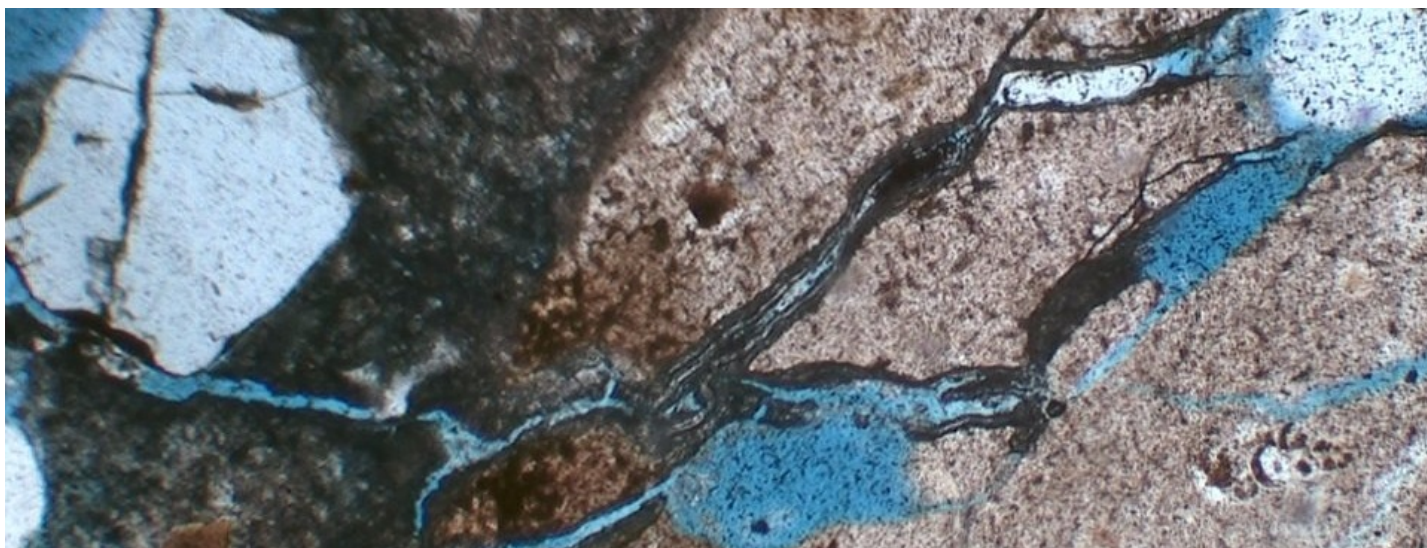


Concrete Petrography



We offer petrographic examination of concrete and cementitious materials including HAC for identification of deleterious reactions ('sulphate attack' and ASR for example) and potential causes of problems and failures within such materials.

Additionally, our laboratory carries out microscopic examination of other materials including identification of the presence and type of cement replacement materials. Petrographic examination is carried out to ASTM C856 and BS/BSEN Protocols.

Our concrete petrography services are used by construction companies and contractors.

The term "petrography" is generic, with everything from sample type and frequency to sub-specimen production, examination and final reporting tailored to the particular circumstances and requirements of the testing and investigation undertaken. In short, when investigating the cause of failure or extent of external impacts on cement based materials, the petrographer turns detective searching for clues.

The very first step involves careful recovery of suitable specimens of the affected concrete, usually via diamond drilling of core samples. Once these have been obtained the petrology proceeds with an initial macro "look see", which is followed by microscope examination of sub-specimens in the form of finely ground and polished thin sections, taken from strategic locations within the core sample(s) and mounted on glass slides, to allow light penetration for the necessary detailed optical inspection. Polished surface specimens may also be prepared and examined to provide additional information.

It is here that the "CSI bit" really begins, the investigation moving into the realms of the "world beneath the lens", the petrographer pursuing tell-tale signs of the material's history and in service exposure prior to its present condition or failure. It is by such means that Kiwa CMT has been able to "nail the answers" on numerous occasions. From the cause of significant cracking to the runway thresholds and aircraft servicing platform of a major UK RAF base, to the extent of fire damage to the linings of a highway tunnel, the condition of High Alumina Cement Concrete floor and roof beams and the reasons for in service failure of a waterproofing/wearing coat membrane applied to the surface of a multi-storey car park.

With expertise developed over many years, the delivery of professional advice and guidance and provision of all parts of the investigative process from diamond drilling of core specimens to supply of the all-important final report, is all part of the day's work

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We are a UKAS accredited testing laboratory (No.0529) for this [scope of accreditations](#).

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