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Modelling local bending stiffness based on fibre orientation in sawn timber

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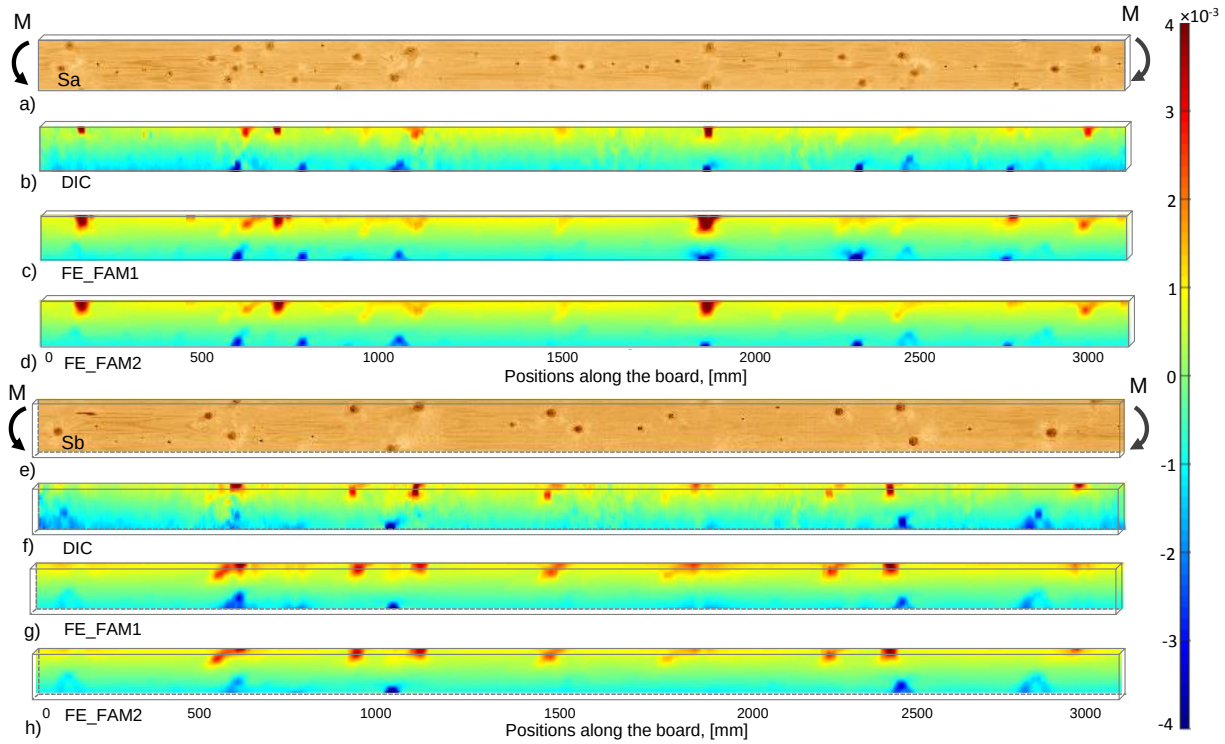
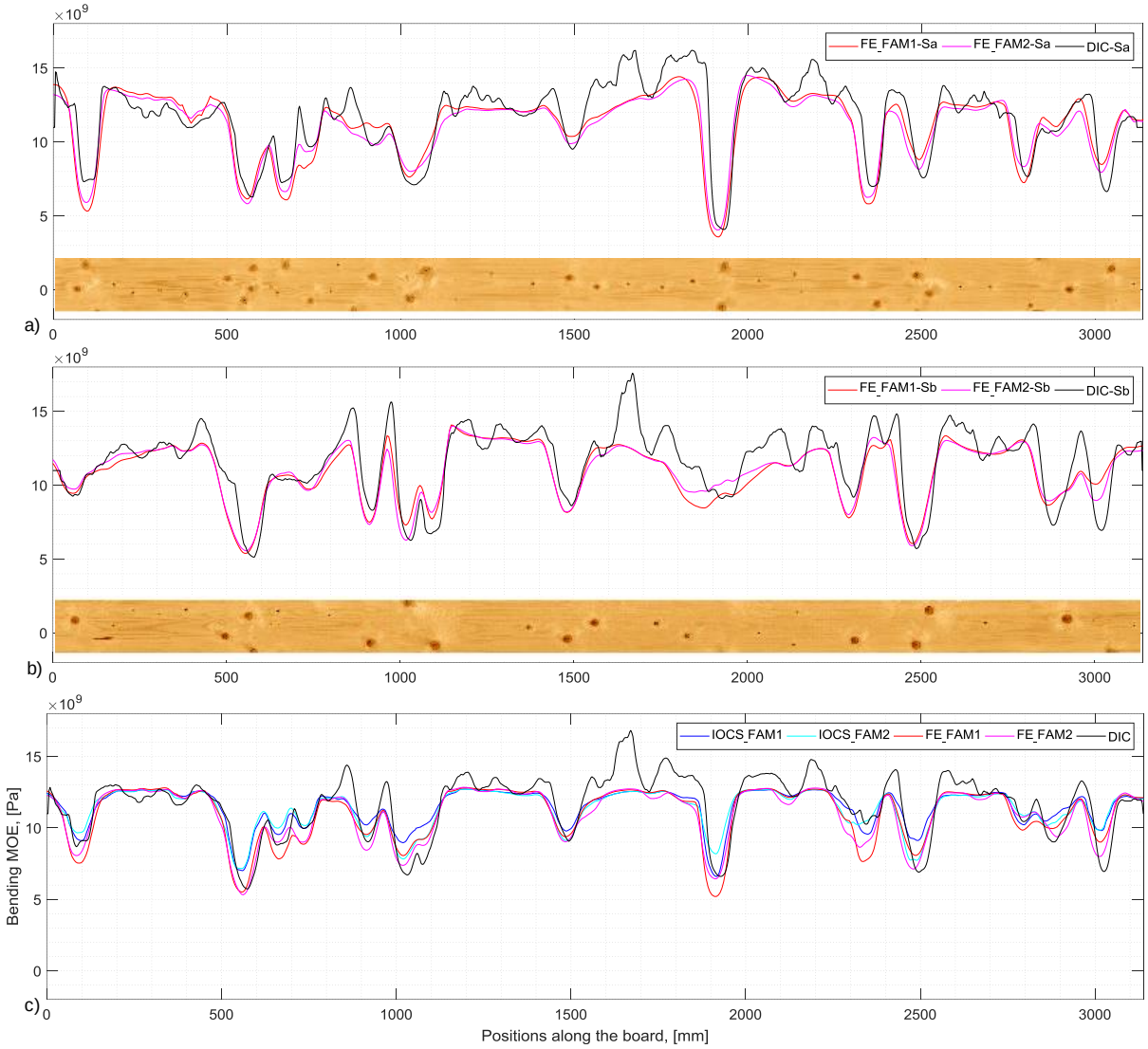


Sup_Fig1. Longitudinal strain $\boldsymbol{\varepsilon}_x$ distribution obtained at load stage 4 for specimen B1. a) Board surface image of Sa valid for the part which was exposed to the constant bending moment. b) The strain field valid for the part of the specimen in a) and calculated using the DIC data. c)–d): The strain field valid for the part of the specimen in a) and calculated using the data of FE_FAM1 and FE_FAM2, respectively. e)–h) The corresponding surface image and strain field results valid for surface Sb.



Sup_Fig2. Bending MOE profiles for specimen B1, each value of the profiles representing the average bending MOE over a surrounding distance of 50 mm. a) Bending MOE profiles calculated based on strains, of stress level corresponding to load stage 4 in Table 3, of surface Sa that originate from DIC, FE_FAM1 and FE_FAM2, respectively; b) the corresponding bending MOE profiles based on strains of surface Sb; c) bending MOE profiles representing an average stiffness over the width of the board.