

comph

if the surface coordinates are ϕ and θ

but it is assumed that there are no variations in the θ direction. It is worthwhile including the required mathematics here because the terms are not the same as in the LineDerivatives class. Specifically

θ

z

the coordinate system is cylindrical polar

under the assumption of axisymmetry. Thus

the specific residuals associated with a two-dimensional surface in a three-dimensional domain

comph=AxisymmetricDerivatives