

TIDAL FLOW IN THE ESCRAVOS BAR, WARRI, NIGERIA

E. O. Oghre and E. O. Okeke

Department of Mathematics

University of Benin, Benin City, Nigeria.

ABSTRACT

Nature has placed a lot of resources at the disposal of mankind to annex for his uses. Day by day man is grasping the enormity of the potential at his disposal. It is now possible to use tidal flows in the generation of electricity. Escravos Bar, Warri is one of many estuaries in the Nigeria coastline where tidal flows occur. We have derived the profile of the tidal flow in terms of the tidal current and surface elevation in the estuary. The nodal line does not exist within the Gulf. Therefore, tides throughout the length of the Bar are at high water (or low water) as the oceanic tides and the height of the tides increases (or decreases) from the entrance of the gulf to the head of the gulf.

Published in Journal of The Nigerian Association of Mathematical Physics, Volume 8, 2004, pp331-336

E. O. Oghre is a Senior Lecturer, in the Department of Mathematics, University of Benin, Benin City

E. O. Okeke is a Professor of Applied Mathematics in the Department of Mathematics, University of Benin, Benin City