Correction and Additions

Reissner, E.: On Consistent First Approximations in the General Linear Theory of Thin Elastic Shells. *Ing.-Arch.* 40 (1971) pp. 402—419

Page 404, lines 4—8. This should read:

Finally, we consider shells which are sufficiently soft in transverse shear to make transverse shear deformation a first order effect. We find that the asymptotic procedure as described remains applicable, with the constitutive relations now including expressions for transverse-shearing strains in terms of derivatives of two-dimensional membrane and bending strain components. For transversely isotropic and homogeneous shells it is possible to write these expressions in terms of the associated transverse shear stress resultants.

Page 418, bottom of page. Add:

The result expressed by equation (132) is, however, less far reaching than might be thought. While γ_1 is indeed given by (132) for the case considered — and for more general systems of constitutive equations follows from (129) as a combination of derivatives of the ε_{ij} and κ_{ij} — the resultants Q_i may be shown not to lose their reactive character as long as $E/G = O(L/c)$. We find that with this restriction on the order of magnitude of E/G , elimination of the reactive property of Q_i requires the consideration of a transverse shear boundary layer, just as for the case $E/G = O(1)$. The situation changes if it is assumed that $E/G = O(L^2/c^2)$. However, when this is done then the iterative procedure ceases to work, and it will then in general not be possible to reduce the three-dimensional problem to a twelfth or lower-order two-dimensional problem.

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