



Productivity and Security



General Vision

Problem: The truck traffic in common vehicle access areas brought great danger of collision, for the weight of the trucks diffculted braking and going out of inertia before going into the main way.

Solution: Usage of Wave RFID tags in the trucks and readers in the highways where there is traffic of other vehicles. When the truck is identified by the Wave reader, we inform the semaphore system which prioritizes traffic, avoiding collisions.

Advantages: Diminishing of collision risk of the trucks with other vehicles roaming in common way, decreased wear on brakes and consequently lesser consumption of fuel and more logistic agility.

Benefits: Avoiding material and human losses.

Target consumer: Logistics.

Arcelor Mittal Tubarão - Traffic control system: much more security.

Acerlor Mittal Tubarão is one of the biggest companies in Brazil and is responsible for 8% of the global volume of steel plates' commercialization. It has one of the highest indexes of reuse of waste produced in the productive process and since 2006, when it started the Terminal of Sea Barges, transports steel coils through the sea. Each sea barge travel, with a capacity of 9.5 thousand tons, represents 300 trucks less circulating in the highways of the country. This means a decrease of about 100 thousand tons per year of CO2. It has one of the best indicators in the world in the area of Health and Security, one of the reasons that pushed the company forward to develop an appropriate logistic solution to its need of maintaining security in internal transit.



Ideal Products for the Solution



500.724 - L-A210

The L-A210 is a powerful reader of reduced dimensions. It works in the 433 MHz frequency and may be used by itself or with other readers in sequence. It reads active AcuWave tags, supports different types of antennas.

For more information about this product, [click here](#).



500.562 - AcuWave L-TGP-A

The L-TGP-A is a tag that continuously transmits its unique ID, which may be read by any AcuWave reader. Its design allows for usage in different situations and its system was developed for a low battery consumption, making for a longer life.

For more information about this product, [click here](#).



500.412 - Tibbo DS1005 Controller

Great option for industrial automatization, access control and security, the DS1005 is a programmable controller in BASIC, with an RS-232 / 485 and an Ethernet.

For more information about this product, [click here](#).

About the Solution

The Client: Arcelor Mittal Tubarão is one of the biggest companies in Brazil and is responsible for 8% of the global volume of steel plates' commercialization. It has one of the highest indexes of reuse of waste produced in the productive process and since 2006, when it started the Terminal of Sea Barges, transports steel coils through the sea. Each sea barge travel, with a capacity of 9.5 thousand tons, represents 300 trucks less circulating in the highways of the country.

Proposed challenge: The trucks don't have great visibility of smaller vehicles nearby, causing eventual collision accidents or even crashes. This risk increases when they have to roam through ways with other smaller vehicles.

Equipment: L-A210 Reader, L-TGP-A tags and DS1005 modules.

Solution: Usage of Wave tags for the trucks to be identified when they go through readers installed near intersections or other vehicle's traffic access ways. RFID system integration with the traffic light controller through a Tibbo module.

Functioning: The tag is affixed to the truck's windshield. When there is no truck around, all traffic lights blink in yellow, which means normal vehicles are forced to stop and check if they can go through. When a tagged truck approaches the intersection, the tag signal is sent to the L-A210 reader, which transmits this tag's ID through RS-485 / 232 to the Tibbo DS1005 controller, it treats this ID checking if it really is going and not returning (there are 3 readers calculating this algorithm), then the DS1005 module activates a relay that lights up the green light so that the truck goes without braking, and red for the normal cars to stop. The reader number 2 confirms the truck's passage and sends the ID to the DS1005 which makes the lights blink yellow again.

Features / Practical improvements: With this automated system, the need for personal presence to guide and prioritize truck traffic is avoided.

Gains / Benefits: Avoiding material and human losses, increasing safety.

ACURA has a focus on the market of general identification, with emphasis on RFID (radiofrequency identification), providing RFID Tags (Transponders), Proximity Cards, RFID Readers and Data Collectors.

For more information about this and other ACURA solutions, visit www.ACURAGLOBAL.com

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