Refuse Derived Fuel at Adelaide Brighton Cement

Since becoming the first Australian business to adopt Refuse Derived Fuels (RDF) as an integral part of its manufacturing process 18 years ago, Adelaide Brighton Cement has achieved:

A 200,000 tonne reduction of raw materials, such as clay, that are mined to produce cement;

Diversion of 2.6 million tonnes of refuse away from landfill

Reduced greenhouse gas emissions by 760,000 tonnes of CO_2

What is RDF?

RDF is refuse from the mixed construction and demolition industry that would otherwise be sent to landfill.

Refuse is diverted and segregated at a specialised third party facility and material that has been appropriately processed is sent to ABC's Birkenhead plant.

Although ABC was the first organisation to use RDF in Australia in the cement industry, it is a commonly used practice in Europe and North America.

How ABC uses RDF

Cement is one of the most widely used construction materials in the world. ABC's cement is used to build homes and vital infrastructure throughout South Australia and other parts of Australia.

The production of cement is a highly energy intensive process with kilns requiring temperatures of up to 1600℃ in order to produce the cement minerals. Kilns have traditionally used fossil fuels such as natural gas to achieve these temperatures.

The RDF combustible material is safely burnt at high temperatures in the plant's kilns. Any remaining ash becomes part of the clinker product produced by the kiln, which then undergoes further processing into cement.

The three stages of RDF:

1 Refuse from the construction and demolition industry is diverted from landfill.

2 Combustible refuse powers the kilns, any remaining ash forms part of the clinker.

3 The clinker forms part of cement, which is used in homes and buildings around South Australia.

Further information visit
www.adelaidebrightoncommunity.com.au

Email us at
BirkenheadCommunity@adbri.com.au

During the hours of 8:30am and 5:00pm, you can reach us on 8300 0300

For matters that arise after hours, please contact our Community Hotline on 8300 0520

Adelaide Brighton Cement Ltd

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RDF quality standards

Over the 18 years that ABC has successfully used RDF it has worked closely with local and state governments, private industry and the community to ensure its facilities and processes are of the highest standard.

ABC began trialling RDF as a fuel source in 2003 and received approval to use it continuously in 2004.

An environmental licence was developed with the SA Environment Protection Authority in consultation with the ABC Community Liaison Group and the local community. ABC continues to work closely with these groups in its management of RDF.

RDF has a different burning mechanism than natural gas, which has resulted in a significant reduction of airborne nitrogen oxides (NOx) emissions from the Birkenhead plant.

As part of the environmental licence for the Birkenhead plant, ABC keeps the EPA and the community up to date on the ongoing success of RDF through regular public reports on the results of independent environmental monitoring.

The benefits of RDF

The use of RDF diverts a considerable amount of refuse away from landfill.

In a single year, ABC's program diverts about 280,000 tonnes of material away from landfill, and over the 18 years since its' inception more than 2.6 million tonnes of refuse has been diverted from landfill. This is enough to fill Adelaide Oval to the level of the highest spectator stands.

The process also significantly reduces ABC's use of natural gas, decreasing the company's reliance on traditional fossil fuels.

Annually, the RDF project has been able to conserve 1.75 million GJ of natural gas per year.

This volume of gas is enough to power 97,000 South Australian homes every year. (The average South Australian household uses approximately 18 GJ of gas per year).*

* Reference: www.australiangasnetworks.com. au/gas-explained/about-natural-gas/costs-of-natural-gas

RDF has also resulted in a 200,000 tonne reduction in the mining of natural resources that are necessary to make cement.

This helps to preserve South Australia's natural resources for future use.

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