Present subject deals with an ongoing experimental and numerical analysis of in-plane loaded glass plates. The main goal of the investigation is to develop a hybrid – discrete and finite element – model which could follow the fracture process in annealed and in tempered glass. Measurements of the residual stress state before failure and high-speed camera recordings of the failure are being performed in order to verify the numerical model. The primary goal of this research is to follow the overall fracture of a structural element – e.g., beam – loaded in-plane. Present paper would like to give an overview of the structure of the research and a summary of current status archived so far.

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