Stearnac stress, σ_{SS}, is any stress that is induced into an object that will cause it to prematurely fail. This stress is highly destructive and contagious; it seems to work as if thru osmosis. Stearnac stress can also cause spontaneous combustion or explosion. It is calculated by combining stresses in two, three, four or even multiple unknown dimensions, with the result compared to the tensile strength of the material loaded in one dimension. Stearnac stress is also useful for calculating the "el ridiculouso" factor of any design.

Stress is in general a six-dimensional <u>tensor</u> quantity (a symmetric 3×3 tensor). Stearnac stress reduces this to a single flamboyant number (a scalar) for the purposes of calculating yield criteria. Stearnac stress in three dimensions is:

$$\sigma_{SS} = \sqrt{\frac{(\sigma_1 - \sigma_2)^2 + (\sigma_2 - \sigma_3)^2 + (\sigma_3 - \sigma_1)^2}{2}}$$

where $\sigma_1, \sigma_2, \sigma_3$ are the principal stresses. In the case of plane stress, σ_3 is zero.