Tracking of Assets in an Industrial Construction Site

BLE Beacon

Wearable Device
Background

In today’s competitive world, every second counts and the longer it takes for a product to come to market, the greater the competition and loss of profit. It is imperative that time is used effectively and losses due to delays are reduced. In the field of construction, especially that of industries, there is a huge investment involved. Any delay in the completion of the project will lead to delays in the starting of production and further add to the losses. To prevent these, a system is required to fine tune the construction process.

Challenges

Construction of industries is a very complex task, requiring precision and quality. The scale of the construction and the complicated designs necessitate timely completion of all the related activities. This can be hindered if the assets on site are not utilized in an optimal manner. Another problem faced by construction companies is assets slacking off during working hours. These issues, along with other factors, greatly reduce the efficiency of the workforce and lead to increased construction time and costs.

The biggest challenge faced by construction companies is keeping track of their manpower on site. Due to the large area and multiple job-sites, it becomes extremely difficult to locate and monitor individual assets. There is no way to correlate the amount of work done by an asset and the time taken. Low efficiency of an asset may not always be due to bad work ethics. Many-a-times, workers are not able to perform their tasks because of insufficient resources, for example, a shortage of plug points required for welding machines, cutters, etc., running out of filler rods, and power outages.

If real-time data regarding the location and working status of the asset is available, then management of the human resources becomes much easier and helps to tackle and prevent emergency situations, thus saving time and money.
**Solution**

CASCADECIM Solutions’ Asset Tracking System is designed to provide a means of managing human resources in real-time as well as to help analyze workforce utilization. The system consists of a wearable device which is issued to the asset and records their location and movement data. Beacons installed in the job-site act as location markers and help locating the asset within the premises. GPS location is also collected to monitor the asset outside the job-site. Depending on the application, custom modules can be designed to monitor parameters such as the on or off state, power consumption, and operating time of a machine.

**Fig. 1: System Architecture of CASCADECIM Solutions’ Asset Tracking System**
Benefits

Management of assets in an industry is not monitored very closely and it is very difficult to trace the job done to the person responsible for it. This greatly affects quality as pinpointing of the source of the issues is tedious and time consuming. Another factor is unavailability of resources, like tools and equipment, at the right time. By implementing a system to monitor both human resources and machinery, managers can ensure proper utilization of all assets. The collection of this data can also help in process optimization. Hence, with each implementation, the quality and efficiency of future production becomes better.

The Asset Tracking System, through its modular design, gives the flexibility to implement the system specific to different requirements and applications. The use of good quality components ensure long life and reusability. To keep up with the fast paced world of today, the Asset Tracking System is the solution to increasing efficiency and profits.