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Editor in Chief

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diamond-point bit See mud auger. { 'dī-mənd 'pɔɪnt ,bit }

diamond-pyramid hardness number [MET] The quotient of the load applied in the diamond-pyramid hardness test divided by the pyramidal area of the impression. { 'dī-mənd 'pɪr-ə-mid 'hɑrd-nəs ,nəm-bər }

diamond-pyramid hardness test [MET] An indentation hardness test in which a diamond-pyramid indenter, with a 136° angle between opposite faces, is forced under variable loads into the surface of a test specimen. Also known as Vickers hardness test. { 'dī-mənd 'pɪr-ə-mid 'hɑrd-nəs ,test }

diamond reamer [DES ENG] A diamond-inset pipe behind, and larger than, the drill bit and core barrel that is used for enlarging boreholes. { 'dī-mənd ,rēm-ər }

diamond-ring effect [ASTRON] A phenomenon observed just before and after the central phase of a total solar eclipse, in which the last Bailey's bead glows brightly compared with other visible features, and the solar corona forms a band that is visible on the rest of the lunar edge. { 'dī-mənd 'rɪŋ i ,fekt }

diamonds [FL MECH] The pattern of shock waves often visible in a rocket exhaust which resembles a series of diamond shapes placed end to end. { 'dī-mənz }

diamond saw [DES ENG] A circular, band, or frame saw inset with diamonds or diamond dust for cutting sections of rock and other brittle substances. { 'dī-mənd ,sɔ }

diamond setter [ENG] A person skilled at setting diamonds by hand in a diamond bit or a bit mold. { 'dī-mənd ,sed-ər }

diamond size [ENG] In the bit-setting and diamond-drilling industries, the number of equal-size diamonds having a total weight of 1 carat; a 10-diamond size means 10 stones weighing 1 carat. { 'dī-mənd ,sɪz }

diamond structure [CRYSTAL] A crystal structure in which each atom is the center of a tetrahedron formed by its nearest neighbors. { 'dī-mənd ,strək-ʃər }

diamond stylus [ENG ACOUS] A stylus having a ground diamond as its point. { 'dī-mənd 'stɪ-ləs }

diamond tool [DES ENG] 1. Any tool using a diamond-set bit to drill a borehole. 2. A diamond shaped to the contour of a single-pointed cutting tool, used for precision machining. { 'dī-mənd ,tʊl }

diamond-turned optics [OPTICS] Optical elements that have been machined to a specular finish on metal-working lathes whose precision is so great that these elements can be used in the infrared without further optical working, and small elements with simple shapes can be used even in the visible region. { 'dī-mənd 'tɜrnd 'ɒp-tiks }

diamond washer [MIN ENG] An apparatus for shaking and separating rock gravel containing diamonds, utilizing a vertical series of screens with 8-, 4-, 2-, and 1-millimeter mesh. { 'dī-mənd ,wəsh-ər }

diamond wheel [DES ENG] A grinding wheel in which synthetic diamond dust is bonded as the abrasive to cut very hard materials such as sintered carbide or quartz. { 'dī-mənd ,wel }

diamyl phenol [ORG CHEM] (C₅H₁₁)₂C₆H₃OH A straw-colored liquid with a boiling range of 280–295°C; used in synthetic resins, lubricating oil additives, plasticizers, detergents, and fungicides. { dī'am-əl 'fē,nɒl }

diamyl sulfide [ORG CHEM] (C₅H₁₁)₂S A combustible, yellow liquid with a distillation range of 170–180°C; used as a flotation agent and an odorant. { dī'am-əl 'sɒl,fɪd }

diandrous [BOT] Having two stamens. { dī'an-drəs }

Dianemaceae [MICROBIO] A family of slime molds in the order Trichales. { dī-ə-nə'mās-ē,ē }

dianite See columbite. { 'dī-ə,nɪt }

Dianulitidae [PALEON] A family of extinct, marine bryozoans in the order Cystoporata. { dī,an-yə'lid-ə,dē }

diapause [PHYSIO] A period of spontaneously suspended growth or development in certain insects, mites, crustaceans, and snails. { 'dī-ə,pɔz }

diapedesis [MED] Hemorrhage of blood cells, especially erythrocytes, through an intact vessel wall into the tissues. { 'dī-ə,pə'dē-səs }

Diapensiaceae [BOT] The single family of the Diapensiales, an order of flowering plants. { dī-ə,pen-sē'ās-ē,ē }

Diapensiales [BOT] A monofamilial order of dicotyledonous plants in the subclass Dilleniidae comprising certain herbs and dwarf shrubs in temperate and arctic regions of the Northern Hemisphere. { 'dī-ə,pen-sē'āl-ēz }

Diaphanocephaloidea [INV ZOO] A family of parasitic round-

worms belonging to the Strongyloidea; snakes are the principal host. { dī,af-ə-nō-sə'fal-ə,dē }

Diaphanocephaloidea [INV ZOO] A superfamily of nematodes represented by a single family, Diaphanocephalidae, distinguished by the modification of the stoma into two massive lateral jaws and the absence of a corona radiata or lips. { dī,af-ə-nō,sēf-ə'lōid-ē; pp }

diaphone [NAV] A fog signal device that produces sounds similar to a siren and uses a reciprocating piston actuated by compressed air. { 'dī-ə,fōn }

diaphorase [BIOCHEM] Mitochondrial flavoprotein enzymes which catalyze the reduction of dyes, such as methylene blue, by reduced pyridine nucleotides such as reduced diphosphopyridine nucleotide. { dī'af-ə,rās }

diaphorite [MINERAL] Pb₂Ag₃Sb₃S₈ A gray-black orthorhombic mineral consisting of sulfide of lead, silver, and antimony, occurring in crystals. Also known as ultrabasilite. { dī'af-ə,rɪt }

diaphragm [ANAT] The dome-shaped partition composed of muscle and connective tissue that separates the abdominal and thoracic cavities in mammals. [ELECTROMAG] See iris. [ENG] A thin sheet placed between parallel parts of a member of structural steel to increase its rigidity. [ENG ACOUS] A thin, flexible sheet that can be moved by sound waves, as in a microphone, or can produce sound waves when moved, as in a loudspeaker. [OPTICS] Any opening in an optical system which controls the cross section of a beam of light passing through it, to control light intensity, reduce aberration, or increase depth of focus. Also known as lens stop. [PHYS] 1. A separating wall or membrane, especially one which transmits some substances and forces but not others. 2. In general, any opening, sometimes adjustable in size, which is used to control the flow of a substance or radiation. { 'dī-ə,frəm }

diaphragmatic hernia [MED] Protrusion of an abdominal organ through the diaphragm into the thoracic cavity. { 'dī-ə,frag,mad-ik 'hɜrn-ē-ə }

diaphragmatic respiration [PHYSIO] Respiration effected primarily by movement of the diaphragm, changing the intrathoracic pressure. { 'dī-ə,frag,mad-ik ,res-pə'rā-shən }

diaphragm cell [CHEM ENG] An electrolytic cell used to produce sodium hydroxide and chlorine from sodium chloride brine; porous diaphragm separates the anode and cathode compartments. { 'dī-ə,frəm ,sel }

diaphragm compressor [MECH ENG] Device for compression of small volumes of a gas by means of a reciprocally moving diaphragm, in place of pistons or rotors. { 'dī-ə,frəm kəm'pres-ər }

diaphragm gage [ENG] Pressure- or vacuum-sensing instrument in which pressures act against opposite sides of an enclosed diaphragm that consequently moves in relation to the difference between the two pressures, actuating a mechanical indicator or electric-electronic signal. { 'dī-ə,frəm ,gāj }

diaphragm horn [ENG ACOUS] A horn that produces sound by means of a diaphragm vibrated by compressed air, steam, or electricity. { 'dī-ə,frəm ,hɔrn }

diaphragm jig [MIN ENG] A jig having a flexible diaphragm to pulse water; used in gravity concentration of minerals. { 'dī-ə,frəm ,jɪg }

diaphragm meter [ENG] A flow meter which uses the movement of a diaphragm in the measurement of a difference in pressure created by the flow, such as a force-balance-type or a deflection-type meter. { 'dī-ə,frəm ,mēd-ər }

diaphragm pump [MECH ENG] A metering pump which uses a diaphragm to isolate the operating parts from pumped liquid in a mechanically actuated diaphragm pump, or from hydraulic fluid in a hydraulically actuated diaphragm pump. { 'dī-ə,frəm ,pʌmp }

diaphragm setting [OPTICS] The position of a camera's diaphragm after opening or closing it. { 'dī-ə,frəm ,sed-ɪŋ }

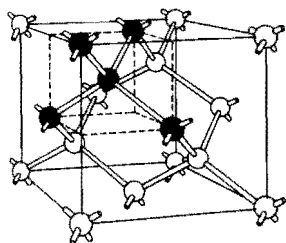
diaphragm valve [ENG] A fluid valve in which the open-close element is a flexible diaphragm; used for fluids containing suspended solids, but limited to low-pressure systems. { 'dī-ə,frəm ,vɒlv }

diaphthoresis See retrograde metamorphism. { dī'af-thə're-səs }

diaphthorite [PETR] Schistose rocks in which minerals have formed by retrograde metamorphism. { dī'af-thə,rɪt }

diaphyseal aclasis See multiple hereditary exostoses. { dī'af-sē-əl 'ak-lə-səs }

DIAMOND STRUCTURE



Crystal structure of diamond. Large cube is unit cell. Small cube emphasizes arrangement of bonds between atom at center of tetrahedron and nearest neighbors at vertices.