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Dipendra Regmi*, Farmingdale State College, Farmingdale, NY 11735. *The two-and-half dimensional magnetohydrodynamic equations with horizontal dissipation and horizontal magnetic diffusion*. Preliminary report.

We study the global regularity of classical solution to two-and-half dimensional magnetohydrodynamic equations with horizontal dissipation and horizontal magnetic diffusion. We prove that any possible finite time blow-up can be controlled by the L^∞ -norm of the vertical components. (Received September 08, 2015)