English summary

Couple and moment of a couple

Tapio Salmi

Summary. The article deals with two parallel forces that have the same magnitude, have parallel lines of action and opposite sense, called a couple. It is shown that the vector sum of forces of a couple is zero vector in spite of the problem that in this case the parallelogram law of forces cannot be applied. Further it is shown that the moment vector produced by a couple is a free vector, independent of the chosen moment point.

Key words: couple, moment of a couple, parallelogram law of forces, teaching of mechanics

Deformation measures in continuum mechanics

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Summary. One basic question in non-linear continuum mechanics is related to the measurement of deformation, which as a geometrical concept can be defined in several different ways. The purpose of this paper is to clarify the meaning of some commonly used strain measures.

Key words: deformation, geometrical non-linearity, continuum mechanics