

APPENDIX G: PHOTOS



Photo G.1: Shuttering



Photo G.2: Casting concrete – crack inducer and crack former in place in mould



Photo G.3: Beam and air-cured cubes



Photo G.4: Forming crack within 24 hours after casting beam

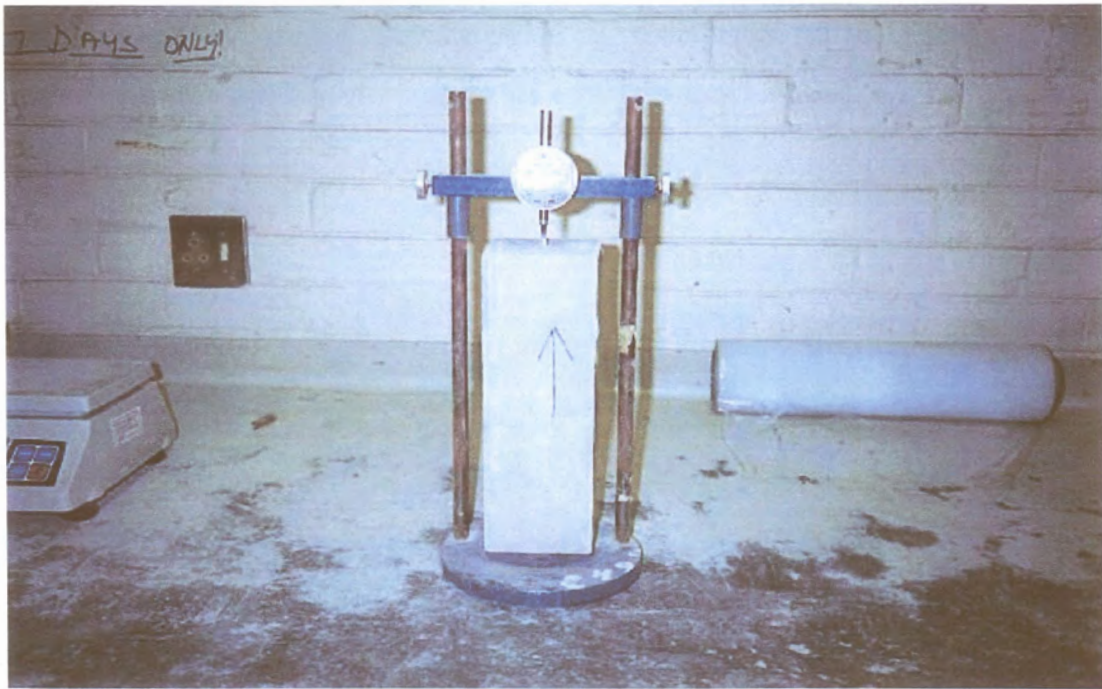


Photo G.5: Determining shrinkage of 100 x 100 x 300 mm beam

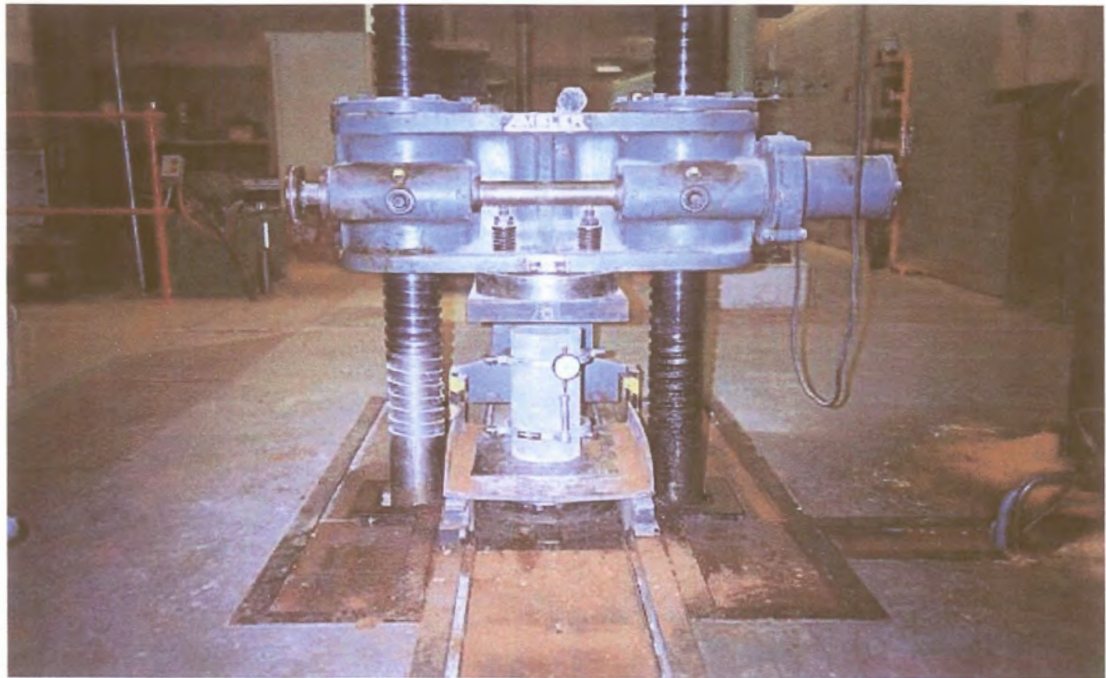


Photo G.6: Modulus of elasticity test on cylinder



Photo G.7: Determining compressive strength of concrete in cube press



Photo G.8: Determining modulus of rupture of concrete in two-point loading press

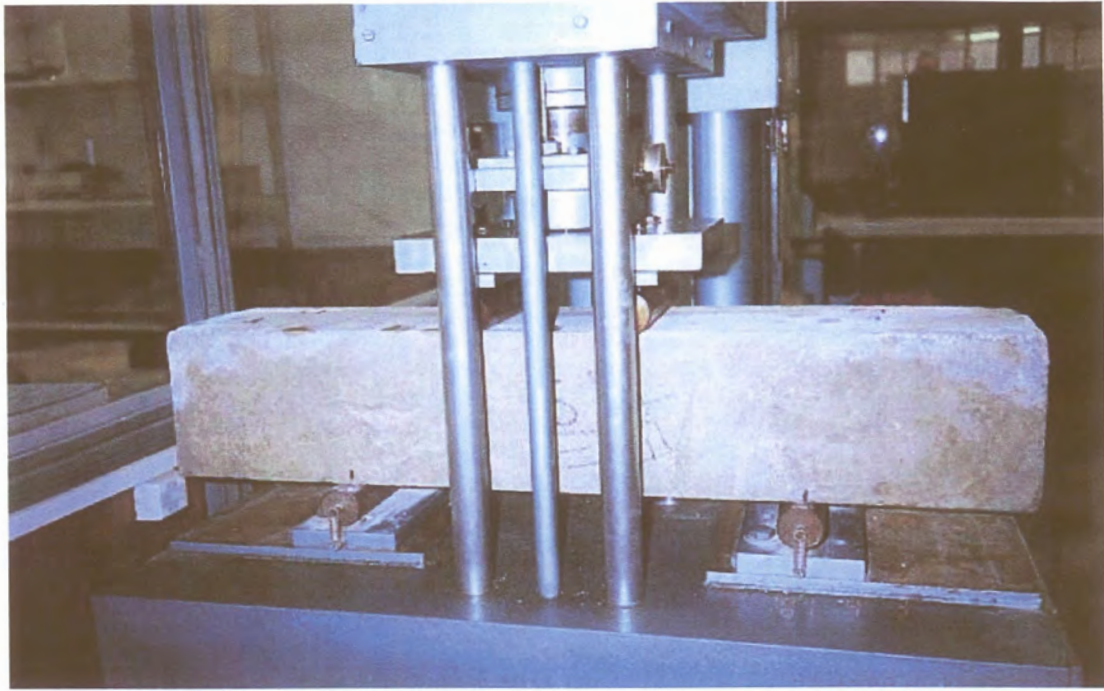


Photo G.9: Determining modulus of rupture of concrete in two-point loading press



Photo G.10: Crack face of modulus of rupture test beam - 37,5 mm dolomite aggregate



Photo G.11: Data logging equipment



Photo G.12: Pressing down ends of beam to break aggregate interlock bond for testing at different crack widths – Experiment 1

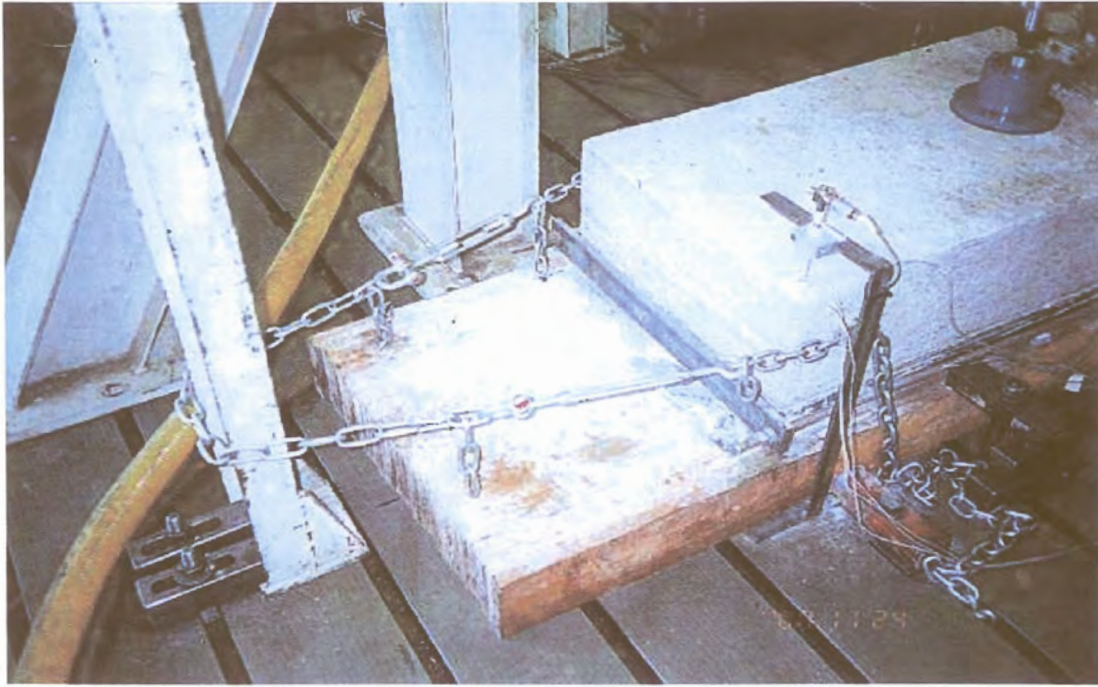


Photo G.13. : Initial crack opening/closing system

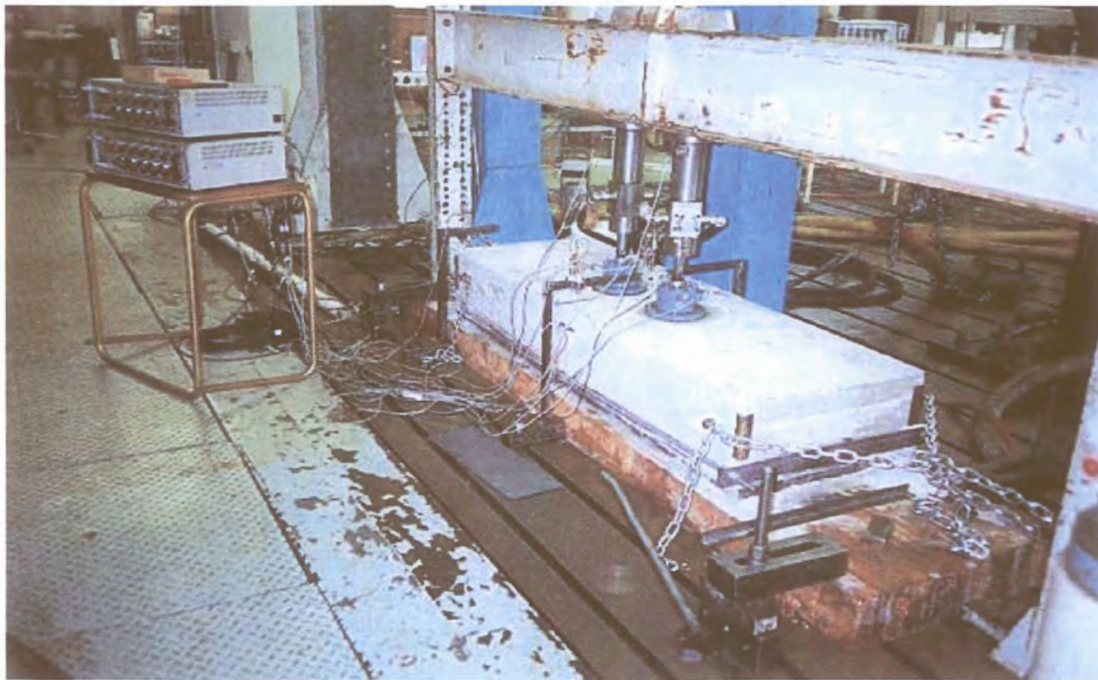


Photo G.14. : Dynamic loading and crack opening/closing system – Experiment 2



Photo G.15: Pressing down ends of beam to break crack open for testing at different crack widths – Experiment 3



Photo G.16: 40 kN static loading with two actuators at one side of joint (Spider measuring temperature in beam in foreground) – Experiment 3

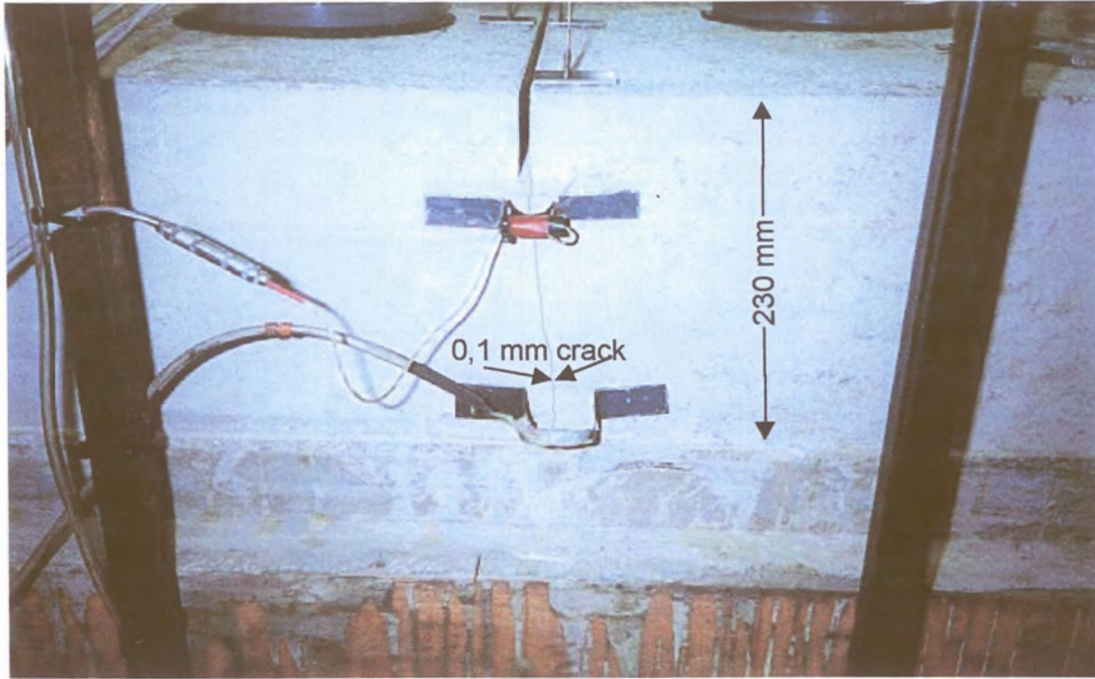


Photo G.17: Thin, 0,1 mm crack at start of testing

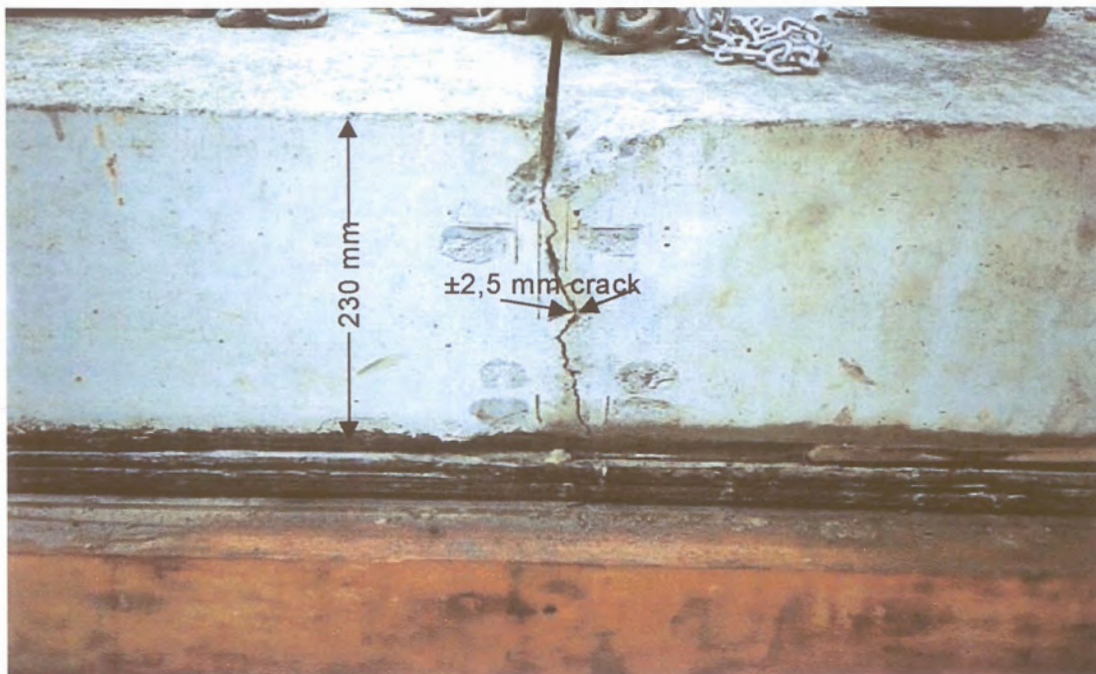


Photo G.18: Clearly visible crack after completion of testing



Photo G.19: Crack face of 19 mm granite aggregate test beam – Experiment 1



Photo G.20: Crack face of 37,5 mm granite aggregate test beam – Experiment 2



Photo G.21: Crack face of 19 mm dolomite aggregate test beam – Experiment 3



Photo G.22: Crack face of 37,5 mm dolomite aggregate test beam – Experiment 4

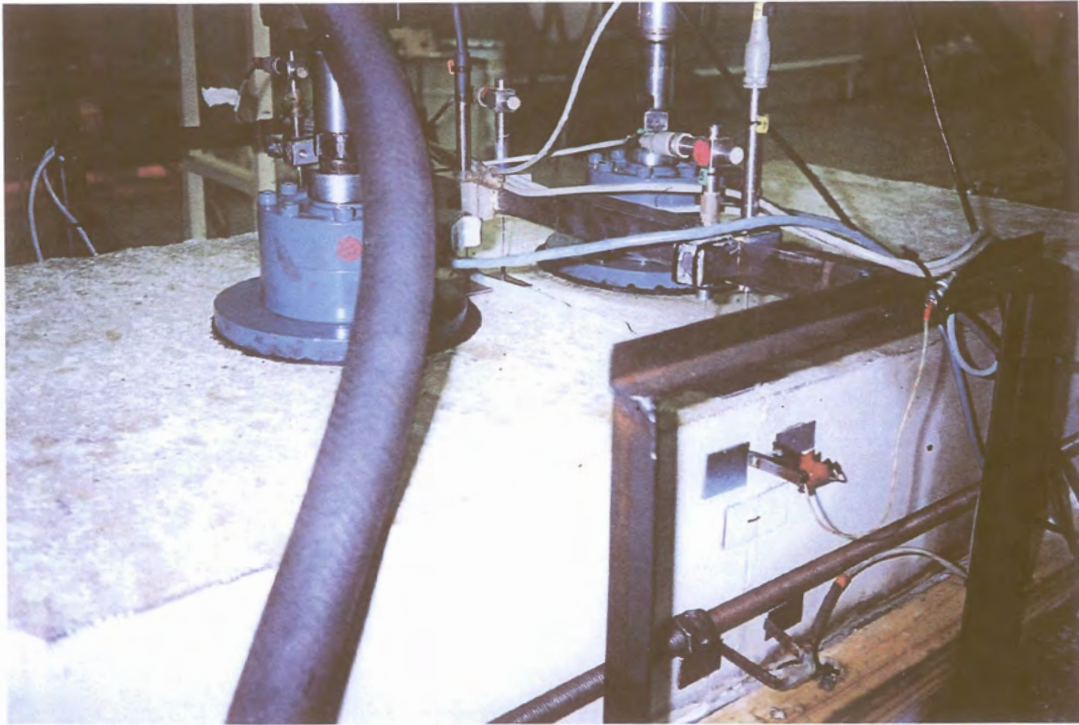


Photo G.23: Pre-deformed plastic joint with edge of plastic sticking out on top of concrete surface – Experiment 5



Photo G.24: Smooth face of pre-deformed plastic joint with plastic sheet in foreground – Experiment 5



Photo G.25: Laser measuring unit mounted on a milling machine to obtain Volumetric Surface Texture (VST) measurement of concrete sample