Formation of cracks in concrete and its expansion can lead to an increased moisture transport and thus to corrosion processes which can permanently damage the structures. To be able to counteract these impacts, concrete with self-healing properties is going to be developed. There have been different approaches by several research groups and first results have been published [1]. In this study, embedded encapsulated healing agents with two component polymers in reinforced concrete beams have been applied for autonomous crack healing. The interaction between crack formation and capsule breakage is an essential factor for the efficiency of crack repair. Therefore crack-controlled three-point bending experiments, monitored by acoustic emission techniques, have been conducted. Recorded acoustic emissions by a 16-channel transient recorder and piezo-electric broadband transducers led to a localisation of these events which should give an indication of the crack formation before and after healing. Results show that the evolution of acoustic emissions correlate with crack formation. Comparisons with the force-time curve confirm these
results. Furthermore, a localization of high energy hits is associated with capsule breakages.

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