hrl:

Briquetting and agglomeration



expertise in action



HRL eliminates coal waste liabilities and creates new client revenue stream

HRL provided technical expertise and developed a briquetting product right through from concept to pilot scale demonstration.

Challenge

A client needed a cost effective solution for the re-use or disposal of large stockpiles of coal waste.

These stockpiles posed an environmental, space, and economic liability. The challenge was developing an agglomeration process to convert the coal waste into a value-added product solving the potential liabilities and creating an additional revenue stream for the client.

Solution

The client engaged HRL to provide comprehensive technical expertise and develop a briquetting product right through from concept to pilot scale demonstration, and finally, a commercial plant producing and selling briquettes.

HRL assisted the client through all steps of product development through to commercial operations, including:

- Laboratory testing to demonstrate the feasibility of briquetting and determine the required briquetting conditions (e.g. technology, binder, moisture content);
- Laboratory scale combustion trials, reactivity testing, and analytical testing;

- Pilot scale double roll press trials to demonstrate and optimise operation;
- Assembly and operation of a demonstration scale briquetting plant to allow production of 100 tonne of briquettes for combustion trials by the end user; and
- Costing activities for a commercial plant.

Results

HRL successfully provided the technical support required to convert the initial concept into a commercial plant producing and selling briquettes.

This solution has alleviated the liabilities associated with the coal waste stockpiles and produced a new revenue stream for the client.

The key capabilities which allowed the solution to be realised were HRL's experience in agglomeration, its laboratory and pilot scale testing capabilities, and its ability to develop technical solutions to meet the client's specific requirements.

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