Hydraulics: percolation in porous media

\[ \phi = p + \rho g z \]

\[ H = \frac{\phi}{\rho g} = \frac{p}{\rho g} + z \]

\[ \nabla \cdot \mathbf{q} = 0 \]

Source variables
- space: dual complex
- time: primal complex
- intervals
- instants

Configuration variables
- space: primal complex
- time: dual complex
- intervals
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\[ \mathbf{q} = \frac{k}{\mu} \mathbf{u} \]

Darcy

\[ \mathbf{u} = \nabla \phi \]


FLU7-9: http://discretephysics.dica.units.it