ABSTRACT

The linear stability of an inviscid, incompressible plane-parallel magnetohydrodynamic stratified shear flow with velocity$\vec{U}=(U\left(z\right), 0 , 0)$ and a constant magnetic field confined between two horizontal parallel plates is analyzed. The governing equations with suitable boundary conditions are solved using normal mode approach. Approximate analytical solutions are found to determine the growth rate. The effects of various non-dimensional parameters like Brunt-vaisala frequency (N), Magnetic Pressure Number (S), Magnetic Reynolds Number (Rm) and Richardson Number(Ri) with respect to wave number is shown graphically