PREFACE

Ground water accounts for a major portion of the world’s fresh water resources. The rapid expansion of population, industry and agriculture has brought about a substantial increase in usage of ground water resources to supplement surface water supplies. Ground water flow through porous media is a topic of great interest in various scientific and technical fields. The resistance to the Ground water flow through granular media is a topic of utmost importance in several fields, e.g., Petroleum Engineering, Water Resources Engineering, Soil Mechanics, etc., particularly resistance to the flow of fluid through Converging or Diverging boundaries. However, a little work has been observed in the earlier literature on radial flows. Thus, it is imperative that in this study an attempt has been made to examine the effect of tilting angle on non-uniform flow through porous media when the media is being packed between converging boundaries by duly considering the porosity effect. A special tilting angle converging duct was designed and fabricated by the author to accomplish the stated goal.

This thesis is primarily intended to serve as a reference for researchers in the field of advanced Ground water flow. There has been a conscious attempt to address the relevant concept of seepage flow through a tilting angle convergent duct in this thesis. This thesis has some features like convergent or divergent flow through porous media which are meant to enhance effectiveness. The theme of each chapter has been introduced at the beginning and summary are drawn for each chapter at the end. The emphasis is not on definitions and technical terms, but on the concepts included in this thesis.

It is hoped that this thesis may serve to elucidate some of the basic ideas concerning seepage flow through porous media when the media being packed between converging boundaries and also provide a greater insight in to the mechanism and behavior of flow through porous media placed in different tilting angle converging configuration and thus contribute to an extension of our knowledge in this field.