



**Use of Alternative Fuels:
lower production costs per ton of clinker!**

Lechtenberg & Partner is the world's leading consulting company in the implementation of alternative fuels from biomass and useable wastes in the cement industry.

Lechtenberg & Partner **develops** concepts for the processing of domestic waste and other waste in to alternative fuels, **checks** the environmentally relevant and process specific influences on the cement production, **plans** adequate preparation plants and **supervises** the ongoing production and the continuous input in cement production plants – worldwide.

We are able to count all leading cement producers among our customers as well as administrations on all continents. "Sustainable Development" is not just a slogan for us but is lived and developed by us.

waste – cement – environment

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YOUR EXPERT IN ALTERNATIVE FUELS



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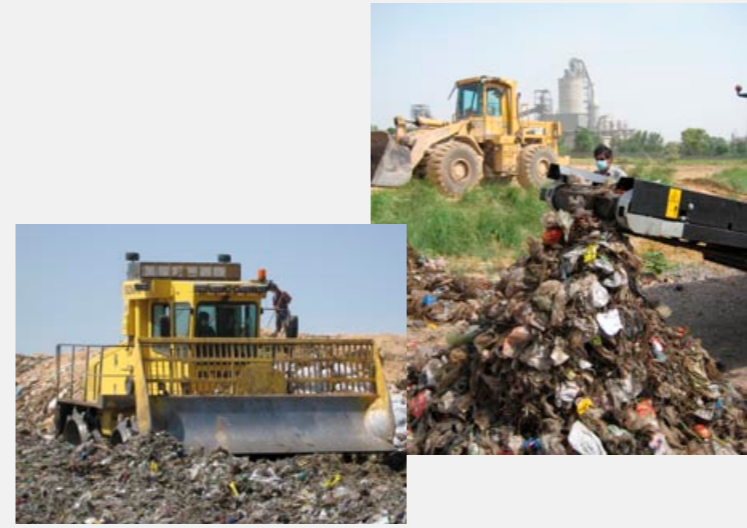
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Lechtenberg & Partner has developed a 3-stage plan, which allows the cement plants to be on the safe side while starting up the use of RDF

Phase 1

Feasibility studies

- Waste assessment
- Impact of RDF utilization on the clinker production
- Environmental effects
- Economical effects & savings



Waste is always a mirror of the society. In each country, even on different landfills, the waste is characterized with a different composition and content of usable waste fractions, e.g. plastics, cardboard, wood and so on. To define a general waste processing technology which can be introduced in each cement plant is therefore not possible. A technology, which can successfully process the Municipal Solid Waste in Amman might be not the right technology for Cyprus. Even the physical and chemical composition has a huge variety, which will need a local "adaptation" on processing technologies.

Phase 2

Turning wastes into fuels

- Development of the concept for RDF production and use
- Assessment of the required technologies
- Engineering



The basic technical equipment in a cement plant and available raw materials have a direct influence on the variety, quality and quantities of usable RDF. The well known theory that RDF with a grain size of less than 50 mm can be feed in every precalciner – it's just a Theory. The practice from various project shows that even at identical cement plants, which are only in an arm-length distance, different substitution rates can be achieved and different arrangements for the introduction have to be made. Lechtenberg & Partner is developing the whole Alternative Fuel Project; we are calculating the real effects – as a base for your project planning!

Phase 3

RDF Project implementation

- Supervision on Start Up
- Assistance in operation
- Quality monitoring



The use of alternative fuels is not only a technical and chemical issue: It is also experience! Lechtenberg & Partner has been working since more then 20 years in the field of alternative fuels- with a long term experience in the use at cement kilns. Substitution rates of up to 90% are possible- depending on the availability of wastes and influence on clinker production. Lechtenberg & Partner is assisting you from the start up of Alternative Fuel Production and use till you have reached the defined goals. Our engineers are available for you. The development of quality control measurements and systems- training on site and ongoing support gives you the confidence for a successful project development.