



# RENOIR CONSULTING

## CASE STUDY

### BIWATER PIPES

*Biwater is a major manufacturer of pipes and fittings for the water industry and is a recipient of the Queen's Award to Industry. The business has been on the same site since the industrial revolution, when it was well situated both for raw material supply and customers. As suppliers and customers became more distant, and the significant capital investment made in the site made it difficult to move, the business needed to become much more cost effective, customer responsive and provide a technical advantage, to remain competitive.*

#### OVERVIEW

The business was divided into 2 areas with different characteristics. Pipe manufacturing had an annual turnover of £60M, was a highly capital intensive process operation, and produced a limited number of pipes in significant batch sizes. The fittings business had an annual turnover of £12M, and produced a product range of several tens of thousands in batches down to a single item. As a consequence, it was labour intensive, and required significant planning and control to ensure effective customer service and productivity.

#### THE ASSESSMENT

Renoir's Assessment revealed that the main problems faced by the business were those relating to labour performance and planning.

**Labour Performance.** The site was strongly unionised, and had a history of industrial action. There was a bonus scheme in place that focused more on product mix than individual or group effort and could give an incentive for departments to ignore customer priorities. There were no meaningful work standards.

#### **Planning & Customer Service.**

Issues identified included:

- ✦ The planning system did not reflect the true lead times.
- ✦ The WIP tracking system was ineffective, due to software problems and poor compliance
- ✦ The shop floor order control system was "launch and chase", releasing orders to standard lead times and relying on progress chasing to achieve service

- ✦ 60% of orders were late

#### **FOCUS PROCESS™ & IMPLEMENTATION**

**Labour Performance.** As it was essential to create an environment where the incentive to perform was dominant, the existing bonus scheme was suspended and an "own average" interim system was used until a new system had been agreed. Relevant standards for each product/process stage were needed but traditional "Work Study" would have taken years and the business needed standards for new products that had never been made, both for performance measurement & for product costing. A method of generating "Synthetic" times was established, enabling standards to be set for all products with a limited number of observations. These were tested & refined over a further period of time. The new standards were used to plan the resources required for each department by week, and to hold both individuals & groups accountable for performance. Processes were re-engineered and overall performance improved by 35%.

**Customer Service.** The planning and operational constraints of each process stage were reviewed and a new model was developed to minimise overall lead times and opportunities for service failure. Training was conducted & significant elements included:

- ✦ Strategic stock of high volume products in finished state and un-machined lower volume products

to reduce the planning complexity of major orders.

- ✦ Installation of a new shop floor product tracking system to ensure traceability of individual orders.
- ✦ Introduction of a daily / weekly product progress report to enable rapid response to plan deviations.

The result was that late orders were almost entirely eliminated without any detrimental effect on performance. Overall, despite the addition of strategic stocks, the reduction in order lead time and the accurate tracking WIP resulted in an overall stock reduction of £300,000.

*"I think it's a bloody brilliant thing that's been done!"*  
**Paul Hubbard, Managing Director**

#### Key Results

- ✦ Annualised savings £2 Mil
- ✦ Late orders down 99.8%
- ✦ WIP down 300 tonnes
- ✦ 7:1 Project ROI
- ✦ Profits up 16%

THE CAPACITY TO SEE  
THE POWER TO CHANGE