



## Top fire solutions for the paper industry prevent cardboard from kindling in Ecuador

Local Bosch partner Adeatel installs intelligent cameras for corrugated paperboard factory, IncarPalm

Industria Cartonera Palmar (IncarPalm) is one of the main manufacturers of corrugated cardboard packaging based in Machala, the capital of the banana trade in Ecuador. Their robust material forms the basis for protective boxes, used to safely store and distribute delicate produce. This, of course, includes bananas, but also other fruits, seafood, and flowers. The company therefore plays a key role in the supply chain for these goods. Any disruption to their efficient reliability would pose a huge business risk.



Manufacturing plants in the pulp and paper industry have to be vigilant to fire risks. An entire business could literally go up in smoke if signs of ignition are not detected immediately. The huge IncarPalm corrugated paperboard factory houses industrial machinery to corrugate cardboard in huge quantities. Their paper-based raw materials generate dry, dusty, highly flammable conditions. The manufacturer had fire detection equipment installed on their site, but mainly positioned near offices. In recent years, local legal requirements were updated in collaboration with fire protection services.

This made certification, showing compliance with specific fire safety regulations, mandatory for industrial plants. This is when IncarPalm got talking with Bosch – and found the perfect solution. Dennis Sánchez, Business Development Manager for Bosch Safety and Security Systems demonstrated AVIOTEC video analytics for fire detection to Patricio Román, IncarPalm's Security Chief. Patricio was impressed, especially as no other technology they explored in the past provided an adequate solution for the factory's fire safety needs.



In collaboration with Alberto Serrano, Project Engineer at Adeatel S.A., a local Bosch Building Technologies partner, an assessment of the site was carried out. Alberto and his team devised an intelligent fire safety solution for their customer. The factory had Bosch BVMS technology installed, then three installation phases were established to integrate the smart surveillance. Over several months, AVIOTEC algorithm-driven video cameras were integrated as phase one to cover IncarPalm's raw materials stocks, machines and end products with sensitive flame and smoke monitoring.

“Designing and Implementing a fire detection system, through video analytics has been a very satisfactory achievement. Being able to count on different technologies that generate high added value for our client reinforces us as certified installers, and encourages us to promote these alternatives to the local market.”

Alberto Serrano, Project Engineer at Adeatel S.A.



The factory area in Machala generates a high volume of dust and lighting conditions are quite poor, partly due to this. More specific challenges included vibration from machinery and pipes on site. Adeatel adapted the position of the cameras and their sensitivity settings to ensure their optimal performance without false alarms. Live tests showed the industrial requirement of detecting any genuine sign of fire within seconds from the point of ignition was even surpassed with this prompt customization of the AVIOTEC video cameras.



Phase one covered over half of the IncarPalm premises with the fast and intelligent video fire detection solution, the first such smoke and flame detectors to be installed in Ecuador – and they will not be the last! Phase two for IncarPalm is still ongoing and involves the installation of a further 12 of the high-tech cameras for monitoring across the remaining areas on the site. The company plans to build undercover storage outdoors on their plant in the coming months.

The intelligent algorithms behind AVIOTEC's efficacy coupled with an infrared illuminator make it the ideal solution for dim light and hours of darkness. Patricio is therefore currently planning phase 3 with Alberto. This is to evaluate the scope and conditions of the planned structure and determine how many intelligent video cameras would serve sufficiently to protect personnel and their entire property.

“On first glance, the benefits don't seem tangible, but by using cutting-edge technologies that reduce the need for human intervention, and facilitate the control of a system, there are returns on investment with business continuity and long-term cost savings.”

Ing. Patricio Román, Security Chief, IncarPalm