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## intergranular corrosion

577

## interlocking relay

**intergranular corrosion** Corrosion that occurs preferentially at grain boundaries. (IA) [59]

**interior** The set of pixels in a region of a digital image that are not adjacent to pixels in the region's complement. *Contrast:* border. (C) 610.4-1990w

**interior communication systems (marine)** Those systems providing audible or visual signals or transmission of information within or on a vessel. (PE/EEC) [119]

**interior wiring system ground** A ground connection to one of the current-carrying conductors of an interior wiring system. *See also:* ground. (T&D/PE) [10]

**interlaboratory standards** Those standards that are used for comparing reference standards of one laboratory with those of another, when the reference standards are of such nature that they should not be shipped. *See also:* measurement system. (IM) 285-1968w, [38]

**interlace (A)** To arrange, access, select, or display in an alternating fashion. **(B)** To refresh a display device using two passes of the writing beam to complete the full display; the first pass draws every other line and the second fills in those skipped. (C) 610.10-1994

**interlaced** Pertaining to a display device in which every other line of pixels is refreshed on each pass. *Contrast:* noninterlaced. (C) 610.10-1994w

**interlace factor (television)** A measure of the degree of interlace of nominally interlaced fields. *Note:* In a two-to-one interlaced raster, the interlace factor is the ratio of the smaller of two distances between the centers of adjacent scanned lines to one-half the distance between the centers of sequentially scanned lines at a specified point. (BT/AV) 201-1979w

**interlace scan** A raster scan technique in which the electron beam alternately refreshes all even, then all odd, scan lines of a display surface. (C) 610.6-1991w

**interlaced scanning (television)** A scanning process in which the distance from center to center of successively scanned lines is two or more times the nominal line width, and in which the adjacent lines belong to different fields. *See also:* television. (BT/AV) [34]

**interlacing impedance voltage of a Scott-connected transformer (power and distribution transformers)** The interlacing impedance voltage of Scott-connected transformers is the single-phase voltage applied from the midtap of the main transformer winding to both ends, connected together, which is sufficient to circulate in the supply lines a current equal to the rated three-phase line current. The current in each half of the winding is 50% of this value. The per-unit or percent interlacing resistance is the measured watts expressed on the base of the rated kVA of the teaser winding. The per-unit or percent interlacing impedance is the measured voltage expressed on the base of the teaser-voltage. (PE/TR) C57.12.80-1978r

**interLATA** In the United States, a collection of circuits that cross local access and transport area boundaries and are passed onto an interexchange carrier. *See also:* intraLATA. (C) 610.7-1995

**interleave (1)** To arrange parts of one sequence of things or events so that they alternate with parts of one or more other sequences of things or events and so that each sequence retains its identity. (C/C) [20], [85]

**(2) (software)** To alternate the elements of one sequence with the elements of one or more other sequences so that each sequence retains its identity; for example, to alternately perform the steps of two different tasks in order to achieve concurrent operation of the tasks. (C) 610.12-1990

**(3)** To arrange parts of one sequence of things or events so that they alternate with parts of one or more other sequences of the same nature such that each sequence retains its identity; for example, to assign successive addresses to physically separated storage locations in such a way as to reduce access time. (C) 610.10-1994w

**interleaved array** In PL/I, an array whose name refers to non-contiguous storage. (C) 610.5-1990w

**interleaved memory** A type of memory in which two or more separate arrays are used to fill alternate accesses in such a way as to speed the average access time of the memory. For example, the odd addresses are all in one memory array and the even addresses are in a second. (C) 610.10-1994w

**interleaved windings (power and distribution transformers)** (of a transformer) An arrangement of transformer windings where the the primary and secondary windings, and the tertiary windings, if any, are subdivided into disks (or pancakes) or layers and interleaved on the same core. (PE/TR) C57.12.80-1978r

**interleaving** The process of alternating two or more operations or functions through the overlapped use of a computer facility. *See also:* interleaved memory. (C) 610.10-1994w

**interlock (1)** A device actuated by the operation of some other device with which it is directly associated, to govern succeeding operations of the same or allied devices. *Note:* An interlock system is a series of interlocks applied to associated equipment in such a manner as to prevent or allow operation of the equipment only in a prearranged sequence. Interlocks are classified into three main divisions: mechanical interlocks, electrical interlocks, and key interlocks, based on the type of interconnection between the associated devices. (SWG/PE/TR) C37.100-1992, C57.12.80-1978r

**(2)** To prevent one device from interfering with another. For example, to lock the switches to prevent manual movement of the switches while a program is executing. (C) 610.10-1994w

**(3)** Device that permits equipment or controls to operate only after other conditions have been fulfilled. (PE/EDPG) 1020-1988r

**interlock bypass** A command to temporarily circumvent a normally provided interlock. (IA/EEC) [61], [74]

**interlocked sequence** A fixed sequence of events in which one event in the sequence must occur before the next event may occur. (IM/AIN) 488.1-1987r

**interlocking (1) (interlocking plant) (railways)** An arrangement of apparatus in which various devices for controlling track switches, signals, and related appliances are so interconnected that their movements must succeed one another in a predetermined order, and for which interlocking rules are in effect. *Note:* It may be operated manually or automatically. (PE/EEC) [119]

**(2)** An arrangement of switch, lock, and signal devices that is located where rail tracks cross, join, separate, and so on. The devices are interconnected in such a way that their movements must succeed each other in a predefined order, thereby preventing opposing or conflicting train movements. (VT/RT) 1474.1-1999

**interlocking deactivating means (defeater)** A manually actuated provision for temporarily rendering an interlocking device ineffective, thus permitting an operation that would otherwise be prevented. For example, when applied to apparatus such as combination controllers or control centers, it refers to voiding of the mechanical interlocking mechanism between the externally operable disconnect device and the enclosure doors to permit entry into the enclosure while the disconnect device is closed. *See also:* electric controller. (IA/ICTL/IAC) [60]

**interlocking limits (interlocking territory) (railways)** An expression used to designate the trackage between the opposing home signals of an interlocking. *See also:* interlocking. (PE/EEC) [119]

**interlocking machine (railways)** An assemblage of manually operated levers or equivalent devices, for the control of signals, switches, or other units, and including mechanical or circuit locking, or both, to establish proper sequence of movements. *See also:* interlocking. (PE/EEC) [119]

**interlocking plant** *See:* interlocking.

**interlocking relay (railways)** A relay that has two independent magnetic circuits with their respective armatures so arranged that the dropping away of either armature prevents the other



simultaneous operation with other similar units (when connected to form a single locomotive) from a single control station. *Note:* A prefix diesel-electric, gas-electric, turbine-electric, etc., may replace the word electric. *See also:* electric locomotive. (EEC/PE) [119]

**multiple-unit electric train** A train composed of multiple-unit electric cars. *See also:* electric motor car. (EEC/PE) [119]

**multiple-unit tube** *See:* multiple tube.

**multiple valve** *See:* multiple tube.

**multiple-valve unit (MVU)** A single structure comprising more than one valve. (SUB/PE) 857-1996

**multiplex** To interleave or simultaneously transmit two or more messages on a signal channel. (C/PE) 610.10-1994w, 599-1985w

**multiplex equipment, asynchronous** A transmission interconnection device that interleaves nonsynchronous low bit-rate digital signals to form a single high bit-rate digital signal. It also performs the reverse function of dividing a high bit-rate digital signal into multiple nonsynchronous low bit-rate signals. The two processes are referred to in this document as multiplexing (combining signals) and demultiplexing (separating signals). Similarly, the mechanisms used to perform these functions are referred to as multiplex equipment. (COM/TA) 1007-1991r

**multiplex equipment, digital** The equipment for combining digital signals from one digital level to a higher digital level. (COM/TA) 1007-1991r

**multiplex equipment, primary** The equipment for combining analog (vf) signals, or digital data signals, to a primary rate digital signal and vice versa. (COM/TA) 1007-1991r

**multiplexer (A) (supervisory control, data acquisition, and automatic control)** A device that allows the interleaving of two or more signals to a single line or terminal. **(B) (supervisory control, data acquisition, and automatic control)** A device for selecting one of a number of inputs and switching its information to the output. (SWG/PE/SUB) C37.1-1987, C37.100-1992

**(2) (A)** A device that allows the transmission of a number of different signals simultaneously over a single channel or transmission facility. *Synonym:* multiplexor. **(B)** A device capable of interleaving the events of two or more activities or of distributing the events of an interleaved sequence to their respective activities. *Contrast:* demultiplexer. (C) 610.7-1995

**multiplexing (1) (modulation systems) (data transmission)** The combining of two or more signals into a single wave (the multiplex wave) from which the signals can be individually recovered. (PE) 599-1985w

**(2)** The division of a transmission facility into two or more channels, either by splitting the frequency band transmitted by the channel into narrower bands, each of which is used to constitute a distinct channel (frequency division multiplexing) or by allotting this common channel to several different information channels one at a time (time-division multiplexing). (SUB/PE) 999-1992w

the multiplexor), as the input to the ADC. A device that allows the interleaving of two or more signals to a single line or terminus. (C) 166-1977w

**multiplex printing telegraphy** That form of printing telegraphy in which a line circuit is employed to transmit in turn one character (or one or more pulses of a character) for each of two or more independent channels. *See also:* time-division multiplexing; telegraphy; frequency-division multiplexing. (EEC/PE) [119]

**multiplex radio transmission** The simultaneous transmission of two or more signals using a common carrier wave. *See also:* radio transmission. (AP/ANT) 145-1983s

**multiplex wave winding (rotating machinery)** A wave winding in which the number of parallel circuits is equal to a multiple of two, whatever the number of poles. (BT) 204-1961w

**multiplicand** A number to be multiplied by another number (the multiplier) to produce a result (the product). (C) 1084-1986w

**multiplication factor (1) (power operations)** A measure of the change in the neutron population in a reactor core from one generation to the subsequent generation. *See also:* effective multiplication factor; infinite multiplication factor. (PE/PSE) 858-1987s

**(2) (multiplier type of valve or tube) (thermionics)** The ratio of the output current to the primary emission current. *See also:* electron emission. (ED) [45], [84]

**multiplication time** *See:* multiply time.

**multiplication transformation function** In hashing, a hash function that returns the original key multiplied by some value. For example, in the function below, the original key is multiplied by the length of the record in which it is found.

Original Record	Calculation	Hash Value
35 Bob White	$35 \times 13 = 448$	448
41 Richard Doe	$41 \times 17 = 697$	697

*See also:* mid-square function. (C) 610.5-1990w

**multiplicative array antenna system** A signal-processing antenna system consisting of two or more receiving antennas and circuitry in which the effective angular response of the output of the system is related to the product of the radiation patterns of the separate antennas. (AP/ANT) 145-1993

**multiplier (1) (general)** A device that has two or more inputs and whose output is a representation of the product of the quantities represented by the input signals. (Std100) 270-1966w

**(2) (analog computer)** In an analog computer, a device capable of multiplying one variable by another. (C) 165-1977w

**(3) (mathematics of computing)** A number by which another number (the multiplicand) is multiplied to produce a result (the product). (C) 1084-1986w

**(4)** A device capable of multiplying one variable by another. *Contrast:* divider. *See also:* two-quadrant multiplier; one-quadrant multiplier; analog multiplier; four-quadrant multiplier. (C) 610.10-1994w