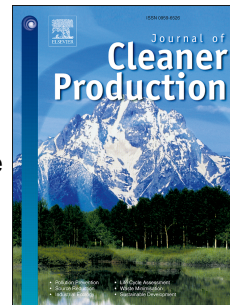


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Reducing Greenhouse Gasses Emissions by Fostering the Deployment of Alternative Raw Materials and Energy Sources in the Cleaner Cement Manufacturing Process

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3 **Reducing Greenhouse Gasses Emissions by Fostering the**
4 **Deployment of Alternative Raw Materials and Energy Sources in**
5 **the Cleaner Cement Manufacturing Process**

6

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16

17 **Abstract**

18 The cement production industry worldwide is one of the largest CO₂ emitting industrial
19 sectors. It accounts for a considerable amount of total global greenhouse gas (GHG)
20 emissions. Due to the increasing awareness of global warming, more energy efficient cement
21 production is increasingly being emphasized. One of the priorities is to reduce the energy
22 demand and innovate the production process to move towards the cleaner production as:
23 Energy efficiency improvements; Waste heat recovery; Reduction of clinker/cement ratio and
24 use of alternative raw materials; Substitution of fossil fuels with alternative energy sources.
25 When the GHG emissions at source opportunities are close to being exhausted, the other
26 mitigations options should be considered such as: CO₂ capture and storage. This is however in
27 most cases not the final solution from the point of Life cycle assessment (LCA). In recent
28 years various mitigation measures are gaining on the importance and the cement industry is
29 more and more shifting to cleaner production. Among the others, there are two measures,

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