

# Carlsberg UK implements a series of measures to reduce waste

The British Beer and Pub Association (BBPA) and British Soft Drinks Association (BSDA) worked in collaboration with Britvic Soft Drinks and Carlsberg (UK) on a joint project to reduce the amount of ingredient and product waste being sent to sewer and to land injection in the brewing and soft drinks industries: 'Project Shandy'.

One of the key findings from Project Shandy for Carlsberg was the detailed understanding of waste product from filling and packing lines. This involved identifying the points on the lines where filled products were being rejected or falling off, measuring the frequency of rejects or falls at these points and quantifying the loss to the business incurred.

The Carlsberg team in Northampton determined a simple solution to prevent product falling off the line – they designed and installed a series of flexible guides to the transfer conveyors of the lines called 'fishing rod guides'.



## Key benefits/savings achieved:

- 28% reduction in can falls, leading to
- 475 tonnes product waste to sewer prevented per year
- £175,000 savings per year

## Summary

Results

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## Results of implementing the solution

The 'fishing rods' installed on the canning and bottling lines are there as a last resort to guide the can/bottle into the track feeding the filler. The operators working on the lines believe the line could not be run effectively without these devices. These very simple guides help the lines run but don't affect any fallen or jammed cans/bottles as this is managed via the numerous catch trays or rejection shoots. The 'fishing rod' prevents excessive wastage and high rejects by preventing:

- Good condition cans/bottles falling off the line unnecessarily;
- Blockages into the single file in-feed from misaligned items;
- Additional damage to cans/bottles; and
- Damage and stoppages to the line from misaligned cans/bottles.

The biggest benefit Carlsberg found is with pint cans – with the fishing rods in place and the line running at the average line speed, rejects were reduced by 28%.

On Carlsberg's average line speed, the biggest benefit of this installation comes from the larger-volume items. The larger the packaging of the bottle or can, the less stable the item is on the line. This makes it more prone to falling or misalignment and therefore increasing wastage via rejects.



The "fishing rod" guide installed on the line – the guide is supported at one end only allowing the rod to flex against product in transit and prevent falls

## Additional waste reduction activity

The Northampton brewery are zero waste to landfill and are now working to move waste streams up the waste hierarchy and are constantly investigating and implementing waste prevention and effective waste management methods. Some examples are:

- Yeast used in the fermenting process has two reuse streams:
  - live yeast is sent to a food extract company to reuse in their products;
  - yeast is killed and sent to an animal feed company, who will distribute to farmers throughout the country.

These options are good revenue streams and in 2014, 17,000 tonnes of surplus yeast was sold.

### Improve your resource efficiency and reduce cost

- Read how a simple solution allowed [Britvic Soft Drinks](#) to save £117,000 a year by reducing syrup waste in soft drinks manufacture.
- Understand the methodology used to tackle waste and check whether you are missing any opportunities in the [guidance and checklists](#) for waste prevention in brewing and soft drinks manufacture

- Cans that are out of specification are effectively controlled and rejected from the line avoiding potential waste and damage from the filler/seamer. This is done by an inspection machine called the 'Cantronic'. As the can passes underneath, a camera in the Cantronic takes an image and compares this with images of cans stored in the program settings. Any cans not matching acceptable criteria in the comparison are rejected. Carlsberg use the Cantronic on Can Line 2 to kick out damaged cans and this helps reduce potential rejects from the filler/seamer. As a result of this inspection unit being installed, the reject rate is down to 0.5%.

Running at optimum rate (60,000 cans per hr, 6 days a week) the reduction of beer going to sewer could be up to 950 tonnes per year



### Additional waste reduction activity

**WRAP's vision is a world where resources are used sustainably. It works in partnership with governments, businesses, trade bodies, local authorities, communities and individuals looking for practical advice to improve resource efficiency that delivers both economic and environmental benefits.**

**Our mission is to accelerate the move to a sustainable resource-efficient economy through:**

- re-inventing how we design, produce and sell products,
- re-thinking how we use and consume products, and
- re-defining what is possible through recycling and re-use.

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