

SEM “*Scanning Electron Microscopy on Xypex Concentrate Specimens from the Breidbalakvisl Bridge Abutment in Iceland*”, Department of Civil Engineering, King Mongkut’s University of Technology Thonburi (KMUTT), Thailand **SEM-117**

Three cored concrete sample were obtained from the abutment of Breidbalakvisl Bridge in Iceland that was treated in 1993 with Xypex Concentrate. The cores were then sliced to provide specimens from the surface (1A, 2A & 3A) and at depth of 150-165mm (1E, 2E & 3E) to investigate the crystalline formation and to compare it at different depths. All slices were subsequently broken into smaller pieces for testing (@ 5mm in size). All test specimens were thoroughly dried in preparation for evaluation of their morphology by SEM at 200x, 1000x & 5000x magnification. In all samples it was noted that “special types of crystal were found” that are not common in Portland cement concrete. The SEM photos showed “needle-like and hexagonal plate-like crystals”; the near-surface samples were more intense compared to the samples at 150-165mm from the surface.