

Beef Bleed Elevator

Silver Fern Farms Belfast

CONSULT

DESIGN

MANUFACTURE

INSTALL

MAINTAIN

Background

Primary food processors have made large investments in machinery and technology that needs to cope with extreme workloads and harsh environments.

Some machinery will last decades with good maintenance but can struggle to comply with increased production plus the changes to Health & Safety regulations and food safety codes.

Brief

The team at SFF Belfast identified that a 40-year-old auto lander unit would require modifications in order to meet the current health and safety regulations. The unit was required to lift carcasses of up to 2000kg up a 4m vertical lift and land them on a transport conveyor.

The costs associated with modifying the existing auto lander proved to be extremely high and it was likely that more modifications would be required in the future. An alternative solution was being used at another SFF plant but required more space than was available at Belfast. Todd Engineering was approached to consult with the SFF Belfast team.

Solution

The team at Todd engineering presented a design which included:

- Replacing the existing auto lander with a more efficient elevator.
- Adaptation of a similar elevator design that had proven successful in another SFF plant but with a reduced height to fit into the existing space without re-roofing.
- Addition of a maintenance platform.
- Modifications to existing bleed conveyor

The new elevator and conveyor changes were installed with a 10mm ceiling support beam clearance - a perfect outcome for the existing space.

Results

The new machinery is compliant with current Health & Safety requirements as well as food safety codes. The new equipment also reduces the amount of manual handling required by operators and is more ergonomic in design. This should prove to reduce risk and injury.

The auto lander capacity was 55 - 60 carcasses per hour max but often ran below this, whereas the elevator will allow up to 100 CPH if required. Quality has been maintained while increasing throughput.

SFF Belfast Project Engineer Fred vanSlooten is very pleased with the outcome of the project – operators find the job easier on the body and he was particularly pleased that the new machinery was able to fit into the existing space without the need for roof modifications.



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