

## Technical Abbreviations

**Term..... Abbreviation**

acre-foot ..... acre-ft  
 actual cubic feet per second .....acfs  
 alternating current ..... ac or AC  
 air mass .....AM  
 air mass 1.0..... AM1  
 ampere ..... A  
 Angstrom unit..... Å  
 ante meridiem (morning)..... a.m.  
 antireflective .....AR  
 atmosphere..... atm  
 atomic percent ..... at. %  
 atomic weight ..... at. wt  
 atto ..... a

bar ..... b  
 millibar ..... mb  
 barrel ..... bbl  
 base (genetics)..... b  
 thousand bases ..... kb  
 base pairs..... bp  
 Baume .....Be  
 becquerel ..... Bq  
 biological oxygen demand ..... BOD  
 boiling point ..... bp  
 British thermal unit..... Btu  
 bushel ..... bu

calorie..... cal  
 candela ..... cd  
 cent..... 4  
 centi..... c  
 centigram ..... cg  
 centiliter..... cL  
 centimeter ..... cm  
 Chapter (not used in text) ..... Chap.  
 chemical vapor deposition ..... CVD  
 circa (about)..... ca.  
 coefficient of lift..... CL  
 coefficient of performance..... COP  
 concentrated (tables only)..... conc.  
 confer (compare)..... cf.  
 cosine .....cos  
 coulomb..... C  
 counts per minute..... cpm  
 cubic centimeter .....cm<sup>3</sup>

**Term..... Abbreviation**

cubic feet per minute ..... cfm or ft<sup>3</sup>/min  
 cubic feet per second ..... cfs or ft<sup>3</sup>/s  
 cubic foot .....ft<sup>3</sup>  
 cubic inch .....in.<sup>3</sup>  
 cubic meter ..... m<sup>3</sup>  
 cubic millimeter ..... mm<sup>3</sup>  
 cubic yard..... cu yd or yd<sup>3</sup>  
 current-voltage..... IV  
 cycles per second (hertz)..... Hz

day..... d  
 deci..... d  
 decibel .....dB  
 degree (angular).....E, deg  
 degree Celsius.....EC  
 degree Fahrenheit ..... EF  
 degree Rankine .....ER  
 deka..... da  
 diameter (tables only) ..... diam.  
 direct current ..... dc or DC  
 dissolved oxygen .....DO  
 dollar ..... \$  
 thousands of dollars.....\$K  
 millions of dollars (tables only) ..... \$M  
 year of dollars..... year \$ (1992 \$)  
 domestic hot water..... DHW

electromagnetic interference.....ENU  
 electromagnetic unit..... EMU  
 electromotive force ..... emf  
 electron volt..... eV  
 electrostatic unit..... ESU  
 equation(s).....Eq(s)  
 equivalent weight.....equiv. wt  
 et ali(i,ae) (and others).....et al.  
 exempli gratia (for example) .....e.g.  
 et cetera ..... etc.  
 exponential .....exp  
 experiment (tables only)..... expt.

farad ..... F  
 feet per minute.....ft/min  
 feet per second..... ft/s  
 femto ..... f

**Term..... Abbreviation**

fill factor .....	.FF
foot .....	ft
foot-pound .....	ft-lb
foot-second .....	ft-s
freezing point .....	fp
fiscal year.....	fy
fiscal year 1993.....	FY 1993
gallon .....	gal
gallons per day .....	gal/d (or gpd)
gallons per minute .....	gal/min (or gpm)
gallons per second.....	gal/s (or gps)
gallons per year .....	gal/yr (or gpy)
gas (in chemical formula).....	g
giga .....	G
grains per second .....	gr/s
gram.....	g
gram-atom.....	g-atom
gravity (force of).....	g
gray .....	Gy
gross national product .....	GNP
hectare.....	ha
hecto .....	h
henry.....	H
hertz .....	Hz
horsepower .....	hp
hour .....	h
hundred.....	C
id est (that is).....	i.e.
inch.....	in.
inch-pound .....	in.-lb
inches per second.....	in./s
industrial process heat .....	IPH
infrared .....	ir or IR
inside diameter .....	ID
(use abbreviation only in such phrases as 3-cm-ID tube)	
international unit .....	IU
joule .....	J
kelvin.....	K
kilo.....	k
kilocalorie .....	kcal
kilocycles per second (kilohertz) .....	kHz
kilogram.....	kg

**Term..... Abbreviation**

kilograms per cubic meter.....	kg/m <sup>3</sup>
kilograms per second.....	kg/s
kilometer .....	km
kilometers per second .....	km/s
kilopascal.....	kPa
kilovolt .....	kV
kilovolt-ampere .....	kVA
kilowatt.....	kW
kilowatt-hour .....	kWh
langley .....	no abbreviation
liquid (in chemical formula) .....	R
liter .....	L
local area network.....	LAN
logarithm (common).....	log
logarithm (natural).....	ln
lumen .....	lm
lux .....	lx
maximum (tables only) .....	max
mean sea level.....	msl
mega (million) .....	M
megacycles per second (megahertz) .....	Mhz
megavolt.....	MV
megawatt .....	MW
megawatt electric .....	MW <sub>e</sub>
megawatt thermal.....	MW <sub>t</sub>
melting point.....	mp
metal-organic chemical vapor deposition.....	MOCVD
meter .....	m
meter-kilogram .....	m-kg
micro .....	μ
microampere.....	μA
microliter .....	μL
micrometer .....	μm
microvolt .....	μV
microwatt.....	μW
mile .....	mi
miles per hour.....	mph
miles per hour per second.....	mph/s
milli .....	m
milliampere .....	mA
milligram .....	mg
milligram percent.....	mg %
milliliter .....	mL
millimeter .....	mm
million (mega) .....	M

**Term..... Abbreviation**

million Btu .....	Mbtu*
milliradian.....	mrad
millivolt.....	mV
milliwatt.....	MW
minimum (tables only) .....	min.
minute.....	min
mole.....	mol
mole percent.....	mol %
molecular weight.....	mol wt
moles per liter (molar).....	M
month (tables only) .....	mo
municipal solid waste .....	MSW
nano.....	n
nanogram .....	ng
nanometer .....	nm
nanosecond.....	ns
newton.....	Ns
normal pressure and temperature.....	NPT
nuclear magnetic resonance .....	nmr or NMR
number.....	no.
oersted .....	oe
ohm.....	$\Omega$
open-circuit voltage.....	V <sub>OC</sub>
ounce .....	oz
ounce-foot.....	oz-ft
ounce-inch .....	oz-in.
outside diameter (see inside diameter) .....	OD
page(s) .....	p(p).
parts per billion.....	ppb
parts per millions.....	ppm
pascal.....	Pa
peak watt.....	W <sub>p</sub>
per.....	/
percent .....	%
peta .....	P
peta .....	P
photovoltaics.....	PV
pico.....	p
post meridiem (after noon).....	p.m.
pound.....	lb
pound-foot.....	lb-ft
pound-inc.....	lb-in

**Term..... Abbreviation**

pounds per square foot .....	lb/ft <sup>2</sup>
pounds per square inch.....	psi
pounds per square inch absolute.....	psia
pounds per square inch gauge.....	psig
public law.....	P.L.
radian .....	rad
reference(s).....	Ref(s).
request for proposals .....	RFP
research and development.....	R&D
research, development and demonstration .....	RD&D
revolutions per minute.....	rpm
revolutions per second.....	rps
root-mean-square.....	rms
safe operating procedure.....	SOP
second (time).....	s
Section (reports).....	Sec.
Section (laws).....	'
short-circuit current .....	L <sub>sc</sub>
siemens.....	S
sievert.....	Sv
simultaneous saccharification and fermentation.....	SSF
sine.....	sin
solid (in chemical formula).....	s
species (sing.).....	sp.
species (pl.) .....	spp.
specific heat.....	C <sub>p</sub>
square centimeter.....	cm <sup>2</sup>
square foot.....	ft <sup>2</sup>
square inch .....	in. <sup>2</sup>
square kilometer .....	km <sup>2</sup>
square meter .....	m <sup>2</sup>
square millimeter .....	mm <sup>2</sup>
standard (tables only).....	std.
standard cubic feet.....	scf
standard temperature and pressure.....	STP
steradian .....	sr
synthetic natural gas.....	SNG
tangent.....	tan
temperature (tables only) .....	temp.
tera.....	T
tesla .....	T
thousand (used with money only).....	K
thousand (kilo).....	k

\*10<sup>6</sup> Btu is preferred. Never use MMBtu.

<i>Term</i> .....	<i>Abbreviation</i>
ton (metric)(10 <sup>3</sup> kg)* .....	t
torr .....	torr
ultraviolet.....	uv or UV
unit.....	U
variety .....	var.
versus (tables only) .....	vs.
videlicet (namely).....	viz.
volt.....	V
volume percent.....	vol %
volume per volume .....	v/v

<i>Term</i> .....	<i>Abbreviation</i>
watt.....	W
(peak) w .....	W <sub>p</sub>
watt electric .....	W <sub>e</sub>
watt-hour .....	Wh
watt thermal .....	W <sub>t</sub>
weber .....	Wb
weight.....	wt
weight percent.....	wt %
weight per weight .....	w/w
yard.....	yd
year.....	yr

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\*Clarify whether a ton is English or metric.  
Avoid using the abbreviation.