Case story

High speed palletising solution for snacks

Veurne Snack Foods is Belgium's largest snack foods manufacturer and is part of the Pepsico group. In a continuous 24 hour production process Veurne Snack Foods manufacture many tons of Europe's leading snack brands like Lays, Doritos and Cheerios, in a huge variety of flavours across many production lines.

Key data:

- **Industry: snack foods**
- **Country: Belgium**
- **Multi-load palletising system**
- **3 C5000 high speed palletisers (69 cases per min. per machine)**
- **42 accumulation lines connected to various production lines**
- **240 pallets per hour**

Together with the engineers of VSF, CSi produced a palletising system comprising of three C5000 high speed palletisers installed in three phases. The result is a dramatic increase in production capacity and flexibility. In the first phase two existing lines were connected to a newly constructed buffer deck. These 14 accumulation lanes in turn are connected to a newly installed C5000 palletising machine with double case infeed.

Benefits:

- **Higher production speeds**
- **High production flexibility over increased product variety**
- **Reduction in production operatives**
- **Higher system reliability**
- **Guaranteed system performance with support from LCSi**

This worked in theory, but it was a different story in practice. The extremely light and thin sided cases caused major technical problems and were frequently damaged during accumulation due to excessive pressure being applied. Moreover this resulted in case counting errors leading to disruptions in production.

Fine adjustment of the accumulation conveyors and careful monitoring during these adjustments finally solved this problem.

Innovations:

- **System design appropriate for large cases of extremely light weights**
- **Improved product in-feed to palletiser**
- **To minimise damage due to excessive pressure, lifting stops within the accumulation conveyor, in combination with automatically adjustable side guides and integrated pressure free accumulation zones**

However this resulted in a delay in handing over phase 1, but due to the lessons learnt, phases 2 and 3 were installed and commissioned on time.

In the second phase additional production lines were connected to a new accumulation deck, positioned above the first buffer deck, which in turn was connected to the second C5000 palletiser.

The final phase involved the connection of the remaining production lines to a third accumulation deck and a third C5000 palletiser.

Placing the C5000 in an already crowded area and integrating the third buffer deck were complex puzzles.

CSi's total scope for this project involved all the necessary case transport to the buffer decks, the connections from the buffer decks to the palletisers and all the empty and full pallet transport, including connections to existing pallet stretch wrappers.

Due to the complexities on this project, it was essential

that good communication existed between both parties where openess and frank discussions helped to ensure that this large project resulted in both companies being extremely satisfied with the outcome.

In particular, CSi created a different project team structure, specifically designed to improve communication with the customer to the benefit of both parties. Veurne Snack Foods now achieve higher capacities than ever, with greater flexibility achieved with considerably less production staff.

The right project approach, combined with the right choice of equipment has resulted in an extremely reliable system.

To guarantee the on-going performance of Veurne Snacks' new palletising system a support contract has been signed with LCSi, our Life Cycle Support Division.

Technical highlights:

- **More lines connected to one palletiser.**
- **Cases coming from the production line are sorted onto accumulation lines where complete pallet loads of one product are accumulated**
- **A complete pallet load can be transported to the palletiser on demand**
- **To ensure continuous palletising during pallet changeover, the accumulation conveyors are approximately 1.5 times the length of a pallet load**
- **Installation of C5000 through the roof**