



Increasing Production of a Speciality Chemical by 50% to meet Demand

Challenge

In order to meet increased sales demand, Robinson Brothers Limited, a leading UK chemical manufacturer of intermediates for the Pharmaceutical, Agrochemical and Speciality Chemical industries, needed to achieve a sustainable 50% increase in weekly production of a speciality additive used in the manufacture of rubber products for highly regulated medical, food and skin contact applications.

Approach

An internal cross-functional team was assembled, providing insight from R&D, engineering, operations, maintenance, and QA functions. The team used the Bristest approach to facilitate an end-to-end review of all inputs, outputs and activities involved in the complex production system. This involved thirteen major process steps, four primary pieces of equipment, including a specialised reactor vessel of limited capacity, two plants, and two sets of operators.

The study showed that the system could meet the necessary production targets, but only if it operated at peak efficiency. Further analysis identified a series of rapidly implementable and longer term opportunities to improve process efficiency and uptime.

Benefits

- A diverse team, including operator knowledge, maximised the gain in process understanding
- Potential root causes of efficiency losses were rapidly identified and evaluated against evidence gathered
- Good planning and communication overcame complexity
- Increased process efficiency and an implemented planned preventative maintenance programme
- 50% increase in weekly production achieved, equating to possible extra sales of ~ £1m per annum
- Bristest DuDES guided a follow-on capital project to double capacity by addressing limiting equipment capacities.



Bristest lets us rapidly and effectively share knowledge, gather and assess evidence, and prioritise actions for improved efficiency.



BOYD GROVER, SENIOR POLYMER CHEMIST
Robinson Brothers Limited

Key Features:

Client - Robinson Brothers Limited

Industry - Application Area

Speciality Chemicals - Whole process review and redesign, process efficiency

Challenge

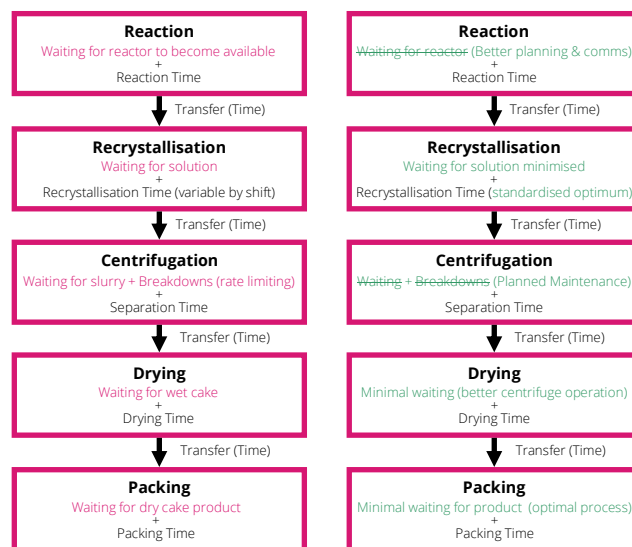
To meet increased sales demand for a speciality chemical, a sustainable 50% increase in weekly production was needed

Solution

An internal cross-functional team used Bristest to thoroughly review the complex, multi-stage production process, identifying immediate opportunities to improve efficiency and uptime, and longer term actions for further gains.

Outcomes

Implementing quick wins resulted in 50% increase in production, making possible extra sales of ~£1M p.a. Follow-on capital project set to double capacity within months.



Previous Batch Time: 3 days **Improved Batch Time: 2 days**

Time is money: a Bristest Process Information Summary Map highlighted variable and non-value adding time elements, subsequently designed out of the system.



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Supporting organisations in gaining value from process understanding