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A1.1.2. Vaschy-Buckingham theorem (1890) or theorem
A1.1.3. Practical advantage to dimensional analysis; A1.1.4. Example of application: head loss in a cylindrical pipe; A1.2. Similarity; A1.2.1. Definition; A1.2.2. Application: condition of similarity in a soft balloon placed in a current of air with a given velocity; A1.3. Analytical searching for solutions to a heat transfer problem (self-similar solution); A1.4. Some dimensionless numbers; Appendix 2 . Thermodynamic Functions; A2.1. General points; A2.2. Translational motion; A2.3. Internal motions; A2.3.1. Monatomic species
A2.3.2. Diatomic species

Sommario/riassunto

Flows with chemical reactions can occur in various fields such as combustion, process engineering, aeronautics, the atmospheric environment and aquatics. The examples of application chosen in this book mainly concern homogeneous reactive mixtures that can occur in propellers within the fields of process engineering and combustion: - propagation of sound and monodimensional flows in nozzles, which may include disequilibria of the internal modes of the energy of molecules; - ideal chemical reactors, stabilization of their steady operation points in the homogeneous case of a perfec
