Recent experiments seem to observe the spin-Seebeck effect, which is the production of a spin-current by a thermal gradient. A thermal gradient and a uniform magnetic field are applied across the length ($x$) of a thin-film ferromagnet grown on top of an insulating substrate. From a voltage measurement across the width ($y$) of the ferromagnetic film, a spin current is inferred to occur along the thickness ($z$) via the Inverse Spin Hall Effect. Some experiments show that this voltage (and thus the spin current) varies as $\text{Sinh}(x/\lambda)$, where $\lambda$ is much greater than a spin diffusion length. With heat currents carried by both phonons and magnons in the ferromagnet, this length may be due to magnon-phonon equilibration. Using the macroscopic equations of irreversible thermodynamics, we show that, with both magnon-phonon equilibration in the sample and phonon-phonon equilibration between the sample and the substrate, thermal gradients along $z$ vary as $\text{Sinh}(x/\lambda)$. The thermal gradient along $z$ yields a spin current along $z$ (the spin-Seebeck effect), which in turn leads to a voltage gradient along $y$ via the Spin Hall conductivity.