

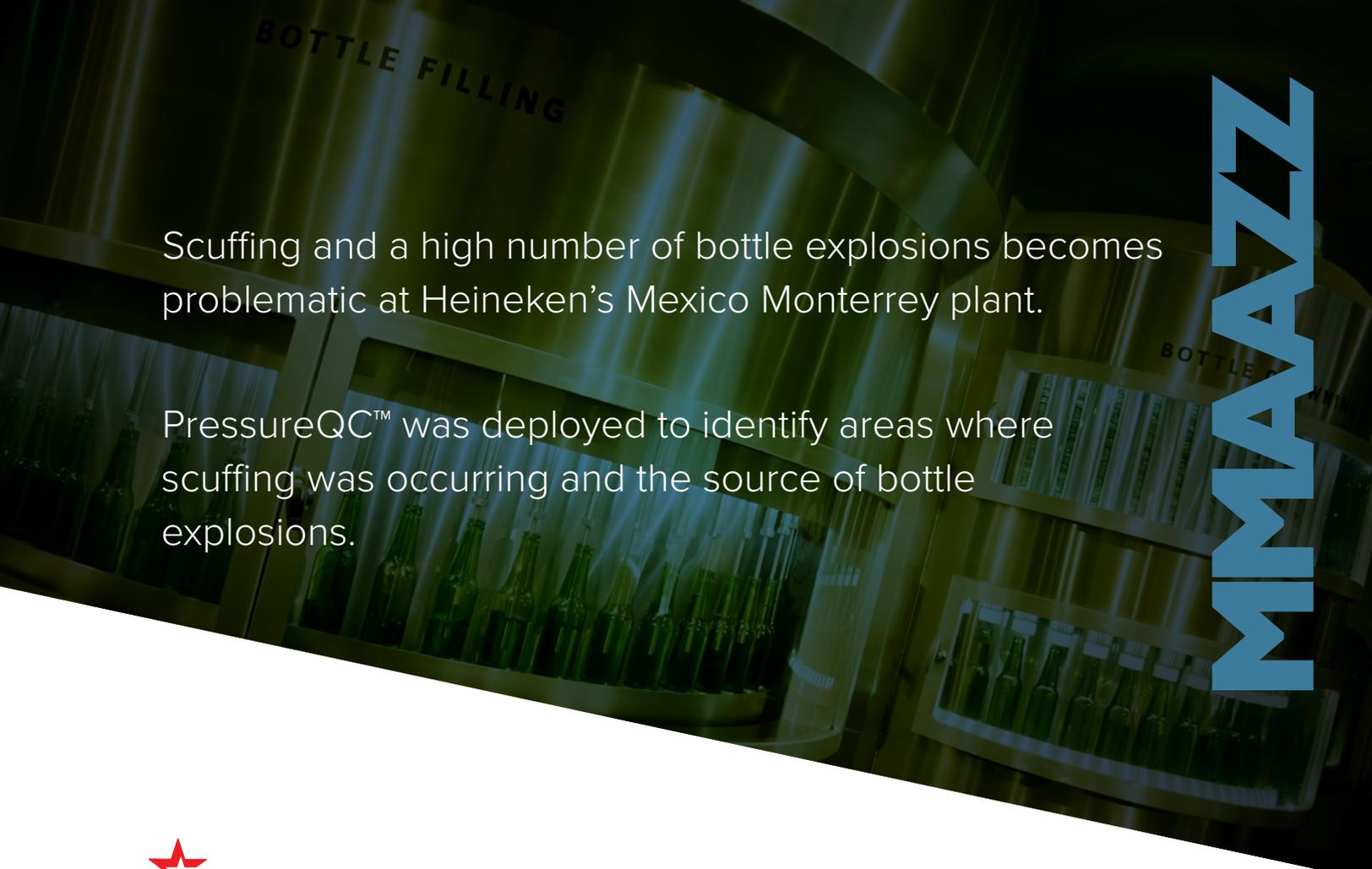
CASE STUDY

MMAAZZ



‘Reduced scuffing to increase bottle life’

Heineken uses in-line sensors to increase the number of filling cycles from returnable bottles and maximize worker safety. Reduction of scuffing levels has increased the life of returnable bottles by up to 50%, providing ongoing annual cost reductions.



Scuffing and a high number of bottle explosions becomes problematic at Heineken’s Mexico Monterrey plant.

PressureQC™ was deployed to identify areas where scuffing was occurring and the source of bottle explosions.



Recognized for their green bottles and signature red star, the Heineken Group produces 16.46 billion litres globally. Heineken has been sold in more than 170 countries including Mexico, China, Australia and various countries in Africa. Source: Wikipedia

CHALLENGE:

Scuffing and a high number of bottle explosions becomes problematic at Heineken’s Mexico Monterrey plant.

Bottle scuffing is a mechanical degradation of the surface of the glass that manifests as white lines above and below the label. These white lines are unattractive to consumers meaning bottlers are forced to remove affected bottles from circulation.

A 50% increase in the life of a bottle through reducing scuffing on the filling line results in yearly savings in the millions of dollars for most brewers.

Project Snapshot:

- PRESSURE & SCUFFING
- COST SAVINGS
- WORKER SAFETY

- High pressure areas on the filling line were causing multiple bottle explosions per hour
- Besides presenting serious work safety risk, the explosions increased filling line costs
- Real-time data provided by PressureQC™ led to immediate appropriate equipment adjustment
- Bottle explosions reduced by 80%
- Reductions in scuffing have increased the life of returnable bottles by up to 50%.

Any increase in the amount of time bottles can stay in circulation reduces the number of 'new' recyclable bottles that must be introduced to meet the production demand.

Explosions of bottles in the filling line can cause worker injury and present a very serious ongoing safety risk. It can also be a significant cost in downtime and clean-up efforts.

Recognizing that a high number of explosions was occurring on the line, Heineken needed to identify areas where too much pressure was being applied to bottles and take action to reduce that pressure..

SOLUTION:

PressureQC™ was deployed to identify areas where scuffing was occurring and the source of bottle explosions.

PressureQC™ was used to pinpoint high-pressure areas in the filling line, as well as areas where significant scuffing was occurring. In these areas, some re-engineering of the line was performed and changes were made to the conveyor belt design and control logic.

States Heineken, "Our initial intention was to increase the life of returnable bottles through the reduction of scuffing by measuring, analyzing and reducing the high-pressure areas in the conveyor belts. As a result, we also achieved a considerable reduction in the number of bottle explosions and a corresponding reduction in the risk of personal injuries."

Outfitted with pressure sensitive film, PressureQC™ smart sensor replicas are placed on the line to measure scuffing and squeeze load in glass, PET and canning industries. Location tracking with wireless Bluetooth beacons pinpoints the origin of damage and opportunities for improvement as the device travels through the entire filling, capping and packing process.



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Heineken Mexico Monterrey Operations

BOTTOM LINE:

Reduction of scuffing levels has increased the life of returnable bottles by up to 50%, providing ongoing annual cost reductions. Reduction of pressure on bottles in the filling line has reduced explosions by 80%.

“The PressureQC™ sensor, on top of being a new and innovative tool for our corporation, has become a key part in all activities aimed to improve safety as well as reducing filling costs,” reports Heineken. “It’s very easy to use the tool. It comes with a tablet already loaded with an app that allows us to see the measurements and results in real-time. When we need to do a more in-depth analysis, we use the web-portal developed and supported by MMAAZZ, and in some cases we export the raw data to Excel for even further analysis.”



“After two and a half years of independent research, PressureQC™ is the industry’s only measure of scuffing received by a glass container as it is processed on the line,” explains Pablo Asiron, MMAAZZ Executive Vice-President, Global Business Development. “The actionable information that this sensor provides allows our customers to achieve incredible results such as those realized by Heineken Mexico.

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The real-time data provided by MMAAZZ in-line sensor solutions allows plant teams to immediately fix serious issues and also do critical preventative maintenance, resulting in much-improved worker safety, achievement of target output and minimized costs and downtime.

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