

Lift truck visibility for the smart port

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To improve the awareness of lift truck drivers in terminals Hyster is exploring and developing an increased range of options for truck-to-truck, truck-to-object and truck-to-pedestrian detection systems. Combined with cameras, telematics and other technologies, “connected” Hyster® fleets are delivering greater productivity and visibility for the smart ports of tomorrow.

Driver awareness

“Lift truck drivers and pedestrians need to maintain proper awareness of each other, especially in port and terminal operations,” says Ed Stilwell, Functional System Leader for Hyster. “Technology can help with this, but to be effective it must meet the specific needs of the handling application.”

He continues, “Lift trucks, for instance, manoeuvre in many different directions, but often have reduced visibility for the driver, compared to a car. Therefore, existing technologies from the automotive sector are often not advanced enough for these complex needs.”

To help operators stay focused on the load and the driving path, while increasing awareness of people and other machines, Hyster has explored and identified a series of proximity and object detection systems. They are modular and can work individually or collectively.

The first automatically detects objects, with multiple sensors that adjust their range with the vehicle speed. It detects objects while driving in a straight line as well as during turning manoeuvres where the tail of the truck is either leading or swinging. When an object is detected, the operator is warned through haptic and audible alerts like a vibration and buzzer. The driver can then react accordingly.

“We can add proximity sensors that enable truck-to-truck and even truck-to-pedestrian awareness,” Stilwell says. “This is important as many operations are moving more product and containers without expanding their footprint. This means there are often more trucks and people working in close proximity than ever before, with increased pressure on productivity.”

Larger material handling machines require significant space to operate, needing ample room to accommodate the “tail swing” of the rear end. Furthermore, the load at the front of the truck when traveling forward and backward needs extra space and can inhibit the driver’s view.

Hyster® trucks are designed to provide operators with a clear line of sight and all-around visibility and are engineered to comply with the EU Machinery Directive, complying with CE marking and safety requirements of both national standard and respective trade organisations across Europe. The company maintains that the operator must always be responsible for the safe operation of the machine, but technology can assist where visibility may be limited.

“Connected trucks assure that operators are aware of trucks, objects, and pedestrians in close proximity and then operate at speeds appropriate for a specified traffic zones,” explains Stilwell.

Visibility

In addition to detection systems, Stilwell says that cameras can also help to improve visibility in certain applications, making it possible to view the immediate area surrounding a truck and the load. To keep operators focused on the load and the path ahead, cameras can be set to activate only when an object is detected and then display an image on screen.

Cameras can be used to assist with container engagements and multiple camera views can be stitched together into one image so the operator doesn't have to spend valuable seconds trying to figure out what view a camera is displaying.

Telematics

Hyster's expertise also caters to the 'big data' needs of smart ports. The Hyster Tracker telematics solution can be installed on a variety of mobile equipment. It enables port operators to collect data, from daily service checks to accident reports and utilisation analysis. Easily-accessed reporting provides quick visibility to key metrics that help keep port operations running efficiently.

Hyster Tracker provides controlled operator access, proactive maintenance alerts and reactive impact and fault codes. GPS tracking data also helps identify areas within an operation that may present a higher probability of incidents, such as congestion-prone areas.

The Hyster® Big Truck line of forklifts provides up to 52 tonnes lifting capacity for port terminals including ReachStackers, empty container handlers, lift trucks and warehouse equipment. Supported by one of the strongest dealer networks in the world and dedicated factory support team, Hyster® trucks provide low cost of ownership to customers globally.

Source: MOLOKINI MARKETING LTD