

## **Diagnosis and repair of a cement concrete structure: A case study of a residential building**

Proceedings of the International Conference on Repair and Renovation of Concrete Structures, 2005, Pages 49-56.

**Authors:** Guettala, A. Abibsi, A. Bahmed, L.

### **Abstract**

This work is one of a series of articles describing the diagnosis and repair carried out on the degradation of different reinforced concrete structures. This paper deals with a residential building achieved 25 years back. The principal causes of the acceleration of its degradation are highlighted. The stages of repair and reinforcement are also described and discussed. Sulfate attack was found to be the main cause of deterioration. Consequences of this attack were a very poor bond strength between cement paste and aggregates and a severe cracking of the concrete cover of the steel reinforcement.

**Keywords** Degradation; Diagnosis; Repair; Sulphate attack.

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