

## GDCTECH's INDUSTRY VISIT – SIGMA ENGINEERED SOLUTIONS – A SMART FACTORY



Sometimes feedbacks on factory visits are restricted to “it was just the usual stuff”, “nothing different”, “it was all buffed up”, etc. In contrast, we were awestruck by the recent factory visit organized by GDCTECH to SIGMA ENGINEERED SOLUTIONS.

The visit was organized on May 7th 2024. GDCTECH did flawless communication regarding initial announcement of the visit, members’ registration for the visit, sending regular reminders and required instructions as per the company rules.

25 members of GDCTECH registered for the visit. Everyone assembled at the entrance of SIGMA Electric, exactly at 9:45 am. SIGMA’s security personnel escorted all to company’s conference room, where excellent arrangements were made by SIGMA for the initial orientation.

Adorned with safety gears we all hit the floor right after the orientation. For the next three to four hours we all were spellbound by SIGMA’s excellent implementation of Total Productive Maintenance (TPM).

SIGMA started their journey of TPM in 2018. Today, the entire plant is well organized, fully connected, mostly paperless, mistake proofed (poka-yoke), clean, safe- no accidents in last whole year, well communicated with electronic displays, and 100% employee involvement.

From initial 70-75% OEE at TPM kickoff, almost all SIGMA’s machines are now at 85-90% OEE. We witnessed at least 3 to 4 line improvements where ergonomics of line operator was the main focus. To list a few, mechanism was designed that will raise the pallets up automatically as the operator consumes components from it (saving operator bending), good air ventilation throughout the floor to save operators from scorching heat, etc. The entire plant is well marked with walkways and signs. We were shown a state of the art training room for operators where one could see different training videos on a big LCD projector and also physically see and try out various cut sections, switches, wires, sensors, that they have to handle while working on a machine.

We could witness TPM in every employees working habits at SIGMA. Process ownership was percolated from management to the floor personnel. “Your machine, your responsibly” is followed by everyone at the floor. Interestingly, we could see posters of superman, Barbie doll, cute cartoon fish displayed on machines to increase visibility. Surely it helps a bit to keep the employees happy.

### **MMM – Manager Model Machine**

In implementing TPM, ‘resistance to change’ pops up as a hurdle, which is a basic human mentality. To overcome this, SIGMA’s managers decided to trickle down the TPM from top to bottom in the organization. An oldest machine (23 years old) with plethora of problems and worst OEE, was chosen as MMM (Manager Model Machine). Managers from all departments worked on that machine diligently and improved its OEE significantly. Once everyone saw that managers are folding up their sleeve, getting on the floor and whatever they did actually improved OEE of the machine; building trust for TPM in their minds became much easier. One by one all the machines, workstations, departments and the entire plant were added to TPM.

The visit started at plant-1 and ended in plant-2 couple of kms away. Both the plants were equally impressive. Around at 1:30pm, the visit was concluded with Q&A session, a thank-you note by Shri R. T. Kulkarni and felicitation of the SIGMA team by Shri Bajrang Lohia, with a memento as a token of appreciation. It was followed by tasty lunch buffet arranged by SIGMA.

After the lunch, all of us departed with fresh ideas in our minds, for making businesses SMART and in effect more profitable.