

INTEGRATION OF MEASURES AND ADMISSIBLE STRESS FIELDS FOR MASONRY BODIES

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We study the compatibility of loads for bodies made of a no-tension (masonry) material. Calling the loads weakly compatible if they can be equilibrated by an admissible stress field represented by a tensor valued measure and strongly compatible if they can be equilibrated by a square integrable function, we examine situations in which the weak compatibility implies the strong compatibility. We consider families of loads depending on a parameter and families of measures equilibrating them, and point out that under some conditions the averaging with respect to the parameter leads to a measure with a square integrable density which equilibrates the loads. We illustrate the procedure on two dimensional rectangular panels in the absence or the presence of gravity, clamped at the bottom and subjected to various loads on the free part of the boundary.