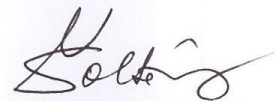


## Hydromechanics

1. Fluids, their properties and classifications.
2. Fluid hydrostatics, Euler's equation of equilibrium in liquids.
3. Total hydrostatic pressure, hydrostatic pressure, suction, piezometers.
4. Hydrostatic pressure and its determination.
5. Archimedes formula and its application.
6. Continuum equation for flowing liquids.
7. Bernoulli's formula for ideal and real liquids, energetic and head expression.
8. Reynold's experiment, laminar and turbulent flow.
9. Hydraulic losses, their characteristics, distribution and determination.
10. Hydraulic solution of simple and compound pipes.
11. Hydraulic solution of a siphon and joint.
12. Open channel flow – main characteristics, properties of channels, rating curve.
13. Solution of non-permanent flow in river beds by means of per partes method.
14. Orifice outflow hydraulics.
15. Hydraulics of overflows.
16. Groundwater flow – basic parameters.
17. Darcy's law.
18. Hydraulics of wells (confined, unconfined).

Bratislava, 2011/12



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