

AC

alternating current

alloy

a mixture of two or more elements, at least one of which is a metal usually formed by melting

anneal

to heat to a critical temperature and slowly furnace cool to remove internal stress

annealed glass

glass produced by slow cooling to remove internal stress; it can be cut to size

austenite

a non-magnetic solid solution of carbon in iron

capacitor

a device consisting of two conducting surfaces separated by an insulator for accumulating and holding an electric charge when voltage is applied

cementite

a hard, brittle iron carbide compound with the formula  $\text{Fe}_3\text{C}$ , found in carbon steel

coefficient of friction

the dimensionless ratio of the friction resistive force and the normal force pressing two bodies together

condition monitoring

a series of tests undertaken while machinery is operating to assess conformance within specified operating criteria

conductor

a substance, body or device capable of transmitting electricity, heat or sound

crashworthiness

a vehicle manufactured in such a way that it is capable of withstanding the effects of a crash

crumple zone

an area of a vehicle that is designed to compress during an accident to absorb the energy from the impact

DC

direct current

diode

a semiconductor device that can act as a conductor if current is moving in one direction or as an insulator when moving in the reverse direction

duralumin

the trade name of an aluminium alloy containing varying degrees of copper, manganese and magnesium

eutectoid

the lowest point on an equilibrium phase diagram at which complete transformation from one solid phase to another occurs

ferrite

body centred cubic (BCC) phase in the iron-carbon phase diagram which may exist in either a low temperature or high temperature form

ferrous

iron based

fibre

a slender thread of a natural or synthetic material, such as optical or carbon fibres

friction

the resistance to the relative motion (sliding or moving) between surfaces in contact

heat treatment

a term applying to any of several processes involving heating metals to controlled temperatures for specific periods of time before cooling them at controlled rates

impedance

a measure in an AC circuit that is equivalent to resistance in a DC circuit

inductor

a piece of equipment providing inductance (electromagnetic induction) in a circuit or other system

inertia

the tendency of a body to persist in its state of rest or uniform (unaccelerated) motion in a straight line unless acted upon by a net (unbalanced) external force