



**INDUCED FLUID FLOW IN A CIRCULAR CYLINDER UNDER  
THE INFLUENCE OF A ROTATING MAGNETIC FIELD**

O. J. Fenuga, A. R. Hassan and R. O. Ayeni

**Abstract**

In this paper, induced fluid flow in a circular cylinder under the influence of a rotating magnetic field is investigated by using Maxwell induction equation.

Asymptotic technique is used to obtain a unique solution for the stated problem and the results show that the convection term which Moffatt neglected in his work is significant in the boundary layer.

**Keywords and phrases:** fluid flow, rotating magnetic field, Maxwell induction equation.

**Pioneer Journal  
of Advances in  
Applied  
Mathematics**



Pioneer Scientific  
Publisher