Case study Australian Briquette Production Facility



Building production and profit from the ashes

In July 2004, Mecrus Pty Ltd began rebuilding the Australian Briquette production facility. With no previous briquette production experience, the company drew upon its expertise in progressive asset management practices and a history of retraining and reenergizing management and workforces.

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The town of Morwell is located in the industrial region of the Latrobe Valley, Victoria. Since the 1950s, Morwell has been the home of the Australian Briquette Production Facility.

With such a long history of production at the site, updates to equipment, procedures and infrastructure had been either random or infrequent. In some cases, briquette production was being undertaken using practices and equipment dating back almost a hundred years.

In December 2003, a fire forced the closure of the facility. With an initial estimated rebuilding cost of between $5 – 10 million, the future for the plant and its workforce looked bleak.

Prior to the fire, production costs were high and the plant's owners experienced an operating loss of millions of dollars. With so many negatives impacting on the plant, it seemed that the only option was to the close facility permanently.

Recommencing production only the beginning

After a period of only five weeks, and with a total refurbishment spend of just $2 million dollars, the facility was again producing briquettes.

To ensure the rebuilding of the briquette plant delivered successful operating outcomes, the team at Mecrus began by challenging the norm of previous operations. This process involved questioning established and traditional work methods, beliefs and practices.

Mecrus conducted a value chain analysis on inputs and outputs and was able to demonstrate that some practices could be refined or removed without an impact on production output.

The analysis addressed and challenged (all) long standing, ingrained workforce culture in favour of complete workplace flexibility. On-site, the Mecrus philosophy was: if it is a safe, legal and an efficient use of resources, then do it.

Creating a totally new workplace

The Mecrus approach not only changed the culture of employees but those of suppliers and customers.

MECRUS

Level 1, Unit 21 Business Park Drive, Notting Hill, Victoria 3168
PO Box 328, Mulgrave, Victoria 3170
Tel 03 8545 8800 Fax 03 8545 8899
www.mecrus.com.au

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This process included the introduction of clear roles and responsibilities, coupled with appropriate level of authority and subsequent accountability for all employees.

This included involvement in the development and integration of communication systems that resulted in immediate and valuable two way feedback between management and the shop floor.

Mecrus initiated recognition of performance, and above all, an equal stakeholder return for all employees. This was achieved by the introduction of flexible work procedures and arrangements.

In fact, by refining roles to include additional responsibility, for both operation of and maintenance on plant, employees were able to control and influence their own destiny.

Operationally, this removed and addressed the issue of demarcation via the support of 'a single union' agreement.

Making a job a career

In human resources and succession planning terms, this approach offered all employees a clear career path. Opportunities are now based on skills and a demonstrated attitude to work.

Mecrus introduced new employees, processes and ideas designed to successfully mix with and leverage off previous experience. This enabled the company to implement lessons learned elsewhere, as well as strategically introduce a controlled level of employee naivety required to question the norm and challenge routine.

This employee blending delivered the impetus to effect change quickly, while not losing site of the ramifications. In addition, the process challenged the thinking of the experienced employees retained during the transition phase.

The overall improvements shown in the table above were generated by:

Improving the productivity of people by 100%

Mecrus achieved the same net production with fewer than 50% of the work force.

This doubled productivity of O&M related inputs (refer column 1 of table).

Reducing costs by 42%

O&M was halved. Utilities remained even. Raw coal reduced by 20%. Coal supply was reduced by 66%. The net result was 42% cost reduction, taking the pervious cost of $95 per tonne to $55 per tonne.

Improving the consistency of quality and time

Mecrus raised the profile of performance feedback by simplifying test procedures. Now, operators test their own outcomes. This eliminates all of the traditionally accepted bottlenecks and unnecessary hold points.

Process improvement

The entire briquette manufacturing process was reduced, with each step being evaluated to ascertain where value could be added. By doing this, 25% of the original process was bypassed. For example, removal of cooling house and simplification of the raw coal feed bunkering system. The step was followed by significant plant modifications that removed a further 15%. (Example: Removal of launders) In all, the total manufacturing process was fine-tuned to overcome myriad, minor plant issues.

Business management

During this complex and challenging process, Mecrus received full union support. The company achieved all of its outcomes without any industrial conflict while working in a heavily industrialised environment.

Project Milestones

- July 04 — Rebuilding of Australian Briquette Production Facility commenced
- September 04 — 10,000 tonnes of production achieved
- December 04 — Full factory production capacity achieved
- February 05 — 100,000 tonnes of production achieved

Comparison between pre and post operations indicators in $/tonne as follows:

Cost per tonne ($)	Labour O&M	Utilities Power, Water & Steam	Raw Materials Coal	Coal Handling	Total
Pre	60	6	20	9	95
Post	30	6	16	3	55

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