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Dictionary of
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Sixth Edition

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On the cover: Representation of a fullerene molecule with a noble gas atom mapped inside. At the Permian-Triassic sedimentary boundary the noble gases helium and argon have been found trapped inside fullerenes. They exhibit isotope ratios quite similar to those found in meteorites, suggesting that a fireball meteorite or asteroid exploded when it hit the Earth, causing major changes in the environment. (Image copyright © Dr. Luann Becker. Reproduced with permission.)

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McGraw-Hill Dictionary of Scientific and Technical Terms, Sixth Edition

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contains the single monotypic genus *Serritermes*. [*'ser-2-tə-mid-ə-dē*]

serrodyne [ELECTR] Phase modulator using transit time modulation of a traveling-wave tube or klystron. [*'ser-ə-dīn*]

Serropalpidae [INSECTA] An equivalent name for Melandryidae. [*'ser-ə-pal-pə-dē*]

serulate [BOT] Finely serrate. [*'ser-2-lāt*]

Sertoli cell [HISTOL] One of the sustentacular cells of the seminiferous tubules. [*'ser-tō-lē-sel*]

serum [RHYTHM] The liquid portion that remains when blood clots spontaneously and the formed and clotting elements are removed by centrifugation; it differs from plasma by the absence of fibrinogen. [*'ser-əm*]

serum accident [IMMUNOL] A serious allergic reaction which immediately follows the introduction of a foreign serum into a hypersensitive individual; dyspnea and flushing occur, soon followed by shock and occasionally by fatal termination. [*'ser-əm-ək-sə-dent*]

serum albumin [BIOCHEM] The principal protein fraction of blood serum and serum fluids. [*'ser-əm-əl-bū-mēn*]

serum globulin [BIOCHEM] The globulin fraction of blood serum. [*'ser-əm-glō-bū-līn*]

serum hepatitis [MED] A form of viral hepatitis transmitted by parenteral injection of human blood or blood products contaminated with the type B virus. [*'ser-əm-jēp-ə-tīd-əs*]

serum shock [MED] An anaphylactic reaction following the injection of foreign serum into a sensitized individual. [*'ser-əm-shək*]

serum sickness [MED] A syndrome manifested in 8-12 days after the administration of serum by an urticarial rash, edema, enlargement of lymph nodes, arthralgia, and fever. [*'ser-əm-sīk-nēs*]

server [COMPUT SCI] A computer or software package that sends requested information to a client or clients in a network. [*'sar-vər*]

service [ENGL] To perform services of maintenance, supply, repair, installation, distribution, and so on, for or upon an instrument, installation, vehicle, or territory. [*'sər-vīs*]

serviceability [IND ENG] The reliability of equipment according to some objective criterion such as serviceability ratio, utilization ratio, or operating ratio. [*'sər-və-sə-bil-əd-ē*]

serviceability ratio [IND ENG] The ratio of up time to the sum of up time and down time. [*'sər-və-sə-bil-əd-ē-rā-shō*]

service agreement [ENGL] A contract which agrees to provide mechanical maintenance of a machine for a fixed period of time at a stated charge. [*'sər-vīs-ə-gre-ment*]

service area [COMMUN] The area that is effectively served by a given radio or television transmitter, navigation aid, or other type of transmitter. Also known as coverage. [*'sər-vīs-er-ē-ə*]

service band [COMMUN] Band of frequencies allocated to a given class of radio service. [*'sər-vīs-bānd*]

service bit [COMMUN] A bit used in data transmission to monitor the transmission rather than to convey information, such as a request that part of a message be repeated. [*'sər-vīs-bit*]

service brake [MECH ENG] The brake used for ordinary driving in an automotive vehicle; usually foot-operated. [*'sər-vīs-brāk*]

service bureau [COMPUT SCI] An organization that offers time sharing and software services to its users who communicate with a computer in the bureau from terminals on their premises. [*'sər-vīs-byū-ə*]

service ceiling [AERO ENG] The height at which, under standard atmospheric conditions, an aircraft is unable to climb faster than a specified rate (100 feet or 30 meters per minute in the United States, Great Britain, and Canada). [*'sər-vīs-sel-īng*]

service compartment [MIN ENG] The section of a mine shaft that houses water pipes, compressed-air pipeline, cables and telephone wires, and signaling and similar arrangements. [*'sər-vīs-kəm-pārt-mēnt*]

service dead load [ENGL] The calculated dead load that will be supported by a member. [*'sər-vīs-ded-lōd*]

service engineering [ENGL] The function of determining the integrity of material and services in order to measure and maintain operational reliability, approve design changes, and assure

their conformance with established specifications and standards. [*'sər-vīs-ēn-jā-nī-īng*]

service factor [ENGL] For a chemical or a petroleum processing plant or its equipment, the measure of the continuity of an operation, computed by dividing the time on-stream (actual running time) by the total elapsed time. [*'sər-vīs-fak-tər*]

service life [ENGL] The length of time during which a machine, tool, or other apparatus or device can be operated or used economically or before breakdown. [*'sər-vīs-līf*]

service oscillator See radio-frequency signal generator. [*'sər-vīs-ōs-ə-lā-2ər*]

service pipe [CIV ENG] A pipe linking a building to a main pipe. [*'sər-vīs-pīp*]

service program [COMPUT SCI] A computer program that is used in a computer system to support the functioning of the system, such as a librarian or a utility program. [*'sər-vīs-prō-gram*]

service provider [COMPUT SCI] An organization that provides access to a wide-area network, such as the Internet. [*'sər-vīs-prə-vīd-ər*]

service rating [MATER] A classification for an engine-lubricating oil that indicates the type of service for which the oil is most appropriate. [*'sər-vīs-rād-īng*]

service road [CIV ENG] A small road parallel to the main road for convenient access to shops and houses. [*'sər-vīs-rōd*]

service routine [COMPUT SCI] A section of a computer code that is used in so many different jobs that it cannot belong to any one job. [*'sər-vīs-rū-tīn*]

service shaft [MIN ENG] A shaft used only for hoisting men and materials to and from underground. [*'sər-vīs-shāft*]

service test [ORD] A test of an item, system of material, or technique conducted under simulated or actual operational conditions to determine whether the specified military requirements or characteristics are satisfied. [*'sər-vīs-tes*]

service time See machine attention time. [*'sər-vīs-tīm*]

service valve [ENGL] In a pipework system, a valve that isolates a piece of equipment from the rest of the system. [*'sər-vīs-valv*]

service velocity [ORD] The muzzle velocity established as the velocity to be attained by a projectile of standard weight and under standard conditions of temperature, when fired from a new gun of the designated type; the range tables are computed on the basis of this velocity. [*'sər-vīs-və-līs-əd-ē*]

service volume [NAV] That volume in airspace surrounding a VOR, Tacan, or Vortac facility within which a signal of usable strength exists and is free of interchannel and cochannel interference; the advertised service volume is defined as a simple cylinder of airspace, usually smaller than theoretical maximum, and is used in planning areas of air operations. [*'sər-vīs-vōl-yūm*]

service wires [ELECT] The conductors that bring the electric power into a building. [*'sər-vīs-wīrz*]

servicing [ENGL] Replacement of consumable material or items needed to keep equipment in operating condition; does not include preventive or corrective maintenance. [*'sər-vīs-īng*]

servicing time [COMPUT SCI] Machine down-time necessary for routine testing, for machine servicing due to breakdown, or for preventive servicing measures; includes all test time (good or bad) following breakdown and subsequent repair or preventive servicing. [*'sər-vīs-īng-tīm*]

serving [ELECT] A covering, such as thread or tape, that protects a winding from mechanical damage. Also known as coil serving. [*'sər-vīng*]

servo See servomotor. [*'sər-vō*]

servo amplifier [ELECTR] An amplifier used in a servo-mechanism. [*'sər-vō-əm-plā-fī-2ər*]

servoarm attachment [MECH ENG] A device that enhances the maximum distance over which the manipulator of a simple robot can travel. [*'sər-vō-ārm-ə-tāch-mēnt*]

servo brake [MECH ENG] 1. A brake in which the motion of the vehicle is used to increase the pressure on one of the shoes. 2. A brake in which the force applied by the operator is augmented by a power-driven mechanism. [*'sər-vō-brāk*]

servolink [COST SYS] A power amplifier, usually mechanical, by which signals at a low power level are made to operate control surfaces requiring relatively large power inputs, for example, a relay and motor-driven actuator. [*'sər-vō-līnk*]

servo loop See single-loop servomechanism. [*'sər-vō-lōp*]