



THE  
SPRAY NOZZLE  
PEOPLE

# Case Study

## TANK CLEANING



# COLOUR CONTAMINATION SOLUTION

01273 400092

[www.spray-nozzle.co.uk](http://www.spray-nozzle.co.uk)

It is not just the food processing industry which needs its process vessels to have exemplary levels of cleanliness. Where a tank may be used for making different versions of the same product, cross contamination by, for example, colour or scent can cause batches to be ruined.

### ► PROBLEM:

One of the UK's leading household products manufacturers asked SNP to help find a solution for cleaning 18 detergent manufacturing tanks. The company needed to ensure a high level of cleaning between batches because it was manufacturing different colour products and could not have traces of one dye contaminating new batches of a different colour. The current cleaning in place (CIP) system was not providing a good enough clean and was using excessive amounts of liquid (the client was using a mix of water, caustics and acids as the cleaning solution).

### ► SITUATION

The client was using a rotary spray ball CIP system. These wore out and became clogged too easily, meaning the tanks were not being properly cleaned and liquid consumption was too high as additional cycles had to be run to get the tanks sufficiently clean. The tanks were not big and the product being manufactured did not leave heavy or sticky residues but the tanks did have agitators in the middle with stirring paddles which meant that a new CIP system had to take account of any shadowing effect (where the equipment inside prevents areas of the tank being reached by the cleaning heads). The tanks were 2.5m in diameter and 3m high and the paddle in the centre was 40mm in diameter. The customer was seeking a solution that would ensure every inch of the tanks was thoroughly cleaned, that would reduce liquid consumption and that would offer a fast clean cycle to reduce downtime between batches.



Orbitor Eco - very fast cycle rotary jet cleaning system

## WHY CHOOSE SNP FOR YOUR TANK CLEANING NEEDS?

- The ability to solve unique and complex process challenges
- ISO 9001:2015 Certified
- Custom nozzle design and manufacturing with consistent quality assurance

With SNP you get our world-class customer support from an industry pioneer who has been creatively solving problems for many decades.



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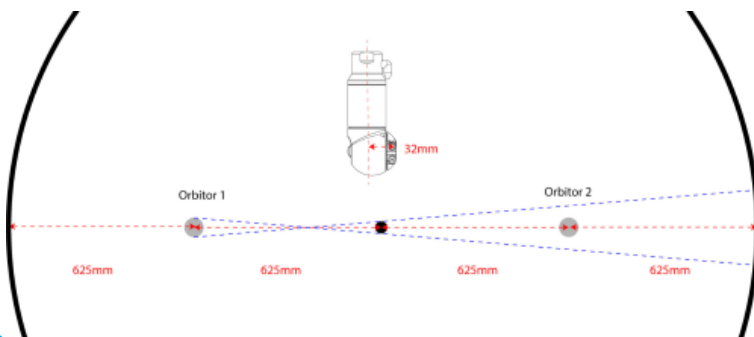
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## The Solution

SNP proposed the use of Orbitor Eco cleaning heads. The agitator running down the middle of each tank meant two Ecos were necessary to eliminate shadowing.

The two 4x5mm Orbitors were positioned on either side of the tank at 6.25cm in from the walls (see diagram) and 6.25cm from the agitator. The Eco model offered a very fast cycle time and was ideal for the light to moderate residues left by the product being manufactured.



### ► CHALLENGES

- Agitator with paddles caused shadowing
- The cleaning system needed to reduce time and water consumption
- Low maintenance, robust solution needed

### ► ORBITOR ECO ADVANTAGES

- Fast cycle times - between 1.6-8 minutes
- Up to 95% water saving when compared to static spray balls & 75% compared to rotary spray balls
- 360° cleaning
- Up to 5m effective cleaning radius
- Self cleaning and hygienic
- Small, robust and light
- Can be taken apart in 10 minutes with no special tools

