

Webinar Title: SMART MANUFACTURING – DIGITAL TRANSFORMATION OF MANUFACTURING

Registration Fee (including GST):- Rs 499/- (Rupees Four Hundred Ninety Nine Only) per participant inclusive of GST

Expert Speaker (Name/ Designation):- Mr. Naresh Chawla, Business Excellence Coach and Six Sigma Master Black Belt

Webinar Date: 08.05.2021 Duration: 15.30 hours to 17.00 hours (one hour thirty minutes)

About Webinar (Brief One para):-

Smart manufacturing is defined as the fully-integrated, collaborative manufacturing systems that respond in real time to meet changing demands and conditions in the smart factory, in the supply network, and in customer needs. Smart industry is a synonym for Industry 4.0 or industrial transformation in the fourth industrial revolution within which smart manufacturing de facto fits. Smart manufacturing is a broad category of manufacturing that employs computer-integrated manufacturing, high levels of adaptability and rapid design changes, digital information technology, and more flexible technical workforce training.

Smart Manufacturing is closely aligning manufacturing with Industry 4.0 to enable enterprise efficiencies, performance, innovation and business models. Smart manufacturing deals with implementation Industry 4.0 technologies mainly in development, production, logistics and maintenance. This calls for application of technologies like additive manufacturing, robots, use of IoTs, Cloud, Analytics, smart supermarket, digital twin etc. This results into better quality, flexibility, speed and productivity

Smart manufacturing is a combination of various technologies and solutions which collectively, if implemented in a manufacturing ecosystem. We call these technologies and solutions "enablers," which help in optimizing the entire manufacturing process and thus increase overall profits. The prominent enablers for smart manufacturing are:

- Artificial intelligence
- Blockchain in manufacturing
- Industrial internet of things
- Robotics
- Condition monitoring
- Cyber security

Smart manufacturing is all about harnessing data; data will tell us “what to do” and “when to do it.” Since smart factories are built around data, cyber security, above all, will play an important and significant role in the entire ecosystem of smart manufacturing. Data security is an important challenge while implementing these enablers.

There is huge potential for IIoT in smart manufacturing. Industrial internet of things (IIoT) is nothing but an ecosystem where every device, machine and/or process is connected through data communication systems.

Blockchain is a much-discussed new technology in manufacturing ecosystems. Currently, it is being implemented in financial systems, but companies are exploring its application in manufacturing. Blockchain could help in maintaining quality control right from the development of raw materials. Currently, most of the attention is on the development of blockchain for supply chain function across the manufacturing ecosystems.

Smart manufacturing is the implementation of industrial robots. Today robots are well connected with the sensor network implemented within the manufacturing shop floor, and they get the data from sensors and change their action accordingly. Artificial intelligence is also being slowly implemented in robotics systems, and thus it makes systems autonomous. Through AI, robotics systems are expected to change their actions according to the situation on a real-time basis. Predictive maintenance enables the capability to determine performance, breakdown and operating conditions of equipment or machine on a real-time basis.

Smart manufacturing is a powerful disruptive force with the potential to restructure the current competitive landscape and produce a new set of market leaders. Companies that are slow to adopt new technologies and processes could be left behind.

The webinar will focus on explaining concepts of Smart Manufacturing and discussing various technologies and solutions "enablers," which help in facilitating Smart Manufacturing.

Webinar Coverage:-

- Introduction and benefits of Smart Manufacturing
- Various technologies and solutions enablers in Smart Manufacturing
 - Artificial intelligence
 - Blockchain in manufacturing
 - Industrial internet of things
 - Robotics
 - Condition monitoring
 - Cyber security
- Additive Manufacturing
- Smart Factory
- Smart Manufacturing skills needed for the new data-driven environment
- Smart automation for productivity
- Digitalization in Manufacturing
- Digital Road Map enabling Smart Manufacturing
- Case study and examples

Speaker Profile (Brief One Para & Photograph):- Mr. Naresh Chawla is a business excellence professional and a Lean Six Sigma coach with more than 28 years of experience driving innovation, continuous improvement and performance management in the business organizations to optimize quality, efficiency, cost and customer value. He is a Certified Six Sigma Master Black Belt and has trained more than 400 people in green belts and black belts. He is also a Certified Productivity Practitioner from APO, Japan. He has served with Vardhman Group as Industrial Engineer, as Dy. Director with National Productivity Council, as Corporate Head Quality & Engineering with KDDL Ltd, as General Manager with PTU Nalanda School of TQM & Entrepreneurship and as Visiting Professor with Centre for Total Quality Management with Punjab Engineering College (a deemed University) in the past.



Register to learn (Key Learnings' in bullet points):

- Introduction and benefits of smart manufacturing
- Various technologies and solutions enablers in smart manufacturing
- Smart Factory
- Additive Manufacturing
- Smart Manufacturing skills needed for the new data-driven environment
- Digitalization in Manufacturing
- Digital Road Map enabling smart manufacturing

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Please Register in advance for this webinar

Thanks and regards

S.P.Singh

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