L^2 -well posedness of an initial boundary value problem for the linear elasticity

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We give an L2-well posedness result for the linear elasticity system in the two or three dimensional half-space, under the uniform Kreiss - Lopatinskii condition. The well-posedness is achieved by constructing an everywhere smooth non degenerate dissipative Kreiss symmetrizer of the problem. Because of the characteristic boundary and the lack of a technical assumption given by Ohkubo, the key point in the construction consists of building the symbolic symmetrizer near some special boundary frequencies. In particular, in the three dimensional case, the analysis of Majda - Osher about uniformly characteristic problems does not apply to the linear elasticity.