

Case Studies

Industry 4.0 Based Low Cost Automation



Case Study

Wireless Production Monitoring & ANDON Monitoring System



Indo Autotech Limited

Locations : Gujarat & Bangalore
Sector : Automotive

About Client

Manufacturers and suppliers of precision sheet metal components, tubular parts and assemblies used in Automobile Industry.

Production Facility Details

- Press Machines : 40
- Assembly Lines : 11



Business Challenges

- Manual OEE Calculation
- Real Time Production Monitoring
- Production stoppages calculation
- Machine capacity Utilization
- Tool Changeover Time Tracking
- Top level management reporting
- No Visual available on Production Floor



Solution

- Installed IIOT Nodes on each machine to capture real time production count
- Based on Product cycle time we have captured Minor stoppages and using ANDON station we have captured Major breakdown times
- Using real time production monitoring system we have calculated real time machine efficiency and base on that we have set alert system
- We have setup total 40 IIOT hardware on press machine for die changeover and one touch screen panel for tool change time tracking.
- We have design customize Dashboard, Auto email summary Report & Customize Report based on management input
- We have setup LED display board on each machine and installed large LED 12x8 feet dual side for overall plant data visualization



Benefits

- Real Time Machine Efficiency Calculation
- Real Time Product loss calculation with breakdown reasons
- No human intervention required for any data collection & reporting
- Reduce breakdown time due to auto escalation matrix facility
- Increases machine run time & improve machine capacity utilization.
- OEE Analysis

Case Study

Wireless ANDON Monitoring System



Aisan Fiem Automotive India Private Limited

Locations : Alwar , Rajasthan
Sector : Automotive

About Client

Manufacturers and Export suppliers of assemblies used in Automobile Industry.

Production Facility Details

- Assembly Lines : 16



Business Challenges

- Manual OAR Calculation
- Downtime calculation
- No Audio & Video available on shopfloor
- Communication Gap between production floor and various department
- Top level management reporting
- Reduce breakdown and improve OEE



Solution

- Installed 16 ANDON Station on each assembly line for generation breakdown alert to concern department and line supervisor
- We have installed total 6 LG make Smart TV and speaker for audio & visual with customize layout
- We have installed LG TV in maintenance room with speaker to send notification to concern team, also send Email and SMS.
- We have design customize Dashboard, Auto email summary Report & Customize Report based on management input



Benefits

- Real Time Product loss calculation with breakdown reasons
- No human intervention required for any data collection & reporting
- Reduce breakdown time due to auto escalation matrix facility
- Increases machine run time & improve machine capacity utilization.
- OAR Analysis

Case Study

Wireless Production, ANDON & EOL Monitoring



TM Automotive Seating Systems

Locations : Panthnagar
Sector : Automotive

About Client

TM Automotive seating system is into designing and manufacturing of seating systems for passenger cars, SUV and commercial vehicles

Production Facility Details

- Assembly Lines : 2



Business Challenges

- Remove Register for breakdown entry and make digital
- EOL Testing with product wise parameters
- Client wise Barcode sticker printing integration EOL line
- Batchwise production Facility implementation.
- Manual OEE Calculation
- Data Visualization on shopfloor for transparent machine output
- Top management Real Time Reporting



Solution

- For breakdown analysis we have setup 4 ANDON station with 5 Problems on bottle-neck station.
- We have setup 2 Touch panel for driver and co-driver lines with Dynamic Testing parameter.
- We have customized QR Code label printing according to client requirement with all details
- In our Effy application we have given provision of Batch order processing and product changeover facility.
- Using AXPxQ Formula we have calculated real time OEE & Machine Efficiency.
- We have implemented Customize Industrial Grade LED display board with customize layouts for data visualization.
- We have design customize Dashboard, Auto email summary Report & Customize Report based on management input



Benefits

- Real Time Product loss calculation with breakdown reasons
- Digital Record keeping of all Testing parameter product wise
- Label printing and re-Printing facility for Rework
- Reduce breakdown time due to auto escalation matrix facility
- Increases machine run time & improve machine capacity utilization.
- Operator also aware about his line performance
- No human intervention required for any data collection & reporting
- OEE Analysis

Case Study

Wireless Production, ANDON & EOL Monitoring



Jaynix Engineering Pvt Ltd

Locations : Por, Gujarat
Sector : Engineering

About Client

Jaynix is an India based manufacturer and exporter of Electrical Lugs, Earth/Ground/Neutral bars made from Aluminum Alloys for use in Low, Medium and High Voltage applications.

Production Facility Details

- CNC Machines : 37



Business Challenges

- Manual OEE Calculation
- Real Time Production Monitoring
- Production stoppages calculation
- Machine ON/OFF Alerts
- Top level management reporting



Solution

- Installed Simplify OEE on each machine to capture real time production count
- Based on Product cycle time we have captured Minor stoppages and using ANDON station we have captured Major breakdown times
- Using real time production monitoring system we have calculated real time machine efficiency and base on that we have set alert system
- We have design customize Dashboard, Auto email summary Report & Customize Report based on management input



Benefits

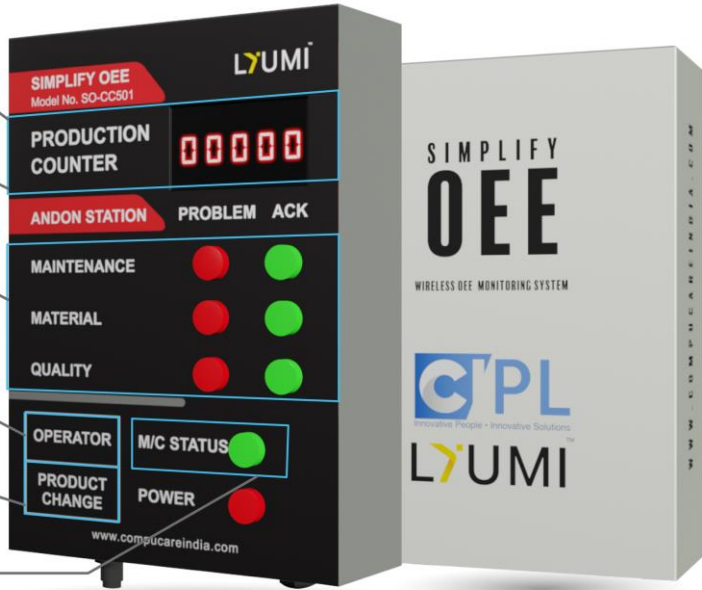
- Real Time Machine Efficiency Calculation
- Real Time Product loss calculation with breakdown reasons
- No human intervention required for any data collection & reporting
- Reduce breakdown time due to auto escalation matrix facility
- Increases machine run time & improve machine capacity utilization.
- OEE Analysis

Thank You

Contact Us

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Performance
Production Plan Vs. Actual Production
Product Cycle Time Tracking | Minor Stoppage

Quality
Good Part Vs. Bad Part
Quality Issue | Rework | Scrap

Availability
Machine Running Time Vs. Machine Downtime
Unplanned Downtime | Planned Downtime
Tool Changeover | Shift Breaks

OLE = Overall Labour Effectiveness
Operator efficiency Tracking

Product Changeover
Maas Production | Batch Wise Production

Machine Status
Track Machine Start & Stop Time