Pressure and drag measurements on a cylinder in a liquid metal flow with an aligned magnetic field

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Pressure distribution measurements around a cylinder placed in a liquid metal flow aligned with a constant magnetic field are presented. The pressure drag is derived from these measurements and is found to be reduced by the electromagnetic forces for values of the interaction parameter, N, around unity. For higher values of N, the rear pressure and the global pressure drag exhibit a linear dependence with the square root of the interaction parameter and it is also shown that, for a sufficient value of the magnetic field, the von Karman street behind the cylinder is suppressed.

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