

**A brief Report-Seminar on SAMARTH UDYOG Smart Manufacturing in India
-Taking Stock to Look Ahead, organized at CMTI, Bangalore**

1.	Date of the Seminar	8 th May, 2019
2.	Organizers	Department of Heavy Industry, Govt. of India, Central Manufacturing Technology Institute, Bangalore, FICCI, CII, EPEC India
3.	Title of the seminar	Seminar on SAMARTH UDYOG Smart Manufacturing in India -Taking Stock to Look Ahead
4.	Programme	(enclosed a copy in pdf)
5.	Report: suggested contents (1) Main takeaway / good suggestions	(Details enclosed in copy in MS word) <ul style="list-style-type: none"> ➤ Success stories (Case studies) from Capital Goods Industries using Smart Manufacturing Industry 4.0 ➤ Challenges in adoption of Smart Manufacturing and Industry 4.0 ➤ Industry 4.0 : Road ahead in India ➤ Framing Templates for Implementation of Industry 4.0 in various industry sectors in India
	(2) Clusters covered	<ul style="list-style-type: none"> ➤ Machine tool Industries and IMTMA Members ➤ Process Industries ➤ Automotive and Aerospace ➤ Auto component, Steel and Energy industries, ➤ Engineering, Heavy Engineering and Construction equipment OEMs

		<ul style="list-style-type: none"> ➤ Automation industries ➤ Start-ups in IIOT ➤ Industry Members of CII, FICCI, EPEC India ➤ Consultants in IIOTs and Industry 4.0 ➤ Academia
	(3) Nos attended	250
	(4) Success stories that need to be compiled / shared	(enclosed in copy in MS Word)
6.	List of Speakerswith contact details	(enclosed a copy in MS Word)
7.	Presentations	-
8.	Resource persons for providing consultancy, skilling, guidance etc.	--
9.	Photographs	Jpeg images (8 images enclosed)
10.	Learning from the seminar	<p>From organizers/ subject point of view for action in the next seminar to improve further Learning outcome from the organiser's perspective</p> <p>(-)</p> <ul style="list-style-type: none"> ➤ More time to be allotted for interaction with participant industries to share their views. <p>(+)</p> <ul style="list-style-type: none"> ➤ Created awareness on advantages of Smart Manufacturing & I 4.0. through success stories and panel discussions ➤ Template for implementation of I4.0 in India needs to be prepared. The template should be dynamic in nature and keep on updating with respect to the progress.

		<ul style="list-style-type: none">➤ IT industry's strength in India can give boost to smart manufacturing industry when worked in synergy.➤ Analysis such as SWOT analysis, ABC analysis, Value analysis, sectorial analysis should be used while implementing I4.0.➤ IOT/I4.0 implementation should leads to reduce down time, increase productivity, enable remote monitoring & support to customer
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Department of Heavy Industry
Government of India

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CENTRAL MANUFACTURING
TECHNOLOGY INSTITUTE

(An Autonomous R&D Institute Under
Ministry of Heavy Industries & Public Enterprises, Govt. of India)



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Seminar on SAMARTH UDYOG

Smart Manufacturing in India -Taking Stock to Look Ahead

MAY 08, 2019, Wednesday

NC Auditorium, CMTI, Tumkur Road Bangalore – 560 022

Time	Programme	
09.00 – 09.45	Registration	
09.45 – 09.50	Welcome	Dr. Nagahanumaiah , Director, CMTI
09.50 – 10.10	Samarth Udyog – A Report	Shri. Navalgundkar Dattatraya S , C4i4, Pune
10.10 – 10.30	Keynote Address	Dr. A.R. Sihag , Secretary Department of Heavy Industry (DHI), Govt. of India
10.30 – 11.20	Success Stories for Industry 4.0	Shri. Chandrashekar Bharathi , MD, Ace Micromatic Group, Bangalore
		Dr. Purnendu Sinha , Technology Leader-IOT& Analysis, Tata Services Limited
		Shri. Hemant Mohgaonkar , Executive Vice President, Thermax Global
		Shri. Rushendra Babu , CTO, Utthunga Technologies
11.20 – 11.40	Tea Break	
11.40 – 13.00	Panel Discussion on Adaption of Smart Manufacturing: Challenges and Road Ahead	Moderator: Prof. Amaresh Chakrabarti , Samarth Udyog Center, CPDM, IISc
		Shri. Sunil Mathur , MD &CEO Siemens (India)
		Shri. Ravi Raghavan , CMD, BFW, Bangalore
		Dr. Sudhanshu Mittal , Executive Director, NASSCOM
		Shri. Ramkumar R S , Director, Kore-Mechatronics
13.00 – 13.15	Summing up	Smt. Sukriti Likhi , Joint Secretary Department of Heavy Industry, Govt. of India
13.15 – 13.20	Vote of Thanks	Shri. Satish Kumar , Joint Director, CMTI
13.20 – 14.30	Lunch	

List of Speakers for Seminar on “SAMARTH UDYOG Smart Manufacturing in India” organized at CMTI, Tumkur Road Bangalore, on MAY 08th, 2019.

Sl. No.	Speaker Details	Contact details
1.	Dr. A.R. Sihag	Secretary, Department of Heavy Industry (DHI), Govt. of India
2.	Smt. Sukriti Likhi,	Joint Secretary Department of Heavy Industry (DHI), Govt. of India
3.	Dr. Nagahanumaiah	Director, CMTI, Bangalore director.cmti@nic.in
4.	Shri. Navalgundkar Dattatraya S,	C4i4, Director, Samarth Udyog Technology Forum, Pune navalgundkards@kpcl.net
5.	Shri. Chandrashekar Bharathi	MD, Ace Micromatic Group, Bangalore chandrashekar@acemicromatic.com
6.	Dr. Purnendu Sinha	Technology Leader-IOT& Analysis, Tata Services Limited
7.	Shri. Hemant Mohgaonkar	Executive Vice President, Thermax Global
8.	Shri. Rushendra Babu	CTO, Utthunga Technologies Rushendra.g@utthunga.com
PANEL DISCUSSION		
9.	Prof. Amaresh Chakrabarti	Samarth Udyog Center, CPDM, IISc ac123@iisc.ac.in
10.	Shri. Sunil Mathur	MD &CEO Siemens (India) Sunil.mathur@siemens.com
11.	Shri. Ravi Raghavan	CMD, BFW, Bangalore ravi.raghavan@bfw.co.in
12.	Dr. Sudhanshu Mittal	Executive Director, NASSCOM sudhanshu@nasscom.in
13.	Shri. Ramkumar R S	Director, Kore-Mechatronics

Seminar on Samarth Udyog Smart Manufacturing in India –Taking Stock to look ahead at CMTI on 8th May, 2019

About 250 industries participated. Secretary DHI deliver the keynote address and discussed various implications in adopting disruptive technologies. Four case study presentations highlighted the Industry 4.0 technology implementation in machine tools, metal casting, distributed manufacturing and factory automation. The panellist the deliberated different challenges and their viewpoints like major headwinds, opportunity areas, need of technology customization and govt. policies required to promote Industry implementation in SMEs.

Key Outcomes:

- ✓ Report on Samarth Udyog Initiative of DHI covering the status of the technology developments & awareness initiatives of four CEFC centres (FSM Delhi, IISc, CMTI, C4iL Lab).
- ✓ Samarth Udyog-Smart manufacturing should also include technology solutions for foundry and forging industries.
- ✓ Template for I4.0 implementation needs to be prepared. The template should be dynamic in nature and keep on updating with respect to the progress.
- ✓ India should capitalise this opportunity in adopting Industry 4.0 quickly and realise its potential at the earliest, as in the past, country has missed such opportunities during previous 3 industrial revolutions.
- ✓ IT industry's strength in India can give boost to smart manufacturing industry when worked in synergy
- ✓ We need to carry out analysis such as SWOT analysis, ABC analysis, Value analysis, sectorial analysis while implementing I4.0.
- ✓ Things that are needed from Industry 4.0 are Digital Data, Connectivity, Transparency, Visibility, Prevention and Self Healing.
- ✓ Four Success stories/case studies were discussed in the implementation of I4.0 & its advantages for Indian industries (Thermax, Tata Group, Utthunga Technologies, ACE Micromatic-MIT).
- ✓ IOT/I4.0 implementation should leads to reduce down time, increase productivity, enable remote monitoring & support to customer.
- ✓ Government's initiative to increase manufacturing share in GDP is achievable with effective implementation of industry 4.0.
- ✓ Need to skill people for Industry ready in near future at academics level, based on technology trends
- ✓ Samarth Udyog initiatives are also useful to SME's and MSME's in productivity and economics along with large scale industries.







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