

Frenching Scribe

Project code
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Project description

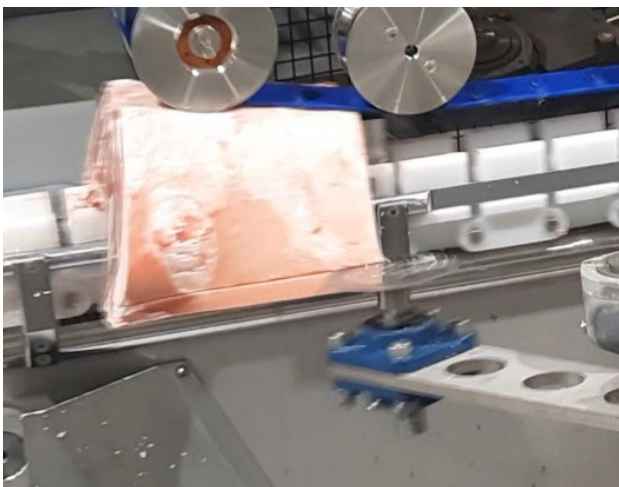
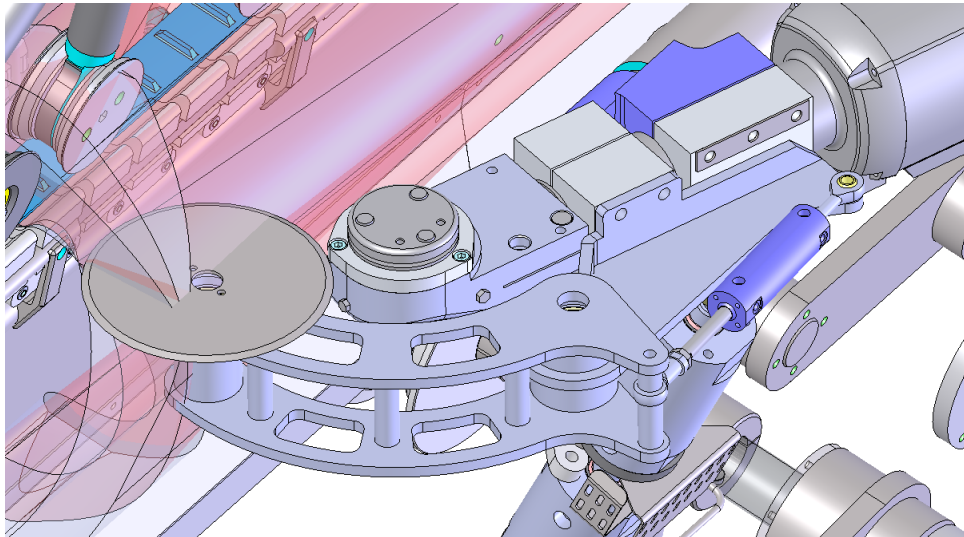
After lamb racks (cap on) are discharged from the Scott Automated Middle system at Brooklyn the racks are often required to be Frenched (cap on or cap off). This process is undertaken by operational staff, using a knife, with no real guide/measure of the Frenching distance (e.g. 50mm). This results in frenched length variation.

Frenching too much (results in lost revenue and potential customer complaints), Frenching too little (results in customer complaints). There is an opportunity to evaluate if the Scott automated middle machine can use its x-ray and vision modules to place a Frenching scribe line on the cap side of the rack.

This project was a PoC evaluation of using the Scott machine to scribe. It was always anticipated that if a successful concept was identified a second project would be required to implement the solution permanently.

Project content

The project design, installed and trialed a number of fixtures with the following some examples.



Project outcome

Trials with two blade variants and around 60 rack saddle products have provided insight into a concept that shows significant promise of achieving the overall objectives of Rack scribing as well as important learnings that will guide the development of a prototype scribe module.



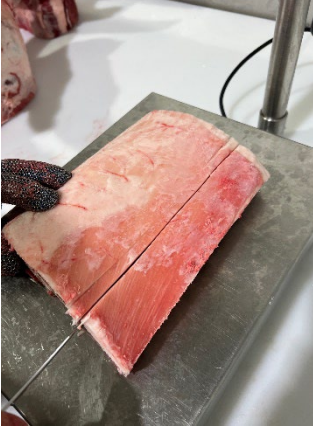





It was shown that a thin circular knife blade with the correct normal force against the surface of the rack fat cap produces a shallow visible scribe mark with relatively low complexity and with minimal risk of introducing instability to the existing machine process.

Whilst the small number of product tested means there are still residual risks such as force vs full range of product sizes, performance over time, performance under full range of process variables and any stability issues that may result on the outlier product variants, the results show that these risks are likely minimal and it is recommended that a prototype stage 1 should be considered that will enable any residual risks to be fully tested and mitigated.

This proof of concept stage project was successful. JBS and Scott are currently developing a Stage 2 deployment submission for AMPC consideration

Benefit for industry

An example of the possible yield, through consistency of operations are pictured below.....

			
<p>Rack from the Scott Machine</p>	<p>15.8 kg</p>	<p>Making two scribe lines @ 60mm and 50mm</p>	<p>Rack was frenched at the 60mm scribe mark with the intercostals and fat cap removed. 13.2kg</p>
			
<p>The rack was then Frenched at the 50mm mark</p>	<p>10mm Frenched product cap on weight (46g)</p>	<p>10mm Frenched product red meat weight (10g)</p>	<p>10mm Frenched product fat weight (38g)</p>