



# 4TH INTERNATIONAL CONFERENCE & EXPO



## HEAT TREATMENT & SURFACE ENGINEERING 2023

A glimpse into interesting  
industrial talks

WEAR RESISTANT METAL  
MATRIX COMPOSITE FOR  
HIGH PRESSURE GRINDING  
APPLICATION.



**Rane**

NEW APPROACH  
TOWARDS SOLVING NVH  
ISSUES - AUTOMOTIVE  
BRAKE FRICTION  
MATERIALS

RESIDUAL STRESS IN  
ENGINEERING MATERIALS



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HEAT TREATMENT OF  
ALUMINIUM PRESSURE  
DIE CASTING:  
CHALLENGES AND  
OPPORTUNITIES

DEVELOPMENT OF A  
DIFFUSION BONDING PRESS  
FOR MANUFACTURE OF  
STAINLESS STEEL 304  
PLATES USED IN PRINTED  
CIRCUIT HEAT EXCHANGERS

**28 - 30**  
**September**  
**2023**

start from 9 am - 6 pm

Chennai Trade Centre,  
Nandambakkam, Chennai,  
India

**Register Now!**

Register at : [www.asm-htse.com](http://www.asm-htse.com)

Email : [conf@asm-htse.com](mailto:conf@asm-htse.com)

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4TH INTERNATIONAL CONFERENCE  
&  
EXPO  
**HEAT TREATMENT &  
SURFACE ENGINEERING  
2023**



**A glimpse into interesting  
industrial talks**

**ELIMINATION OF ERW  
TUBE SURFACE  
IMPERFECTIONS**

**ZF WABCO**



**CASE STUDY :  
INTERCOOLER  
PROTOTYPE**

**GREEN STEEL A STEP  
TOWARDS CARBON  
NEUTRALITY: A REVIEW**

**MATERIAL SELECTION  
THROUGH ARTIFICIAL  
INTELLIGENCE IN  
AUTOMOTIVE INDUSTRY**

**CASE STUDY-  
ENVIRONMENTAL  
ASSISTED SPRING  
FAILURE IN COMMERCIAL  
VEHICLE**



**OPTIMIZATION OF  
INDUCTION HARDENING &  
TEMPERING USING SELF-  
TEMPERING TO ACHIEVE  
COST REDUCTION AND  
ENERGY CONSERVATION.**

**EFFECT OF MOBILITY ON  
SPINODAL  
DECOMPOSITION OF FE-  
CR ALLOY SYSTEM**

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### ASHOK LEYLAND



HIGH TEMPERATURE  
CERAMIC COATING FOR  
AUTOMOTIVE ENGINE  
COMPONENT

CORE STRENGTH  
ENHANCEMENT OF GEARS  
BY HIGH PERFORMANCE  
QUENCH OIL

INDUCTION HARDENING  
ON THE DURABILITY OF  
NODULAR IRON REAR  
SPRING SUPPORT  
BRACKETS

ALTERNATE MATERIAL IN  
PLACE OF EN353 FOR THE  
PRODUCTION OF GEAR  
BOX COMPONENTS

STUDY OF  
MICROSTRUCTURE,  
MECHANICAL PROPERTIES  
OF MAO COATED PISTONS

### MAHINDRA & MAHINDRA



HEAT TREATMENT  
PROCESS DISRUPTIONS  
TO CATASTROPHIC  
FAILURES IN  
AUTOMOTIVE  
TRANSMISSION

HEAT TREATMENT  
SEQUENCE AND SURFACE  
TREATMENT EFFECT IN  
WHEEL BOLT FOR  
IMPROVING FATIGUE LIFE.

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# HEAT TREATMENT & SURFACE ENGINEERING

2023

Technical Talks/Papers  
from....



*And Many More...*

Representatives from Academic and Research Institutes such  
as IITs, NITs, ISRO, IGCAR, BARC, ARCI, DRDO, DMRL etc, are  
also participating and presenting interesting technical talks as  
well!!!!

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# ASM International Chennai Chapter


## HTSE 2023 – Speakers At a Glance

### Guest of Honour and Plenary Speaker

	Dr. Navin Manjooran	Vice President, ASM International, USA & Chairman of Solve-global, USA	USA	Inventing the Future with Materials: 'The Backbone of Modern Technology & Innovation
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### Other Plenary Speakers

	Dr. Debashish Bhattacharjee	Vice President - Technology and R&D, Tata Steel Limited, Kolkata	India	New Materials for Industrial Applications
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	Prof. Christopher Berndt	Former President ASM International USA & Distinguished Professor of SSIE, Swinburne University of Technology	Australia	The Extrinsic Features of Thermal Spray Microstructures that Provide Architectural Ingenuity.
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	Mr. N. Gopinath	Managing Director of Fluidtherm Technology, Chennai	India	Advanced Concepts in Furnace Design: Continuous Furnaces with Rapid Gas Quenching for Emerging Applications
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### Keynote Speakers

	Mr. Jason Dervish	International Sales Manager at Phoenix Temperature Measurement Ltd.	UK	Technical challenges and solutions to the complete thru-process temperature monitoring of key heat treatment applications combining heating and quench phases.
	Mr. M. Damian Bratcher	Director International Operations at Super Systems Inc., Cincinnati	USA	Modern Approach to the Quality Control of HT Processes Based on CQI-9 Requirements
	Prof. Massimo Pellizzari	University of Trento	Italy	Heat treatment of additively manufactured tool steel and selected Titanium alloys
	Prof S. Marya	Ecole Centrale de Nantes, Nantes Cedex 3, France	France	Additive Manufacturing (Manufacturing and Process Mechanics aspects), Rapid Manufacturing
	Mr. Kamil Siedlecki	Sales Manager at SECO/WARWICK Group / Vacuum Heat Treatment Technologies / Brazing / Hardening/ Low Pressure Carburizing	Poland	1. Tools and Dies heat treatment in vacuum furnaces, 2. Case Hardening by Low Pressure Carburizing for Automotive and Aerospace industry 3. Vacuum heat treatment for Aerospace
	Mr. Adam Adamek	Sales Team Leader at Vacuum Furnaces Division at Seco/Warwick Group	Poland	1. Tools and Dies heat treatment in vacuum furnaces, 2. Case Hardening by Low Pressure Carburizing for Automotive and Aerospace industry 3. Vacuum heat treatment for Aerospace

	Mr. Thomas Strabo Hummelshøj	CTO at Expanite A/S	Denmark	Low temperature carburizing, carbonitriding & nitrocarburizing.
	Mr. Cesar Cases	Director of GH Induction	Spain	Dual Frequency induction heating systems for stress relieving applications & and introducing some advances in induction packages
	M S Ganesh	ECM Furnaces	France	Carburizing in a Decarbonizing World
	Mr. MANORANJAN PATRA	CEO XITIZ GROUP	India	Xitiz Technology on Vacuum Heat Treatment with highly efficient and cost-effective solution for Hardening, Tempering, Annealing, Brazing, Solution Annealing, Stress Relieving, Sintering,LPC, LPN Through Horizontal and Vertical Vacuum Furnaces with Gas and Oil Quench System
	Dr. Santanu Mandal	Senior GM - Technology at CUMI Murugappa	India	A Successful Collaborative Endeavor between ISRO & CUMI: Technology Absorption, Standardization & Space Qualification Process of 3-layer (Cr-Cu-Au) Metallized 99.6% Alumina Substrate for MIC Fabrication

	Mr. V. R. Chari	Vice Chairman at GH Induction India Pvt. Limited, Chennai	India	Development of coils for induction hardening/heating applications by simulation
	Dr. Tapan Rout	Principal Scientist; R&D and Product Technology, Tata Steel Ltd., Jamshedpur	India	Graphene nanocomposite coatings for protecting low-alloy steels from corrosion
	Dr. Dheepa Srinivasan	Chief Engineer Pratt & Whitney R&D Center United Technologies Corp. India Pvt. Ltd., Bengaluru	India	Heat Treatment Optimization of Mechanical Properties in Additively manufactured Aluminum and Nickel based Superalloys for Gas Turbine Applications
	Dr. R. Balamuralikrishnan	Outstanding Scientist & Director, DMRL, Hyderabad	India	Specialty Steels for Strategic Applications in Defence
	Dr. Urvesh Vala	Head of Material Engineering Technology at L&T Energy Hydrocarbon Engineering Ltd. Vadodara	India	Thermal Spray Coatings for Oil and Gas Refinery Applications
	Dr. S.K.Jha	Chairman & MD, MIDHANI, Hyderabad	India	Development of Nickel base alloys for High Temperature Applications



	Dr. S.V.S. Narayana Murthy	General Manager, Liquid Propulsion Systems Center, ISRO Trivandrum	India	Fabrication and Heat Treatment of Components for Space Applications
	Dr. S.T. Aruna	Chief Scientist, National Aerospace Laboratory, Bangalore	India	Indigenization efforts towards the development of plasma sprayable powders and coatings for aerospace, energy and biomedical applications
	Dr. I.A. Palani	Professor, Department of Mechanical Engineering, Indian Institute of Technology, Indore	India	Laser Nitriding for Industrial Applications
	Mr Martin Strutzenberger	Area Sales Manager, Rubig Group	Austria	Economic & Ecological Impact and Advantages of Plasma- based Surface Treatments
	Mr. Elanchezhian K Vice President - Technology	Savitha Oil Technologies	India	Keynote Talk



4th Edition

# **HEAT TREATMENT & SURFACE ENGINEERING 2023**

**CONFERENCE & EXPO**

**28 | 29 | 30  
SEPTEMBER  
2023**

**VENUE:**  
CHENNAI TRADE  
CENTRE, CHENNAI,  
TAMIL NADU, INDIA

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# HT&SE | 2023

## Heat Treatment & Surface Engineering

CONFERENCE AND EXPO



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SEPTEMBER 28-30  
CHENNAI TRADE CENTRE,  
NANDAMBAKKAM,  
CHENNAI

**GUEST OF HONOUR**  
INAGURAL FUNCTION  
THURSDAY, 28 SEPTEMBER - 9 AM



**BHUVAN ANANDAKRISHNAN**  
VICE PRESIDENT ENGINEERING AND  
COUNTRY MANAGER- INDIA  
CATERPILLAR INDIA



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### GUEST OF HONOUR

INAUGURAL FUNCTION

THURSDAY, 28 SEPTEMBER - 9 AM



### DR. N. SARAVANAN

PRESIDENT & CHIEF TECHNOLOGY  
OFFICER  
ASHOK LEYLAND



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