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Environmental management for concrete and concrete structures

Part 3: Production of concrete constituents and concrete

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National foreword

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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Introduction

Concrete, a material essential for constructing buildings and civil structures forming infrastructure, is extensively used worldwide, requiring huge amounts of natural resources for its production, including the production of its constituents. A variety of byproducts from other industries are also used for their production. Moreover, the production of concrete constituents and concrete causes emissions of global warming gases including CO_2 and air pollutants such as NOx and SOx, water pollutants, as well as discharges of waste such as concrete rubble. Cement, one of the primary constituents of concrete, causes a large amount of CO_2 emissions during its production. Extraction of mineral resources, which are materials for concrete constituents, can also change the land use and alter the habitats of flora and fauna.

In this context, when producing concrete constituents and concrete, environmental consideration is necessary from every aspect including effective use of resources and prevention of global warming.

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