

Cement factory design requirements based on industrial ecology

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ABSTRACT:

Industrial ecology is a hierarchy of production process which is designed for the material cycle accompanied with optimal raw material obtaining, production, consumption and final disposal aiming to minimize the environmental outcomes and waste. In an industrial process, making use of raw materials in process and changes on these materials along with waste disposal has different effects on the surrounding environment. These influences can directly be at first level on the region of environmental changes, microscale climate changes, lifecycle changes among organisms and plants as well as different soil, water, air pollutions and in the next level, indirect effects such as macroscale climate changes and local people's lifestyle changes etc. But, industrial ecology can be used in industrial development in order to design industrial cycles such that industrial activities have the least influence on surrounding environment. Present article aims to design the Golistan Payvand factory. During the process some solutions were derived in order to improve the cement factory wastes management as well as consistency between cement industry and natural basin.

Keywords:

Cement factory, Environmental design, Industrial ecology, Industrial process.