

## عنوان مقاله:

DETERIORATION EVALUATION OF COOLING TOWER UNIT 28 IN MOBAREKEH STEEL COMPLEX AND PROVIDING ITS REPAIR PROCEDURES

## محل انتشار:

سومین کنفرانس بین المللی بتن و توسعه (سال: 1388)

تعداد صفحات اصل مقاله: 10

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## خلاصه مقاله:

It is generally supposed that concrete is one of the best durable materials but, it is a fact that all concrete structures will deteriorate with time, though the rate at which they deteriorate varies considerably, as it is affected by many factors. Deterioration will change the performance and appearance of structure, which may affect its performance under normal working conditions. Cooling tower unit 28 is one of the concrete structures in the Mobarekeh Steel Complex which was observed with various remarkable deteriorations. This concrete structure was directly subjected to circulation of industrial water and under aggressive sulfates, corrosion reinforcement, lack of timely attention and periodical investigations at regular time intervals were found responsible for serious deteriorations. In order to have an optimal use of the structure and its stability and to achieve an adequate repair procedure, a thorough and logical investigation of distress causes was carried out. The survey includes information collection and visual sketching of distress locations, several in-situ NDT tests, the determination of various aggressive ions in depth of concrete, and some other laboratory tests on core specimens taken from selected components of the structure. Based on studies carried out, different deterioration mechanisms were determined and then concrete removal methods and appropriate repair procedures were suggested. Finally, durability and the remaining service life of repaired structure is predicted.

## کلمات کلیدی:

distress evaluation, concrete, inspection, durability, maintenance strategies

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/60609>

