

$$\left.\frac{\mathrm{d}u_i}{\mathrm{d}t}\right|^n = (1-H_i)\left.\frac{\mathrm{d}u_i}{\mathrm{d}t}\right|_{fluid}^n + H_i\left.\frac{\mathrm{d}u_i}{\mathrm{d}t}\right|_{solid}^n$$