

Tyre Derived Fuels

CEL is the largest producer of Tyre Derived Fuels in the UK

Tyre Derived Fuels

Tyre derived fuels (or TDF) is the name given to the application of scrap tyres processed to produce a fuel for energy generation. The majority of such fuels are utilised in cement kilns although some is used by power plants for the generation of heat or electricity – or both. The image of a burning tyre brings to mind clouds of black smoke and pollutants – however, the very sophisticated gas clean up equipment utilised by the cement works allow for the clean burning of tyres along with many other fuels – both waste derived (SRF, wood, solvents, meat and bone meal etc.) and traditional fossil fuels such as coal and petcoke.



Why TDF?

Tyres have a calorific value (a measure of the energy released when they are burnt) equivalent to a high quality coal. The burning of scrap tyres replaces the burning of fossil fuels. In addition tyres have a natural rubber content that is biomass and therefore a renewable form of energy. In addition to this when TDF is used in a cement kiln it adds iron content (from the steel wires that are in a tyre) to the process which is important in producing a high quality product and therefore the use of TDF allows a reduction in iron additives. The tyres used for TDF have already been assessed for their suitability for reuse or re-manufacture - and where possible this is done. If the tyres are not suitable for these applications then energy recovery is the best use of the product.

CEL and TDF

CEL has been manufacturing TDF by chipping car tyres to a nominal 50mm size for more than 8 years. During that time well over ¼ million tonnes of TDF has been supplied to customers around the world. CEL counts Tarmac/Lafarge, Cemex, and Hope Construction Materials amongst its UK clients and has exported to India, Japan, Latvia, and Korea. In 2013 CEL will produce circa 70,000 tonnes for sale. CEL does not use truck tyres for the manufacture of TDF. Car tyres will typically produce a 50mm x 50mm x 20mm product whereas truck tyres manufactured by the same process can be 50mm x 50mm x 60mm+ due to the thickness of tread remaining. These larger pieces cause issues because they do not burn out completely in the correct part of the cement kiln causing a build-up of materials. It is possible to produce larger or smaller particle sizes, but this is done to order and the standard CEL product is a 50mm nominal chip size.

