

# Committee Report: JCI-TC131A

## Technical Committee on Establishment of Construction Standards and Quality Assurance System for Performance-based Design of Porous Concrete

委員会報告 : JCI-TC131A

性能設計対応型ポーラスコンクリートの施工標準と品質保証体制の確立研究委員会

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### Abstract

Porous concrete can be designed so as to have various performances such as being water permeable and allowing vegetation growth and is thus expected to be useful materials for constructing social infrastructures, such as road pavement, that would play important roles not only in protecting the environment but also in preventing disasters such as during storms. However, there have been no construction standards or quality assurance standards established. The study committee on establishment of construction standards and quality assurance system for performance-based design of porous concrete has aimed to summarize study results in the past, conducted experimental studies toward quality assurance, and presented performance-based design guidelines (draft) for realizing performance-based design and manufacture and construction guidelines (draft) and acted toward establishment of a quality assurance system.

### 1. Introduction

Porous concrete has continuous voids or pores within and can be designed to have various performances such as being water permeable and retentive and allowing vegetation growth. It is thus expected to be useful materials for constructing social infrastructures that would play important roles not only in protecting the environment but also in preventing disasters such as during storms. However, there have been no construction standards or quality assurance standards

established in Japan; and the lack of such standards that are indispensable for stable manufacture and resultant performance-based design is likely to be the main cause that has impeded sound spread of porous concrete.

In countries outside Japan, for example in the US, generalization has been promoted by using a uniform and standardized name of pervious (water-permeable) concrete and establishing ASTM standards. The ISO/TC71/SC1 committee started establishing standards on testing methods of porous.....