Cattle carcass AI vision checker

Inspect the carcass surface for contamination
by our 12-camera AI vision system

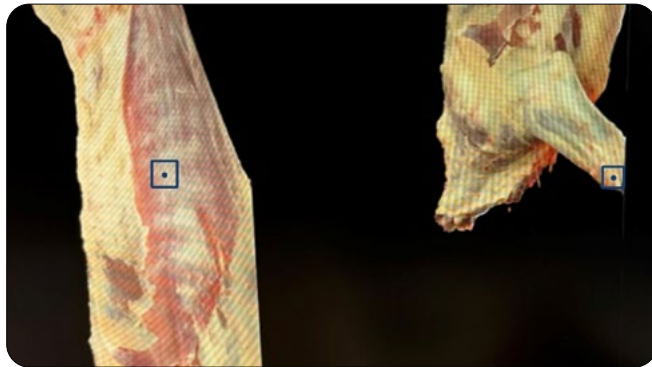**DANISH TECHNOLOGICAL INSTITUTE**

Cattle carcass AI vision checker

Inspect the carcass surface for contamination by our 12-camera AI vision system. Finds are shown on a monitor for operator attention

The trained eye can now be supported to ensure spotting small contaminations on large carcass surfaces. The AI solution assists efficient detailed screening, on the fly at the slaughter line, of a large and very complex surface.
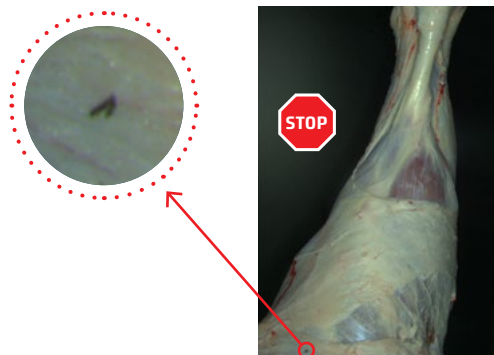
CONCERNED ABOUT CONTAMINATIONS?

- Manual inspection is costly, tedious, slow and error-prone
- Contaminants like fecal, oil, and dirt compromise food safety.
- Meeting regulatory, market and quality standards is critical
- Contamination of carcass surfaces is impossible to fully avoid, and the contamination must be removed on the slaughter line.
- The AI solution assists by fast detection and pin pointing the contamination for operator removal
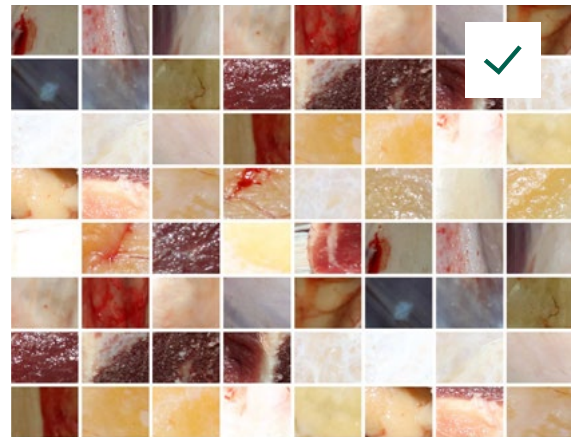

Contamination to be removed shown in blue frame on monitor

AI-POWERED DETECTION AT LINE SPEED

12 high resolution images of the carcass surface are captured in-line as the carcass halves pass the cameras mounted in 4 encircling towers. Our AI solution uses advanced machine vision and deep learning algorithms to detect contaminants (fecal, oil, dirt) on carcasses in real time, where the hide has been removed. It ensures continuous monitoring performance, fast identification and marking for corrective removal actions. The exact location is shown on a monitor with a blue frame for easy identification and removal by an operator at a workstation.
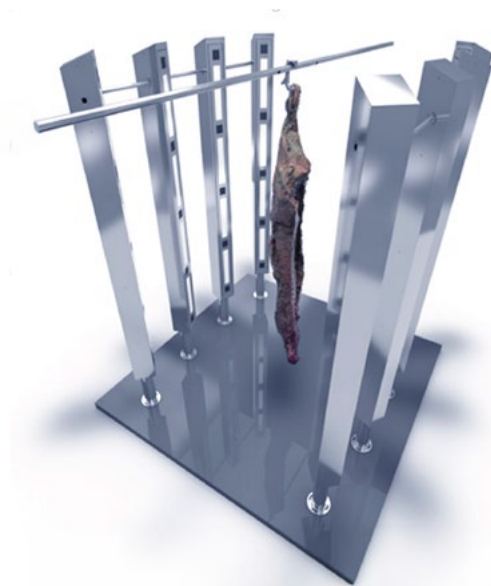
AI CARCASS VISION CHECKER OFFERS

- Detection of fecal and other contaminations (dark grease, dirt, hair lumps) to be removed
- Documentation and statistics of process errors for continuous improvement
- Consistent assessment of contaminations independent of operator
- High level of food safety and compliance
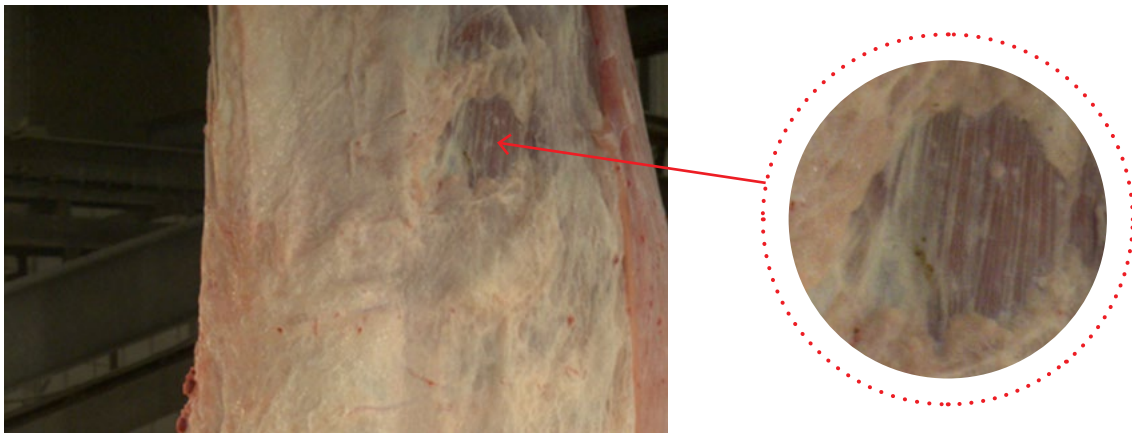- Identification of contamination which may be missed until later in the process

The solution may be installed either:

- end of line – within the BCC-3* (Frontmatec) cabinets used for carcass quality grading

or

- in dedicated camera towers installed where feasible after the dehiding/evisceration
- the monitor showing contamination can be placed at the relevant workstations for removal and validation

CATTLE CARCASS AI VISION CHECKER DETAILS

- Power/use: 230 V AC
- Industry wash down
- Footprint 3.4 x 3.4m
- CE, EU 852/853/1935 (2004)
- Detectable contamination size:
  - configured and optimized to customer preference typically to few mm^2

- Capacity: 240 carcass halves per hour in standard configuration (special configuration for higher speeds)
- *BCC-3 https://www.frontmatec.com/en/beef-solutions/clean-line-chill-room/carcass-grading

AI carcass checker locates hard to spot contaminations on the varying carcass background.

Food innovation for the future

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