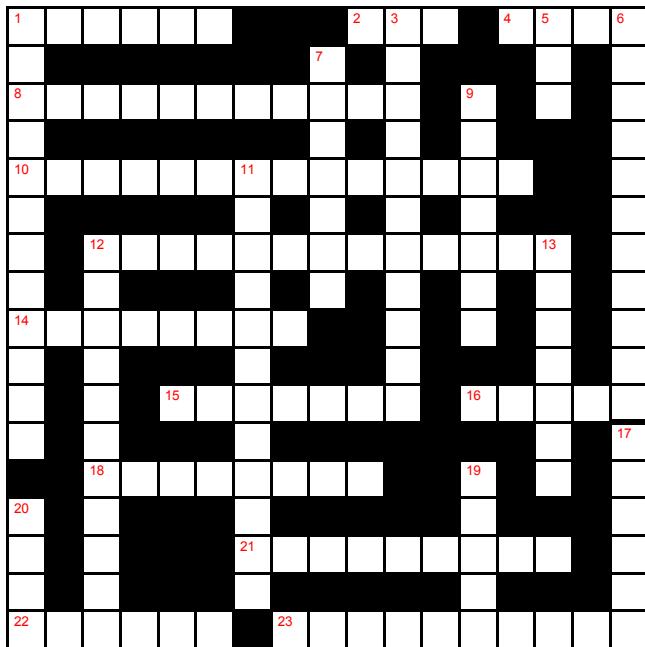


Thermodynamics_17x17_2008-10-21

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Across

1 ____ law of thermodynamics states inter alia that every process that occurs in nature is irreversible and unidirectional. (6)

2 A unit of energy equal to the work done by a power of 1000 watts operating for one hour. (3)

4 A form of energy that is transferred by a difference in temperature. (4)

8 A stable situation in which forces cancel one another. (11)

10 It is the difference between enthalpy and the product of pressure and volume. (8,6)

12 The destructive distillation of coal (as in coke ovens). (13)

14 A hard natural coal that burns slowly and gives intense heat. (4,4)

15 Rotary engine in which the kinetic energy of a moving fluid is converted into mechanical energy by causing a bladed rotor to rotate. (7)

16 ____ law of thermodynamics relates to the law of conservation of energy. (5)

18 German physicist who formally established the equivalence of heat and work (first law of thermodynamics). (8)

21 Process of expansion occurring without loss or gain of heat. (9)

22 The capacity of a physical system to do work. (6)

23 With unchanging

Down

1 Ratio of heat required to raise the temperature of a substance by one degree to that required to raise the temperature of an equal mass of water by one degree. (8,4)

3 The degree of hotness or coldness of a body or environment. (11)

5 A cgs unit of work or energy. (3)

6 It is a point where all the three phases exist together. (6,5)

7 The temperature of a gas is a measure or a function of average ____ energy of gas molecules. (7)

9 A variety of coal having least calorific value. (7)

11 The principle that

12 A cycle of expansion and compression of an idealized reversible heat engine that does work without loss of heat. (6,5)

13 An elementary particle with 0 charge and mass about equal to a proton. (7)

17 A decimal unit of measurement of the metric system (based on meters and kilograms and seconds). (6)

19 Its specific heat is one. (5)

20 Carbon fuel produced by distillation of coal. (4)

22 equal volumes of all gases (at same T and P) contain equal numbers of molecules. (9,3)