Application Note



INDUSTRIAL WIRELESS & IOT SOLUTIONS

CEMENT INDUSTRY

INDUSTRIAL PROCESSES

- STACKER AND RECLAIMER
- WAGON LOADING MACHINE
- SUPPLY CHAIN MANAGEMENT
- RAW MATERIAL
- MANY MORE



Wireless

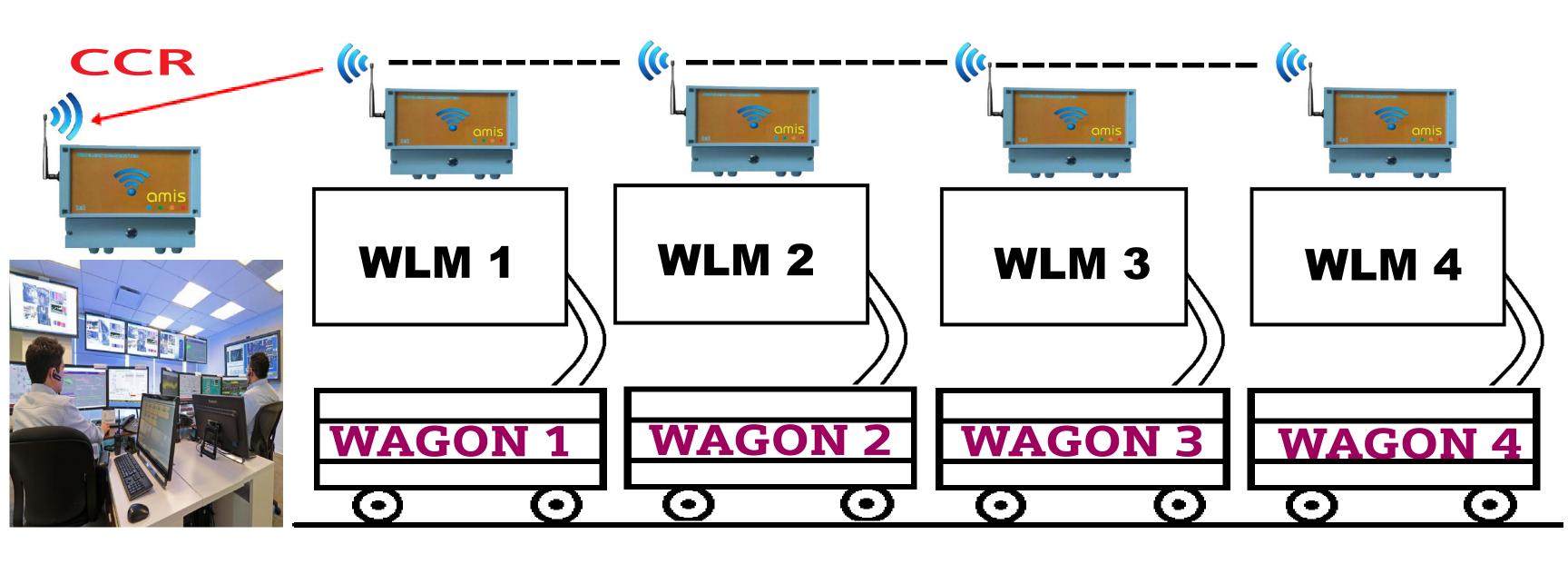
Every Minute counts in a process Industry and wireless networks are powerful tool boosting productivity and encouraging information sharing. Our 121 Bi-Directional Analysers are developed using LoRa Technology which has key features of Long Range coverage and millions of nodes.

IOT

Internet of things represents a general concept for the ability of network devices to sense and collect data from anywhere in the process. Our loT system provide real-time information's and process data. It accepts signal inputs like Analog, Digital, MODBUS, TCP/IP..etc more. With dedicated login facility customer can visualise and get statistical report analysis of data.

Wagon Loading Machine





Site Installation





Wagon loading machines are used to load filled cement bags into closed wagons. The common design principle of these equipment's is the multi-sectional construction of the machines and the connection of various sections via heavy duty slewing gears.

121 Analyzer monitor machine ON/OFF and DiverterOpen/Close signals remotely from CCR Room. Hence savings are:

- Cable Cost
- Improve Loading efficiency
- Reduce penalties on wagon wait

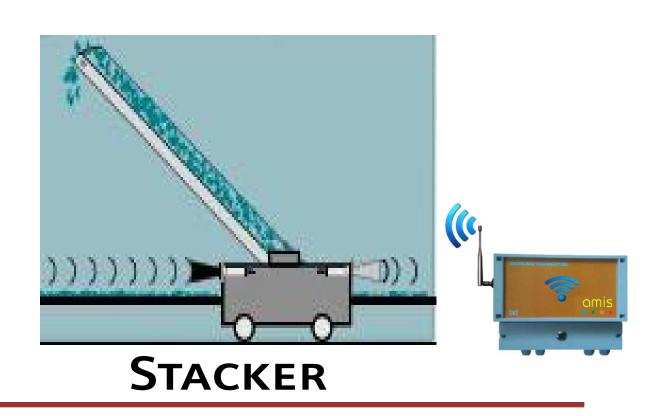
Stacker and Reclaimer











Control Signals

- Stacker and Reclaimer ON/OFF
- S/R Manual and Auto mode
- S/R Forward and Reverse Motion
- Yard Conveyor ON/OFF permissive
- Feeding and discharging Speed
- more etc.,

Type of Stacker/Reclaimers

- 1. CBS Circular Blending System
- 2. BS Longitudinal Bridge Scraper store
- 3. SS Longitudinal Side Scraper store

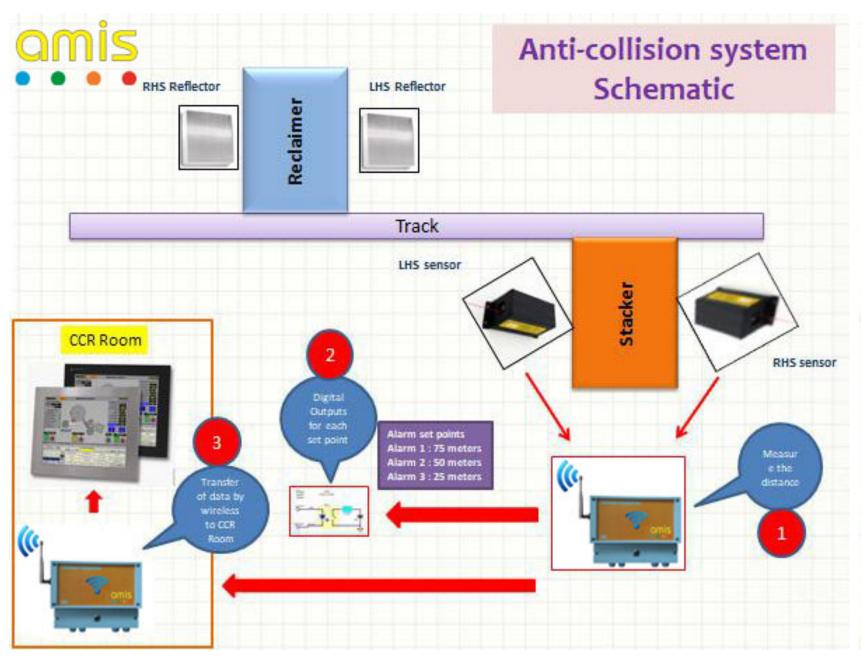
Stacker and Reclaimer are ideal for both prehomogenisation and buffer storage of raw materials. stacker and reclaimer systems precisely meet your needs such as, selection creteria and Prehomogenisation.

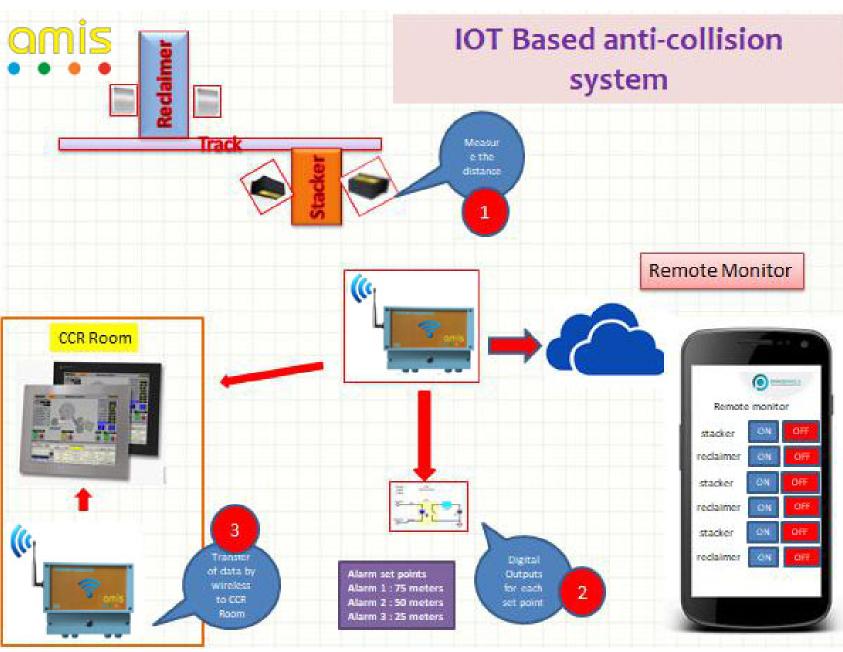
121 analyzers monitor the above control signals remotely from CCR to Stacker and Reclaimer, thus by benefiting the following,

- Production efficiency
- Stacker and reclaimer Reliability
- Enhanced Sfety
- Multi discipline Control

Anti collision system

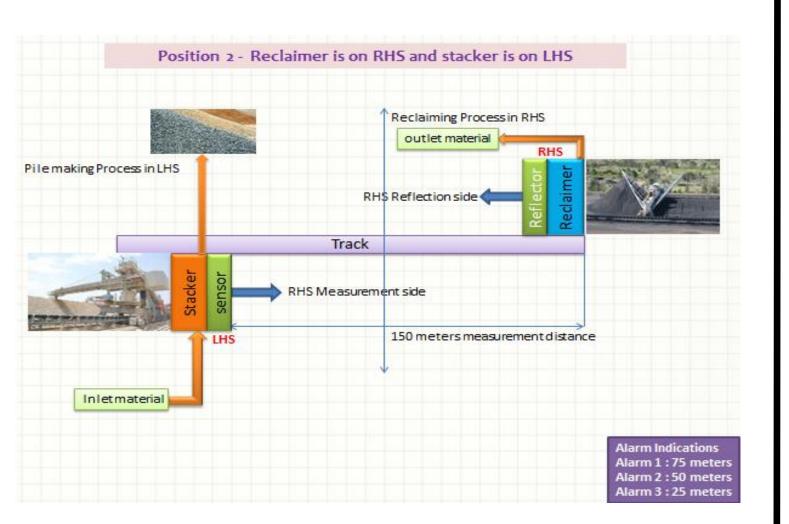






Our Solutions

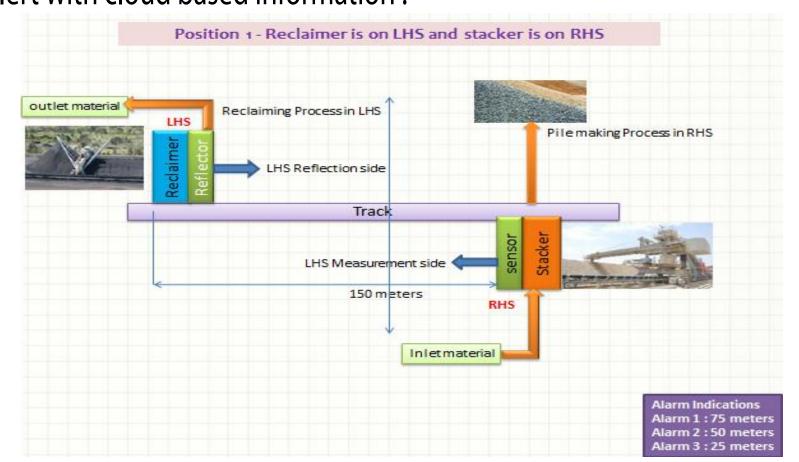
- Non Contact Position Control
- Ranges upto 150 meters
- No wearing parts
- On power up, Instantly known it's position
- No wearing parts
- Low Installation cost, Low purchase price
- Position monitoring through wireless from CCR
- Change of mode provided for change of pile

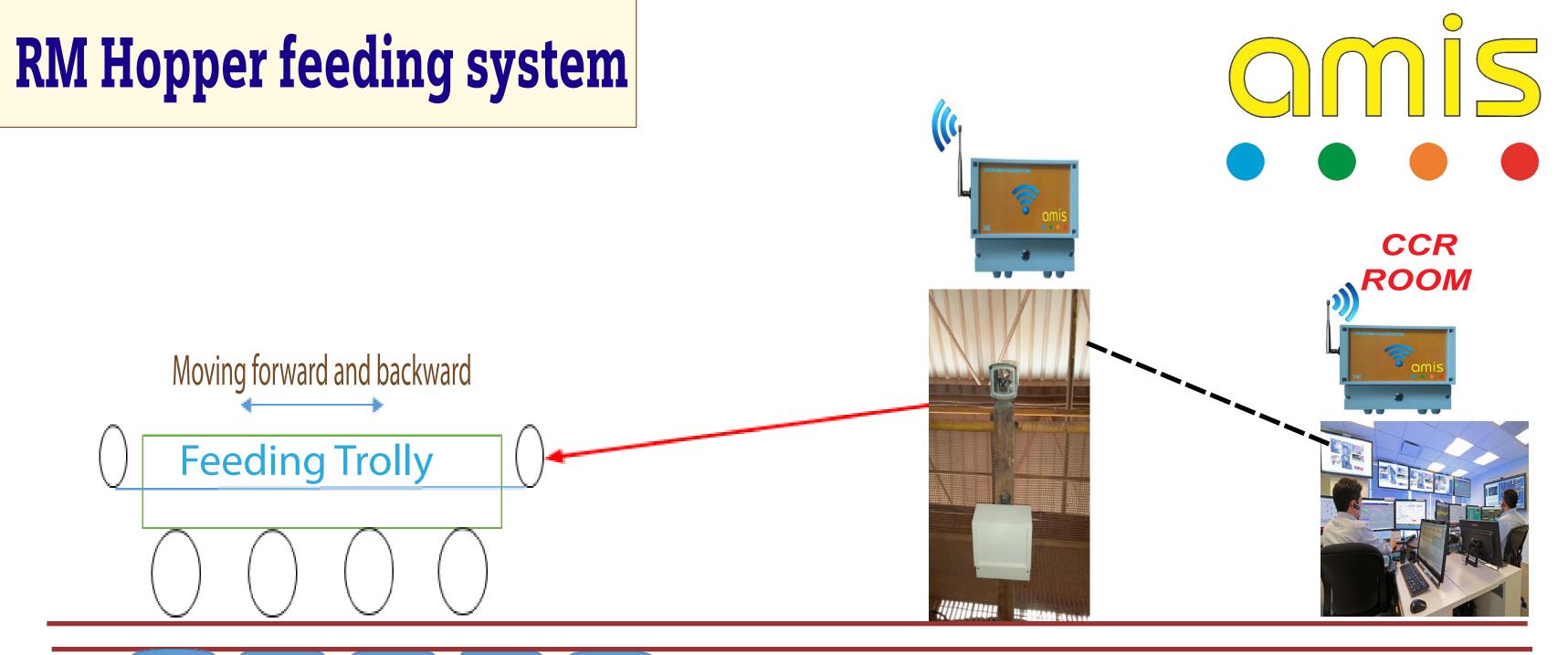


Stacker and Reclaimer are used in stock yards to stack Ores, Minerals and other Raw materials. System are needed to monitor the collision of stacker and reclaimer when position of them changed at location during stacking and reclaiming of the material. Traditional detection technologies are done using Proximity sensors and they are not safe as measurement distance is close and limited and chance of failures

121 Analysers use new technologies to measure the operating distance of both machines and provide alert infos to operator by user friendly set points on distance. For ex: 10 mtr / 20 mtr / 40 mtr / 75 mtr....etc.

We have designed Anti-collision system start measuring the distance from 150 mtr onwards to close-by using laser based sensor which are more accurate, cost effective and provide Anti- Collision info through wireless to CCR and also alert with cloud based information.







<----RM HOPPERS</pre>

Site Installation



Precise and accurate distribution of the Rawmaterials is the basis for an efficient and economical automation of assembly lines in RM Hopper.Our solutions guarantee a perfect integration while optimizing the Hopper positioning, continious Tracking and manufacturing costs.

121 analyzers measure the distance in feeding trolly using LASER sensor thus by benefiting the following,

- Hopper's positionig
- Distance/Continuous tracking with Analog and Digital Outputs