

Acronyms

A	ampere
AC	alternating current
ACEN	alternating current electrode negative
ACEP	alternating current electrode positive
ACHF	alternating current high frequency
ACLF	alternating current low frequency
Ar	argon
ASME	American Society of Mechanical Engineers
AWS	American Welding Society
CAC-A	air carbon arc cutting
CC	constant current
CCHF	constant current high frequency
cfh	cubic feet per hour
cm ²	square centimetre
CO ₂	carbon dioxide
CP	constant potential
CSA	Canadian Standards Association
CV	constant voltage
CVEN	constant voltage electrode negative
CVEP	constant voltage electrode positive
CVHF	constant voltage high frequency
CWB	Canadian Welding Bureau
dB	decibel
DC	direct current
DCEN	direct current electrode negative
DCEP	direct current electrode positive

Acronyms

DCRP	direct current reverse polarity
DCSP	direct current straight polarity
FCAW	flux-cored arc welding
ft.	foot
GTSM	gouging to sound metal
GMAW	gas metal arc welding
GTAW	gas tungsten arc welding
HAZ	heat affected zone
He	helium
HF	high frequency
ID	inside diameter
in.	inch
in ²	square inch
in ³	cubic inch
in./min	inches per minute
ITP	inspection and test plan
kg	kilogram
lb.	pound
lb./in ³	pounds per cubic inch
LPI	liquid penetrant inspection
m	metre
MCAW	metal-cored arc welding
mm	millimetre
MS	mild steel
MTR	mill test report

Acronyms

NDT	non-destructive testing
O ₂	oxygen
OD	outside diameter
OFC	oxy-fuel gas cutting
PAC	plasma arc cutting
PAG	plasma arc gouging
PPE	personal protective equipment
PQR	procedure qualification record
psi	pounds per square inch
rpm	revolutions per minute
SAW	submerged arc welding
SDS	safety data sheet
SMAW	shielded metal arc welding
SS	stainless steel
UV	ultraviolet
WPDS	welding procedure data sheet
WPS	welding procedure specifications

Formulas

Constants

π	3.1416
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Formulas

Descriptions	Full	Abbreviated
Area of a circle	$\pi \times \text{radius squared}$	πr^2
Area of triangle	$\frac{\text{height} \times \text{base}}{2}$	$\frac{h \times b}{2}$
Circumference of circle	$2 \times \pi \times \text{radius}$	$2 \pi r$
Length of an arc	$\theta^\circ \times (\pi / 180) \times \text{radius}$	$\theta^\circ \times (\pi / 180) \times r$
Volume of cylinder	$\pi \times \text{radius squared} \times \text{height}$	$\pi r^2 h$