(across the height, h) on the beam cross section at the mid span (that is under pure bending!) at the elastic limit load, M_Y. compare your findings with the analytical solution of part A to verify the results. **(20 marks)**

Appendix

Figure 2 shows a typical image of distribution of normal to cross section (axial) stress component (**σ**) in a four point bend loading configuration of a beam. This image has been produced using finite element modelling of the beam in ABAQUS/CAE as an indicative solution for part B of this assignment.

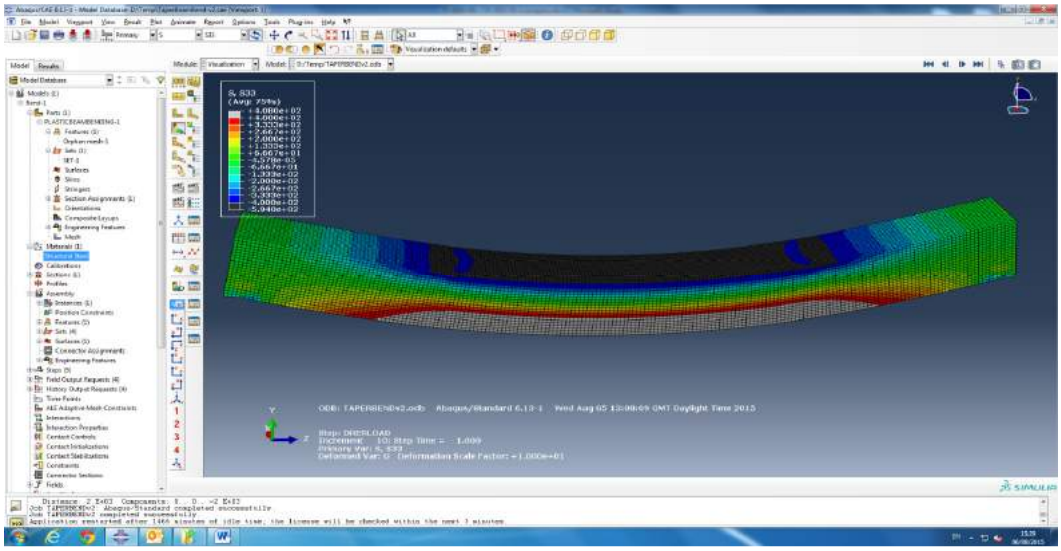

Figure 2. Typical distribution of "elastic" bending stress component in the beam

Assessment criteria:

80+: all requirement addressed to a professional standard and are correct

70-79: all requirements are fairly addressed, results are correct, and presentation is good with some room for improvement

60-69: most requirements addressed, procedures are not explained in sufficient details although the results are correct and presented to acceptable standard

50-59: most requirements met, majority of results are correct, procedures are not sufficiently presented but reference is provided

40-49: requirements partly met, there are mistakes in results, presentation is insufficient and procedures are not presented or referenced

0-39: the quality of report is below minimum requirements, most results are incorrect, and procedures are not presented or referenced properly