

A NEW TECHNOLOGIES REVIEW FOR THE CATTLE SLAUGHTERING & PRIMAL CUTS BREAK-UP PROCESS

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Project Description

In that there is evidence that new automation processes in other industry sectors are being successfully implemented by using the latest suite of state-of-the-art automation technologies, suggests that it is timely for an overview review of whether or not a similar advance is applicable to the Cattle Slaughtering & Primal Cuts Break-up Process.

Accordingly, the objective of this Project is to examine in general terms the Cattle Slaughtering & Primal Cuts Break-up Process, whilst being mindful of the constraints and the preferences that now govern the existing methodologies, to see if current state-of-the-art automation technologies can be brought to bear on the Process in order to create greater value or to save labour.

Project Content

This review took a detailed look into parallel examples in other Industry Sectors where automation solutions have become available when 30 years ago, despite, a concerted international effort, no automation solution was forthcoming.

Following this, was a review of the current Automation Technology milieu to identify the currently available tools and future trends, as well as to identify the technology “lack” that are the factors holding back significant new implementations.

A useful and convenient vehicle was the re-examination for the FutureTech Project in its objectives and its (1970s – 1980s) technologies, and to see how its aims might be achieved today. As an illustration of what can be possible today, one candidate solution was created and described. This exercise was really to illustrate where there is a “match” between currently available technologies and some/all of the abattoir tasks at a “macro” level.

Furthermore, a number of specific abattoir tasks – at the micro level – were identified where we can see a direct match of an available technology(s) to a specific task. Examples of these are described and may lead to further in-depth R&D projects on their own right.

Project Outcome

The outcome from this overview Project are the following findings:

// there has been significant advances in the technology milieu in the last 30 years,

- // resulting in the greater availability, and thus cost-effective, advanced tools for the implementation of manufacturing automation, and
- // that there have been recent manufacturing automation successes in other Industry Sectors that were not available some 30 years ago.

However, the Red Meat Industry Sector in general, and the cattle Slaughtering & Break-up Process in particular, is along with other Industry Sectors such as the Textile Clothing & Footwear Industries, Patient handling in the Health Care Sector, and the Fresh Fruit & Vegetable Harvesting & Processing Sectors, still relatively “untouched” by automation. This is largely due to the “work-pieces” being handled being highly variable one-from-another, fragile, shape-changing, and generally just difficult to handle /manipulate.

Benefit for Industry

Nevertheless, there still exists a scope for automation implementations using today’s technologies – both towards “generic solutions” as well as towards narrowly targeted applications. Whether or not these current technology implementations can give the commercial returns that are expected is a separate question to be answered.

If the over-arching strategy for the Red Meat Industry Sector for the future rests on a strong manufacturing capability, then, there is a strategic motivation to start focused investigations towards potential automation tools and solutions. As it is the nature of technology that “technology it builds upon itself” – each stage of technology development creates the spring-board for the next stage – without a starting effort there will surely not be an ultimate prize.

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