

insulator

a material of such low conductivity that the flow of current through it is usually negligible

integrated circuit

a semiconductor wafer on which electrical components such as resistors, transistors, capacitors have been manufactured; also known as a chip or microchip

laminated glass

a sandwich of two panes of glass with a polymer interlayer of polyvinyl butyral (PVB), joined under heat and pressure in a furnace called an autoclave

microprocessor

a programmable computer processor manufactured on a single 'chip', or in some cases, multiple chips

momentum

a measure of the motion of a body equal to the product of its mass and velocity

non-ferrous

containing no or minimal iron

normalising

a heat treatment process for ferrous alloys involving heating the material above the upper critical temperature, then cooling in still air, the object being to enhance toughness by refining grain size

passive safety

any device which automatically provides protection for the occupants of a vehicle, such as the bumpers, seat belts, air bags etc.

pearlite

a phase of carbon steel and cast iron consisting of ferrite and cementite formed into distinct layers on slow cooling from austenite

phase diagram

a diagram in which the existence and coexistence of various phases are identified by regions and lines

power	a measure of the work done within a specified time or a measure of the rate at which work is being done, expressed in watts (W) or kilowatts (kW)
quenching	involves the use of a variety of rates of cooling to cause a steel to harden; this is done in water, brine and oil
reactance	that part of the impedance of an alternating current (AC) circuit that is due to the inductance and capacitance
rectifier	an instrument containing diodes that allows the conversion of AC current to DC
resistance	the property of a device which opposes the flow of an electric current, measured in ohms

safety glass

a generic term for glass that has been processed in order to resist shattering

semiconductor

a substance whose electrical conductivity is intermediate between that of a metal and an insulator and whose conductivity increases with temperature and in the presence of impurities

spheroidising

heat-treatment in which pearlite lamellae are broken down to form spheroids

tempered glass

glass heat-treated to create a compressive surface layer by controlled cooling of the surface

tempering

reheating of a quenched steel to a sub-critical temperature in order to improve ductility and toughness

transformer

an electrical device, which by electromagnetic induction allows the voltage of an alternating current to be stepped up or down

transistor

a semiconductor device with three connections, capable of amplification in addition to being used to switch electronic signals on and off

work

a measure of the energy expended by a force in moving an object a certain distance
