

# Écoulement bas Reynolds



Component  
École Nationale  
Supérieure  
d'Électrotechnique  
d'Électronique

## In brief

- › **plugin.odf-inp:PLUGINS\_ODF\_COURSE\_NBHOURS\_TXT:** 12,25
- › **Code:** N6EM03B

## Presentation

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### Objectives

The object of this course is to describe the particular hydrodynamic phenomena that one encounters with small Reynolds numbers . The basic equations are commented, analyzed and solved in simple geometries.

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### Description

Introduction:  $Re \ll 1$  What is inertia? and applications  
Basic equations and different formulations  
Specific properties (linearity, reversibility, reciprocity) and consequences.  
Fundamental Solutions of Stokes Equations  
Cellule of Hele-Shaw  
Lubrication (hydraulic bearing)  
Flows in thin layers  
Calculation of the stokes force

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### Pre-requisites

Méca Fluides 1