

kinetic energy

the capacity to do work  
due to a particle's  
motion

matrix

a surrounding substance  
within which something else  
originates, develops or is  
contained

normal

a force applied at 90  
degrees to a surface

pearlite

a phase of carbon steel and cast iron  
consisting of ferrite and cementite  
formed into distinct alternating layers (or  
lamellae) on slow cooling from austenite;  
pearlite is a tough phase responsible for  
the mechanical properties of  
unhardened steel

plasticity

the ability of a material  
to withstand permanent  
deformation without  
failure

power

a measure of work done over a period of time; power is measured in watts, where one watt is the power used to perform one joule of work in one second

shear

when one section of a body tends to slide over a neighbouring section

sintering

most often associated with powder metallurgy, sintering involves heating compressed parts in a controlled-atmosphere furnace; the pressed powder particles fuse together (at temperatures below their melting point), forming metallurgic bonds

steel

a metallic product whose principal element is iron and where the carbon content is not more than 2%

strain

the amount of deformation an object experiences compared to its original size

tension	a force tending to stretch or elongate something, a pulling force
torsion	the result of twisting forces produced in engine crankshafts while the engine is running; forces causing torsion produce torque or turning moments
toughness	the extent to which a material absorbs energy without fracture; the area under a stress-strain diagram is a measure of toughness
true stress	the ratio of the applied load (L) to the instantaneous cross-sectional area (A)
ultimate tensile strength (UTS)	the maximum stress a material can withstand before failing

weldability

the ease with which a material is able to be welded

Young's modulus

the ratio of stress to strain within the elastic region of the stress-strain curve (prior to the yield point)