



THE SIXTH FRAMEWORK PROGRAMME
for Research, Technological
Development and Demonstration



**ALF-CEMIND Project:
Supporting the use of alternative fuels in the cement industry
Specific Support Action**

Contract No: TREN/05/FP6/EN/S07.54356/020118

**Prefeasibility study in the
Câmpulung cement plant - Holcim (Romania) SA**

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Executive summary

In the framework of WP3 of the Alf-Cemind project, an agreement has been obtained with the company Holcim (Romania), SA in order to develop a prefeasibility study in the Câmpulung cement plant. Taking into account the geographical situation of the cement plant – near the Carpathian mountains – it has been foreseen to focus the study on the use of sawdust as alternative fuel.

The cement plant from Câmpulung was founded in 1971 and has been acquired by Holcim in October 1999. Câmpulung cement plant is a dry process, 4 stage preheaters cement roduding plant and has an operating clinker capacity of 3 kilns x 850 t clinker/day. All its kilns are multifuels burners. Currently the plant produces about 1 million tons of different types of cement each year and consumes about 2.8 million GJ for producing the necessary clinker. This heat is assured by burning of traditional fuels, but also of the alternative fuels (waste as such or pre-processed). The quantities of alternative fuels co-processed by the moment in the Câmpulung cement plant are in average about 2000 tons per year.

A market survey on the sawdust potential in the Câmpulung region (50 km around the cement plant) showed that a reasonable amount of sawdust is available. About 1 000 tons of sawdust per week are available to be valorize as fuel, with 50% moisture content, representing about 23% of the total energy consumed by the cement plant.

Three scenarios had been developed. The first one is using the actual equipment of the plant, with a sawdust substitution rate up to 10%. Investment is done only for storage, handling and transport of sawdust. The second scenario is also using the actual kiln burners. Sawdust is using impregnated with petroleum waste, allowing a total substitution rate up to 30%. Investment is done for storage, impregnated equipment and handling and transport of sawdust. The last scenario foresees to install calciner to the kiln burners. This solution allows substituting up to 45% of the total used energy by impregnated sawdust. This scenario has the same investment scheme than the previous scenario, plus the calciners and calciners' towers.

As conclusion, no solution is economically available is the principle of “polluter-payer” is not applied. Moreover, a deeper study has to be performed including several type of waste to be coprocessed in the Câmpulung cement plant, the only use of sawdust / impregnated sawdust being economically sustainable with difficulty, for the cement plant as well as for the wood processing companies.