

عنوان مقاله:

Cement pollution and its high production and usage in the United States, China and Iran and available solutions through cleaner technologies

محل انتشار:

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خلاصه مقاله:

After water, concrete is the most widely used substance on the planet. But its benefits mask enormous dangers to the planet, to human health and to culture itself. If the cement industry were a country, it would be the third largest carbon dioxide emitter in the world with up to ۲.۸bn tonnes, surpassed only by China and the US. The material is the foundation of modern development, putting roofs over the heads of billions, fortifying our defences against natural disaster and providing a structure for healthcare, education, transport, energy and industry. All the plastic produced over the past ۶۰ years amounts to ۸bn tonnes. The cement industry pumps out more than that every two years. Taking in all stages of production, concrete is said to be responsible for ۴-۸% of the world's CO₂. Half of concrete's CO₂ emissions are created during the manufacture of clinker, the most-energy intensive part of the cement-making process. (Vidal, J. and Watts ۲۰۱۹) In this paper we collected information about the mass of producing cement and its consumption in USA, China and Iran. It can widely show the disaster of vast production of cement in the industry or life. At the end we expose several alternates for discussion about solution of pollutant impact originated from cement production particularly in concrete.

کلمات کلیدی:

Cement Industry, Greenhouse Gas, Global Warming, Portland Cement Clinker, Concrete Materials

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