

# Tableware Glaze - A Case Study

**Quality and costs are critical for a high efficiency manufacturing operation.**

The following Case Study is typical of high volume tableware manufacturers around the world who have improved quality and reduced costs by installing technology developed by **Xtract**.

## Tableware Company Profile

**Company:**

Manufacturer of domestic and commercial tableware

**Output:**

11 million pieces per annum

**Products:**

Standard tableware items – flatware, bowls and dishes, cups and mugs

**Colours:** Mainly white

**Manufacture:**

Traditional production methods and dust pressing

**Handling** Automated, robotic and manual

**Glazing:** High speed production lines with continuous glaze spraying



The manufacturing performance was affected by glazing faults and ongoing contamination due to specking.

## Glazing Data

	Average Dry Weight per Piece
Actual weight of glaze purchased (400 tpa)	36.0 g
Weight of glaze required 'measured' (327 tpa)	29.5 g
Weight of glaze 'potential for saving' (73 tpa)	6.5 g

## Problems Encountered

A change to 'higher value' unleaded glaze made settlement even more difficult with increased losses of fine glaze particles during decanting. This resulted in the further deterioration of quality and the additional loss of valuable raw materials.

## Waste Water System

Flocculated settling system and filter press overloaded resulting in regular discharges of excessive solids into municipal drain. Road tankers frequently used to remove low density glaze slurry and relieve the strain on the waste water system.

## Existing Primary Glaze Reclaim

Overspray and glazing booth washdowns pumped into tanks and tubs to allow settlement and decanting. Dilute washings plus decanted liquid passed to factory drains and waste water system.

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## Key “Financial and Process Benefits” after installation of the Xtract System

- reduction of glaze losses by 60 dry tonnes per annum
- glaze usage increased from 82% to 97%
- glaze losses per piece reduced from 6.5 grams to 1.0 gram
- cost savings in excess of £160K per annum including raw materials, labour, waste disposal and increased productivity
- eliminate glazing faults due to poor quality glaze reclamation
- reclaim glaze quality comparable with virgin
- reclaim glaze as a high density slurry ready for immediate re-use
- capital payback less than 2 years
- glaze reclaim now a reliable and integral part of manufacturing operation
- glaze application , flatware 80% reclaim + 20% virgin
- cup 50% reclaim + 50% virgin
- production throughput increased by 6% - spray gun settings remain fixed for any size of flatware
- glaze inventory reduced by 50 tonnes – removal of tanks and tubs containing settling ‘idle’ glaze
- water consumption reduced – clean water (20,000 litres per day) from Xtract system re-used within factory
- compact Xtract footprint allows greater use of factory space for other manufacturing operations
- waste water system under control and road tankers eliminated
- existing glaze prep personnel used to operate Xtract system

## Quality – The Advantage

By processing dilute glaze washings and combining the Xtract system with multiple stages of sieves and inline magnets, it is possible to eliminate contamination.

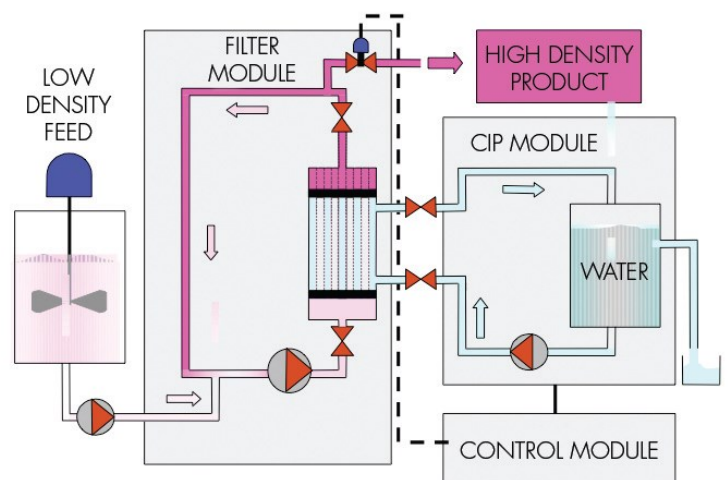


## The System

The Xtract Glaze Reclamation System separates water from dilute washings to produce a high density re-usable material.

The system, as illustrated below, comprises three modules:

- Filtration Module
- Control Module
- Clean in Place (CIP) Module



For more information on raw materials recovery please contact Xtract Filtration Systems Ltd.

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