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Nota di contenuto	I Non-Miscible Stratified Flows -- 1. Introduction -- 2. Pressure Conditions and Potential Energy -- 3. The Motion of Non-Miscible Stably Stratified Fluids -- II Miscible Stratified Flows -- 4. The Equations of Continuity and Motion for Miscible Stratified Flows -- 5. IRfT = The Bulk Flux Richardson Number -- 6. Entrainment (VE) -- 7. Interfacial Shear Stress (?i) -- 8. Dense Bottom Currents -- 9. Free Penetrative Convection -- 10. Wind-Driven Stratified Flow -- 11. Horizontal Buoyant Flow -- 12. Vertical Buoyant Jets and Plumes -- III Case Studies -- 14. Sediment Laden Buoyancy Jets -- 15. Dense Bottom Currents in Rotating Ocean -- 16. Laboratory Experiments on Entrainment due to Free Convection -- 17. Steady Wind Set-up in Prismatic Lakes -- 18. Division of the River Neva. How will it influence the Baltic Sea, the Belt and Cattegat -- 19. Surface Jet at Small Richardson Numbers -- 20. Internal Seiches in a Stratified Sill Fjord -- 21. On Arctic Lakes. A thermodynomic and hydrodynamic investigation -- 22. A Multipurpose Stratified Flow Flume.
Sommario/riassunto	The present lecture notes cover a first course in th~ most common types of stratified flows encountered in Environ- mental Hydraulics. Most of the flows are buoyancy flows, i.e. currents in which gravity acts on small density differences. Part I presents the basic concepts of

stagnant, densit- stratified water, and of flowing non-miscible stratified fluids. The similarity to the (presumed) well-known open channel flow, subject to a reduced gravity, is illustrated. Part II treats the miscible density stratified flows. In outlining the governing equations, the strong coupling between the turbulence (the mixing) and the mean flow is emphasized. The presentation and discussions of the basic governing equa- tions are followed by illustrative examples. Separate chapters are devoted to Dense Bottom Currents, Free Penetrative Convec- tion, Wind-driven Stratified Flow, Horizontal Buoyancy Flow and Vertical jet/plumes. Part III presents some examples of practical problems solved on the basis of knowledge given in the present lecture notes. It is the author's experience that the topics treated in chapter 8 and in the subsequent chapters are especially well-suited for self-tuition, followed by a study-circle. ACKNOWLEDGEMENT
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