

SMART JH CASE STUDY

OVERVIEW:

Machinery, equipment & devices are the important part of the manufacturing unit. So, maintenance and monitoring of the entire machine is very important. Prior, the operators used to keep the data related to the machine maintenance manually i.e using the CLITA sheets which resulted in paper and time consumptions, also the chances of errors were increased. It was very tedious to manage and maintain all the records and machine status on the CLITA sheet. So our client wanted the solution which could increase the overall equipment efficiency of machinery by limiting the paperwork, time and cost. The data maintained on sheets were about the basic aspects of machine maintenance like cleaning, lubrication, etc. To overcome all these problems our team came up with a solution - SmartJH.

SmartJH helps to increase the productivity of factory. It enables machine maintenance which involves cleaning of the machine parts, checking lubrication, check if machine is emitting any kind of noise, etc. SmartJH System is used to conduct daily JH (Jishu Hozen) activity using a PC based software and an Embedded unit.

CHALLENGES:

There are a few challenges in managing the basic aspects of machine maintenance. The biggest challenges that company needs to overcome to enhance the entire productivity are:

1. **Manual data entry:** Manual data entry and re-entry is a slow process and leaves room for error. Our systems allow humans to incorporate their natural unreliability into processes that should be protected by systems in organizations. This can lead to a lengthy, inaccurate process when re-entering data onto ERP from paper based methods.
2. **Maintaining Records:** Record was maintained by traditional paper CLITA Sheets, it demanded huge resources be it time, storage space and papers. It was difficult to manage and maintain JH activities in CLITA sheets. (CLITA: Cleaning, Lubrication, Inspection and Tightening)
3. **Monitoring the operator's work:** The process carried out by the operator was infrequent thus the real time data was not available. The entered data was not accurate and consisted of errors due to which it was difficult for the supervisor to track the operator's work.
4. **Time tracking:** CLITA operations i.e. Cleaning, Lubrication, Inspection & Tightening have allotted specific time of approx 5 to 10 minutes. Operator used to perform all these operations randomly due to which the total time taken to perform the activities was not accurate.
5. Due to random data entry, total time calculated for the completion of the JH activities was infrequent which resulted in machine breakdown.

SOLUTIONS:

1. Syslogyx has made the manual data entry process fully automated. Now as the process is automated, CLITA sheet is made in excel format and uploaded. This has reduced man work and time as well. Accuracy in work can be seen in autonomous programs and is more effective.
2. In SmartJH system, Job report section is created with 6 months backup wherein the job of parameters of CLITA sheets is managed on daily basis. User can see all the job reports according to the dates and by filtering the operator's name which helps the supervisor to check the actions performed by operators for machine maintenance.
3. SmartJH system helps to maintain the records properly and gives visual indication on JH hardware devices which minimizes the machine breakdown, safety and quality problems.
4. Syslogyx has made the system automated, time required to complete the JH activity is calculated which indeed helps the supervisor to track the total time taken by the operators. SmartJH system includes job start and stop times as well as idle time on that machine.
5. Syslogyx has built a system which doesn't permit operators to turn the machine ON unless and until all the JH activities are performed.

EXPECTATIONS:

The main objective of SmartJH is to increase the Overall Equipment Effectiveness (OEE) of plant machinery. Thus, SmartJH system has become a staple to manage all the machine related data and keep track of everything from machine maintenance to operator's work. SmartJH successfully gives the improvement in the availability, performance and efficiency, results in improvement of the overall equipment effectiveness. It is an effective tool to increase the productivity of any industry.