks goes to the participants of the conference. We would like to express our gratitude to all the members of the Organizing Committee for the efforts they have made before and during the conference.

Prof. Dr. K. Palanikumar

Editor

Prof. Dr. C.V. Jayakumar

Associated Editor

COMMITTEE MEMBERS

CHIEF PATRON

MJF. Ln. LEO MUTHU, Chairman

PATRONS

Ms. J. SharmilaRajaa, Trustee

Sri. Sai Prakash Leo Muthu, CEO

ADVISORY COMMITTEE

Dr. M. Rajaram, Vice Chancellor, Anna Univ, Chennai, India

Dr. S. Ganesan, Registrar, Anna Univ, Chennai, India

Dr. J. Paulo Davim, Univ of Aveiro, Portugal

Dr. Immanuel Edinbarough, Univ of Texas @ Brownville

Dr. K. Elangovan, Oman

Dr. Subramaniam Arunachalam, Univ of East London, UK

Dr. M. Ravindran, Chairman, NRB, DRDO, New Delhi

Sri. Sujith Banerjee, DST, New Delhi

Dr. S.M. Suresh, Director, AICTE, New Delhi

ORGANIZING COMMITTEE

Chairman

Dr. K. Palanikumar, Professor and Principal, Sri Sai Ram Institute of Technology

Co-Chairman

Dr. C. V. Jayakumar, Professor and Principal, Sri Sairam Engineering College

CONVENOR

Prof. U. Tamilarasan, Sri Sairam Engineering College

ORGANIZING SECRETARY

Prof. A. Sridhar, Sri Sai Ram Institute of Technology

Technical Committee and Review Experts

Dr.K.Sivakumar, Regional Director, Anna Univ, Madurai

Dr. Basavarajappa, Univ.BDT College of Engg., Davenkera

Dr. Gaitentode, BVB college of Engineering, Hubli

Dr. J. Sornakumar, Thiagaraja CE., Madurai

Dr. P. Askooan, NIT, Trichy

Dr. A.NoorulHaq, NIT Trichy

Dr. G.Shanmugasundram, Anna University, Chennai

Dr. A.Elaiyaperumal, Anna University, Chennai

Dr. J.Ramkumar, IIT Kanpur

Dr. Aravindhan, IIT Delhi

Dr.I.A.Palani, IIT, Indore

Dr.A.Velayudham, Cvrde, Avadi

Dr.L.Vijayaraghavan, IITM, India.

Dr. L. Karunamoorthy, Anna Univ, Chennai

Dr. S. Balasivanandhaprabhu, Anna Univ, Chennai

Dr. J. Jerald, NIT, Trichy

Dr.B.Mohan, CEG, Anna University, Chennai

Dr.V.S.Senthil Kumar, CEG, Anna University, Chennai

Dr. Thanigaarasu, MIT, Anna University, Chennai

Dr.K.ShanmugaSundaram , Anna University, Chennai

Dr.K.Shanmugam, Annamalai University, Chidambaram

Dr.M. Pradeep Kumar, CEG, Anna University, Chennai

Dr. B. Vijayaramnath, Sri Sairam EC, Chennai

Dr. L. Mahesh Kumar, St. Peter's University, Chennai

Dr.A.Krishnamoorthy, Sathyabama University, Chennai

Dr.A.Rajendra Prasad, Sri Sairam EC, Chennai

Dr.C.Elanchezhian, Sri Sairam EC, Chennai

Dr.K.Maran, Sri Sairam Engineering College, Chennai

Dr.M.Balasubramanian, RMK CET, Chennai, India.

Dr.N.Mani, Sri Sairam Engineering College, Chennai

Dr.S.Prakash, Sathyabama University, Chennai

Dr.S.Ramachandran , Sri Sairam Engineering College, Chennai

Dr.S.Ramachandran, Sathyabama University, Chennai

Dr.S.Ramesh, Vel Tech High Tech, Dr.RangajanDr.Sakunthala Engineering College, Chennai

Dr. NRR Anbusagar, Sri Sai Ram Institute of Technology, Chennai, India

MEMBERS

Mr. S.Arunprasad

Mr. D. Muruganandam

Mr. V. Velmurugan

Mr. B. Senthilkumar

Mr. D. Raghuraman

Mr. V. Prabhu

Mr. M. R. Ashok

Mr. P. V. Inbanaathan

Mr. M. Ramesh

Mr. R. Ashok Gandhi

Mr. K. Velavan

Mr. T. Srinivasan

Mr. A. PonShanmugakumar

Mr. G. ShanmugaSundar

Mr. J.M.Prabhu Das

Mr. P. Ramu

Mr. D. Kasinathan

Mr. M. Mareeswaran

Mr. S. Vigneshwaran

Mr. S. SreeKarthikeyan

Mr. B. Karthikeyan

Mr. M. Balachandar

Mr. M. Raj Mohan

Mr. R. Arun Kumar

Mr. AshwinSailesh

Mr. R. Sangameswaran