SBMA

SINGLE BORE MULTIPLE ANCHOR

Removable Ground Anchors for the Doha Convention Centre Tower, Doha, Qatar

Ammico
Passion for Excellence

Client: Qatari Diar Real Estate Investment Company
Engineer: Hyder Consulting Group & Arup
Specialist Anchor Contractor: Ammico Contracting Co. W.L.L.
Specialist Consultant: SBMA Ltd

Overview

Removable SBMAs were installed to support a reinforced concrete diaphragm wall. The use of removable anchor technology is mandatory in the region.

Project

Like many countries in the Middle-East, Qatar is experiencing tremendous economic growth reflected in its quickly expanding infrastructure. The Doha Convention Centre and Tower project comprises some 105No. storeys and is typical of the type of construction that exists in a constantly changing skyline. The use of diaphrgam walls to support the basement structure is common and the stability of such walls is often reliant on ground anchors.

Ground Conditions

The excavation was carried out in weak limestone (referred to as ‘Simsima Limestone’) which is characterised by heavy fracturing and the existence of cavities.

Solution

In a bid to satisfy environmental and physical constraints imposed on the project it was proposed that 711 No. 600kN working load removable anchors be used to provide temporary support to a section of diaphragm wall which had a total perimeter of approximately 1300m and was up to three storeys deep.

Construction

SBMA, in collaboration with Ammico, supervise trial anchor programmes aimed at establishing in-situ bond stress values and demonstrating the effective removal of the tendons from the borehole. SBMA also assisted with the establishment of a tendon fabrication depot on site and advised on all aspects of construction, stressing and testing.

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