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机械焊接用语

acetylene 乙炔
ampere 电流安培
angle welding 角焊
arc 电弧
argon arc welding 氩弧焊接
bare electrode 光熔接条
butt welding 对接焊接
camber 电弧弯曲
cascade 阶叠熔接法
clad weld 被覆熔接
crator 焊疤
excess metal 多余金属
filler rod 焊条
fillet weld 填角焊接
gas shield 气体遮蔽
groove welding 起槽熔接
hand face shield 手握面罩
hard facing 硬表面堆焊
jig welding 工模焊接
laser beam welding 雷射光焊接
metal electrode insert gas welding MIG 熔接
nugget 点焊熔核
overlaying 堆焊
peening of welding 珠击熔接法
plug welding 塞孔熔接
positioned welding 正向熔接
pressure welding 压焊
propane gas cutting 丙烷气切割
pure nickel electrode 纯镍熔接条
reinforcement of weld 加强焊接
resist 抗蚀护膜
root running 背面熔接
seam 焊缝
seaming 接合
seam welding 流缝熔接
series seam welding 串联缝熔接
skip welding process 跳焊法
spark 火花
spot welding 点焊接
stitch welding 针角焊接
stud arc welding 电弧焊接
under laying 下部焊层
void 焊接空隙

weld flow mark 焊接流痕
weld flush 焊缝凸起
weld line 焊接纹
weld mark 焊接痕
weld penetration 熔接透入
weld zone 焊接区
welding 焊接
welding bead 焊接泡
welding direction 焊接方向
welding distortion 焊接变形
welding flux 焊剂
welding ground 电熔接地
welding interval 焊接周期
welding stress 熔接应变
welding torch 熔接气炬

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焊接术语 **Welding Glossary**

Active Arc Stabilizer™ (Miller Welding Exclusive) — Enhances arc starts and provides a softer arc throughout all ranges, with less puddle turbulence and less spatter.

Adaptive Hot Start™ (Miller Welding Exclusive) — Automatically increases the output amperage at the start of a Stick weld, should the start require it. Helps eliminate sticking of the electrode at arc start.

Advanced Active Field Control Technology™ (Miller Welding Exclusive) — A simple and reliable patented way of accurately controlling an engine drive's generator weld output.

Air Carbon Arc Cutting (CAC-A) — A cutting process by which metals are melted by the heat of an arc using a carbon electrode. Molten metal is forced away from the cut by a blast of forced air.

Alternating Current (AC) — An electrical current that reverses its direction at regular intervals, such as 60 cycles alternating current (AC), or 60 hertz.

Amperage — The measurement of the amount of electricity flowing past a given point in a conductor per second. Current is another name for amperage.

Arc — The physical gap between the end of the electrode and the base metal. The physical gap causes heat due to resistance of current flow and arc rays.

Automatic Start at Idle (Miller Welding Exclusive) — Idles engine immediately when started, extending engine life and reducing fuel consumption and noise.

Automatic Welding — Uses equipment which welds without the constant adjusting of controls by the welder or operator. Equipment controls joint alignment by using an automatic sensing device.

Auto-Retire™ (Miller Welding Exclusive) — Automatically controls the pilot arc when cutting expanded metal or multiple pieces of metal, without manual re-triggering.

Constant-Current (CC) Welding Machine — These welding machines have limited maximum short circuit current. They have a negative volt-amp curve and are often referred to as “droopers”. The voltage will change with different arc lengths while only slightly varying the amperage, thus the name constant current or variable voltage.

Constant-Speed Wire Feeder — Feeder operates from 24 or 115 VAC supplied by the welding power source.

Constant-Voltage (CV), Constant-Potential (CP) Welding Machine — “Potential” and “voltage” are basically the same in meaning. This type of welding machine output maintains a relatively stable, consistent voltage regardless of the amperage output. It results in a relatively flat volt-amp curve as opposed to the drooping volt-amp curve of a typical Stick (SMAW) welding machine.

Current — Another name for amperage. The amount of electricity flowing past a point in a conductor every second.

CFM (Cubic Feet per Minute) — A standard volumetric measurement of gas flow.

Direct Current (DC) — Flows in one direction and does not reverse its direction of flow as does alternating current.

Dig — Also called Arc Control. Gives a power source variable additional amperage during low voltage (short arc length) conditions while welding. Helps avoid “sticking” Stick electrodes when a short arc length is used.

Direct Current Electrode Negative (DCEN) — The specific direction of current flow through a welding circuit when the electrode lead is connected to the negative terminal and the work lead is connected to the positive terminal of a DC welding machine. Also called direct current, straight polarity (DCSP).

Direct Current Electrode Positive (DCEP) — The specific direction of current flow through a welding circuit when the electrode lead is connected to a positive terminal and the work lead is connected to a negative terminal to a DC welding machine. Also called direct current, reverse polarity (DCRP).

Duty Cycle — The number of minutes out of a 10-minute time period an arc welding machine can be operated at maximum rated output. An example would be 60% duty cycle at 300 amps. This would mean that at 300 amps the welding machine can be used for 6 minutes and then must be allowed to cool with the fan motor running for 4 minutes. (Some manufacturers outside the U.S. rate machines on a 5-minute cycle).

Fan-On-Demand™ (Miller Welding Exclusive) — Internal power source cooling system that only works when needed, keeping internal components cleaner.

Fixed Automation — Automated, electronically controlled welding system for simple, straight or circular welds.

Flexible Automation — Automated, robotically controlled welding system for complex shapes and applications where welding paths require torch-angle manipulation.

Flux Cored Arc Welding (FCAW) — An arc welding process which melts and joins metals by heating them with an arc between a continuous, consumable electrode wire and the work. Shielding is obtained from a flux contained within the electrode core. Depending upon the type of flux cored wire, added shielding may or may not be provided from externally supplied gas or gas mixture. Consumables: contact tips, flux cored wire, shielding gas (if required, depends on wire type)

Ground Connection — A safety connection from a welding machine frame to the earth. Often used for grounding an engine-driven welding machine where a cable is connected from a ground stud on the welding machine to a metal stake placed in the ground. See Workpiece Connection for the difference between work connection and ground connection.

Ground Lead — When referring to the connection from the welding machine to the work, see preferred term Workpiece Lead.

Hertz (Hz) — Hertz is often referred to as “cycles per second”. In the United States, the frequency or directional change of alternating current is usually 60 hertz.

High Frequency — Covers the entire frequency spectrum above 50,000 Hz. Used in TIG welding for arc ignition and stabilization.

Hot Start™ (Miller Welding Exclusive) — Used on some Stick (SMAW) machines to make it easier to start difficult-to-start electrodes. Used for arc starting only.

Inverter - Power source which increases the frequency of the incoming primary power, thus providing for a smaller size machine and improved electrical characteristics for welding, such as faster response time and more control for pulse welding.

kVA — Kilovolt-amperes. The total volts times amps divided by 1,000, demanded by a welding power source from the primary power furnished by the utility company.

kW — Kilowatts. Primary kW is the actual power used by the power source when it is producing its rated output. Secondary kW is the actual power output of the welding power source. Kilowatts are found by taking volts times amps divided by 1,000 and taking into account any power factor.

Lift-Arc™ (Miller Welding Exclusive) — This feature allows TIG arc starting without high frequency. Starts the arc at any amperage without contaminating the weld with tungsten.

LVC™ (Line Voltage Compensation) (Miller Welding Exclusive) — Keeps the output of a power source constant, regardless of minor fluctuations in input power.

Microprocessor — One or more integrated circuits that can be programmed with stored instructions to perform a variety of functions.

MIG (GMAW or Gas Metal Arc Welding) — An arc welding process which joins metals by heating them with an arc. The arc is between a continuously fed filler metal (consumable) electrode and the workpiece. Externally supplied gas or gas mixtures provide shielding. Common MIG welding is also referred to as short circuit transfer. Metal is deposited only when the wire actually touches the work. No metal is transferred across the arc. Another method of MIG welding, spray transfer moves a stream of tiny molten droplets across the arc from the electrode to the weld puddle. Consumables: contact tips, shielding gas, welding wire

Open-Circuit Voltage (OCV) — As the name implies, no current is flowing in the circuit because the circuit is open. The voltage is impressed upon the circuit, however, so that when the circuit is completed, the current will flow immediately. For example, a welding machine that is turned on but not being used for welding at the moment will have an open-circuit voltage applied to the cables attached to the output terminals of the welding machine.

Plasma Arc Cutting — An arc cutting process which severs metal by using a constricted arc to melt a small area of the work. This process can cut all metals that conduct electricity. Consumables: torch consumables, gas or compressed air supply

Pounds per Square Inch (psi) — A measurement equal to a mass or weight applied to one square inch of surface area.

Power Efficiency — How well an electrical machine uses the incoming electrical power.

Primary Power — Often referred to as the input line voltage and amperage available to the welding machine from the shop's main power line. Often expressed in watts or kilowatts (kW), primary input power is AC and may be single-phase or three-phase. Welding machines with the capability of accepting more than one primary input voltage and amperage must be properly connected for the incoming primary power being used.

Pulsed MIG (MIG-P) — A modified spray transfer process that produces no spatter because the wire does not touch the weld puddle. Applications best suited for pulsed MIG are those currently using the short circuit transfer method for welding steel, 14 gauge (1.8 mm) and up.

Pulsed TIG (TIG-P) — A modified TIG process appropriate for welding thinner materials.

Pulsing — Sequencing and controlling the amount of current, the frequency, and the duration of the welding arc.

Rated Load — The amperage and voltage the power source is designed to produce for a given specific duty cycle period. For example, 300 amps, 32 load volts, at 60% duty cycle.

Resistance Spot Welding (RSW) — A process in which two pieces of metal are joined by passing current between electrodes positioned on opposite sides of the pieces to be welded. There is no arc with this process. For more information on Resistance Spot Welding, please see Resistance Spot Welding Tech Tips.

RMS (Root Mean Square) — The "effective" values of measured AC voltage or amperage. RMS equals 0.707 times the maximum, or peak value.

Semiautomatic Welding — The equipment controls only the electrode wire feeding. The welding gun movement is controlled by hand.

Shielding Gas — Protective gas used to prevent atmospheric contamination of the weld pool. Usually a mixed gas or CO₂.

Single-Phase Circuit — An electrical circuit producing only one alternating cycle within a 360

degree time span.

Smart Fuel Tank (Miller Welding Exclusive) — Tank's design minimizes chance of fuel backflow.

Spatter — The metal particles blown away from the welding arc. These particles do not become part of the completed weld.

Spot Welding — Usually made on materials having some type of overlapping joint design. Can refer to resistance, MIG or TIG spot welding. Resistance spot welds are made from electrodes on both sides of the joint, while TIG and MIG spots are made from one side only.

Stick Welding (SMAW or Shielded Metal Arc) — An arc welding process which melts and joins metals by heating them with an arc, between a covered metal electrode and the work. Shielding gas is obtained from the electrode outer coating, often called flux. Filler metal is primarily obtained from the electrode core. An AC/DC welder is recommended for Stick. For most applications, DC reverse polarity welding offers advantages over AC, including easier starts and out-of-position welding, smoother arc and fewer arc outages and sticking. Consumables: stick electrodes

Submerged Arc Welding (SAW) — A process by which metals are joined by an arc or arcs between a bare metal electrode or electrodes and the work. Shielding is supplied by a granular, fusible material usually brought to the work from a flux hopper.

Three-Phase Circuit — An electrical circuit delivering three cycles within a 360 degree time span, and the cycles are 120 electrical degrees apart.

TIG Welding (GTAW or Gas Tungsten Arc) — Often called TIG welding (Tungsten Inert Gas), this welding process joins metals by heating them with a tungsten electrode which should not become part of the completed weld. Filler metal is sometimes used and argon inert gas or inert gas mixtures are used for shielding. Consumables: tungsten electrode, filler metal, shielding gas

Torch — A device used in the TIG (GTAW) process to control the position of the electrode, to transfer current to the arc, and to direct the flow of shielding gas.

Tungsten — Rare metallic element with extremely high melting point (3410° C). Used in manufacturing TIG electrodes.

Voltage — The pressure or force that pushes the electrons through a conductor. Voltage does not flow, but causes amperage or current to flow. Voltage is sometimes termed electromotive force (EMF) or difference in potential.

Voltage-Sensing Wire Feeder — Feeder operates from arc voltage generated by welding power source.

Volt-Amp Curve — Graph that shows the output characteristics of a welding power source. Shows voltage and amperage capabilities of a specific machine.

Weld Metal — The electrode and base metal that was melted while welding was taking place. This forms the welding bead.

Weld Transfer — Method by which metal is transferred from the wire to the molten puddle. There are several methods used in MIG; they include: short circuit transfer, spray arc transfer, globular transfer, buried arc transfer, and pulsed arc transfer.

Wind Tunnel Technology™ (Miller Welding Exclusive) — Internal air flow on many Miller inverters, that protects electrical components and PC boards from contamination, significantly improving reliability.

Wire Feed Speed — Expressed in in/min or mm/s, and refers to the speed and amount of filler metal fed into a weld. Generally speaking the higher the wire feed speed, the higher the amperage.

Workpiece Connection — A means to fasten the work lead (work cable) to the work (metal to be

welded on). Also, the point at which this connection is made. One type of work connection is made with an adjustable clamp.

Workpiece Lead — The conductor cable or electrical conductor between the arc welding machine and the work.

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ASME 锅炉和压力容器规范中有关焊接术语定义

电弧缝焊 arc seam weld 采用电弧焊方法焊成的缝形焊缝。

电弧点焊 **arc spot weld** 采用电弧焊方法焊成的点状焊缝。

弧伤 **arc strike** 由于疏忽大意，使电能完成的焊缝（或母材）表面与焊条或磁探头（电流源）之间通过，从而发生电弧，造成在完成的焊缝（或母材）的外形轮廓上的任何烧伤。

螺柱弧焊 **arc stud welding** 一种弧焊方法。此法在金属螺柱（或类似零件）和另一工件之间引发电弧，直至被连接的表面受到适当加热，然后再以压力使两者接合起来。在螺柱外围加一陶瓷护套，可以获得适当的部分保护。焊剂或保护气体可用可不用。

电弧焊 **arc welding** 电弧焊是指某一焊接方法群，此焊接方法群是以单弧或多弧加热的办法来实现接合，填充金属可用可不用，外加压力亦可用可不用。

焊态 **as-welded** 焊缝金属、焊接接头和焊件，在焊接后未接受任何后续处理例如热处理、机械处理或化学处理之前的状态。

自动焊 **automatic welding** 采用施焊时无需焊接操作工调节控制钮的机器进行的焊接。这类焊机可以也可以不执行装卸工件的工作，参见机动焊。

背面清根 **back gouging** 从一个部分焊接的接头的另一面清除一些焊缝金属和母材，以保证从这一面作后续焊接时能完全焊透。

后焊法 **backhand welding** 焊炬或焊枪的指向与焊接方向相反的一种焊接技术。

衬垫 **backing** 为了支撑熔化的焊接金属在焊接接头的根部放置一材料。

背面气体 **backing gas** 采用氩、氦、氮或活性气体之类，从焊接接头根部的背面（与焊接侧相反的一面）排除氧气。

母材 **base metal** 被焊接的或被切割的金属。

熔合线 **bond line, fusion line** 见 **fusion line**

对接接头 **butt joint** 在近乎同一的平面内对装在一起的两元件之间的接头。

堆焊缓冲层 **buttering** 堆焊缓冲层是指在接头准备作最终焊接前，预先在接头的—一个（或两个）侧面堆焊—层（或多层）焊缝金属，以便为后续焊接提供适当的过渡层熔敷焊缝。

接合 **calescence** 被焊接的材料相连在一起，或者形成—体。

完全熔合 **complete fusion** 在整个要求焊接的母材表面上和所有的焊层和焊道之间都发生熔化。

熔嘴电渣焊 **consumable guide electro-slag welding** 填充金属由电极及其导电元件提供的一种电渣焊接方法，参见电渣焊 ESW。

熔化性填塞 **consumable insert** 与接头根部完全熔合，并成为焊缝—部分的预置性填充金属。

导电管 **contact tube** 送电流传送到连续电极的装置。

角接接头 **corner joint** 两个互成近乎直角的元件之间的接头。

试件 **coupon** 见 **test coupon**。

裂纹 **crack** 具有尖端，且开口位移长宽比很大的短裂型的不连续性。

缺陷 **defect** —一个或多个的不连续点，其性质或累积效应（例如裂纹的总长度）使某—零件或产品不能满足有关的最低验收标准与规格者，—这一术语意味着（指出）拒收。

直流电极接负 **direct current electrode positive** 直流弧焊时，导线的接法使工件为焊接电弧的正极，而电极为其负极，参见正接性。

直流电极接正 **direct current electrode negative** 直流弧焊时，导线的接法使工件为焊接电弧的负极，而电极为其正极，参见反接性。

双面焊对接接头 **double-welded butt joint** 从两面进行焊接的对接接头。注：对于填充金属仅从单面加入的接头，假如采取了措施使接头完全焊透，具接头两面都得到了加强，

则这种接头可认为是相当于双面焊的对接接头。

双面焊搭接接头 **double-welded lap joint** 一个搭接接头沿着相互搭叠的两个工件的边缘均用焊缝连接。

驻留 **dwell** 在每一次有规律的摆动或横摆中，电极在任一点所停留的时间。

电极 **electrode**

弧焊电极 **arc welding electrode** 焊接回路中的一部分，通过它，电流在电极夹和电弧之间流过，参见弧焊。

裸电极 **bare electrode** 由单一金属或合金构成的填充金属电极，其形状可以是丝、带或棒。除了在制造或保管中附着在其表面上的东西外，这种电极既没有覆层也没有涂料。

碳电极 **carbon electrode** 在弧焊和切割中采用的非填充材料电极，它是镀铜的带其它覆层的碳棒或石墨棒。

组合电极 **composite electrode** 各种物理形状的多组份填充金属电极（例如多股、管状或涂料焊丝）之中的任一种。

涂料焊条 **covered electrode** 它是由裸电极芯或金属芯焊丝构成的组合式填充金属电极：在此电极上附有足够的涂料，以便在焊缝金属上形成渣层。涂料中可以含有能起防止大气干扰、脱氧、稳弧等作用的材料以及金属添加剂。

药芯焊丝 **flux cored electrode** 它是由金属管或其他中空形状的金属构成的组合式填充金属电极，其中含有能提供保护气氛、脱氧、稳弧和造渣的组份。电极芯中也可含有合金材料，外部保护气体可有可无。

金属芯焊丝 **metal cored electrode** 它是由金属管或其他中空形状的金属构成的组合式填充金属电极，其中含有合金组份，也可含有一些能起稳弧和脱氧作用的少量组份。外部保护气体可有可无。

多股电极 **stranded electrode** 由于多股焊丝构成一种组合电极，在其中可包入改善焊缝性能

发射涂料焊条 **emissive electrode** 是在裸电极芯或复合电极的外面涂一极薄层的稳弧涂料所构成的填充金属电极。

薄涂料焊条 **lightly coated electrode** 是由金属丝和在拔丝后涂上的主要起稳弧作用的薄药层构成的填充金属电极。

金属极 **metal electrode** 是由任何方法制造的、带镀层、涂料或全裸的金属丝或棒。它用作弧焊或切割中的非填充金属电极。

钨极 **tungsten electrode** 主要用钨制造的、用于弧焊或切割中的非填充金属电极。

电渣焊电极 **electro-slag welding electrode** 焊接回路中填充金属部分。电流是通过后者在电极导电元件和熔渣之间流过的。注：在弧焊电极一条下所定义的裸电极和组合电极可用于电渣焊。熔化嘴可作为电极系统中的一个部分用于电渣焊。

电阻焊电极 **resistance welding electrode** 它是电阻焊机的零部件。用以向工件导入电流，并且在多数情况下对工件直接施加压力。电极形状可以是滚轮式、滚柱式、棒式、筒式、板式、夹钳式、夹盘式或其变型，参见电阻焊。

电气焊 **electro-gas welding** 通过填充焊丝（可熔化的）和工件之间的电弧来加热金属使之结合的一种电弧焊方法。对于立焊位置的焊接使用造型滑块使焊缝金属成形。焊丝可以是药芯焊丝，也可以是实芯焊丝。使用实芯焊丝时保护来源于气体或混合气体。使用药芯焊丝时的保护来源于外界提供的单一气体或混合气体。

电子束焊 **electron beam welding(EBW)** 是利用主要由高速电子流组成的聚焦束流撞击被焊表面而产生的热量使金属发生接合的焊接方法。

电渣焊 **electro-slag welding(ESW)** 以熔渣产生金属结合的一种焊接方法，熔渣使

填充金属和工件的被焊表面熔化。当焊接进行时，熔渣沿着接头的整个横截面移动，而熔池则受到熔渣的保护。起焊时，首先从电弧加热渣，然而弧灭，导电的渣借助于电流通过电极和工件时的电阻而保持为熔融状态。参见电渣焊电极和熔嘴电渣焊。

焊接面 **face of weld** 焊缝所在施焊的一侧所暴露的表面。

铁素体数值 **ferrite number** 指奥氏体不锈钢焊缝金属铁素体含量的一种任意的、标准化的数值。应以这种数值在一对一换算的基础上代替铁素体百分含量或铁素体百分含量。参见最新版 AWS A4.2 标定奥氏体不锈钢焊缝金属 δ -铁素体含量磁测定仪的标准程序。

填充金属 **filler metal** 为了制造焊缝而添加的金属。

角焊缝 **fillet weld** 在搭接、T型和角接接头中，连接大体互成直角的两个表面的焊缝，焊缝的横截面近乎三角形。

焊剂 **flux** 以焊接电弧使之熔化的易熔性矿物材料。焊剂可以使粒状或固态的涂层。焊剂用以稳定电弧、保护熔池的全部或一部分，使之免受大气的干扰，分解时可能放出也可能不放出保护性气体

活性焊剂 **active flux** 含有 Mn 或/和 Si 合金且 Mn 和 Si 合金向熔敷金属过渡。过渡受焊接参数的影响。尤其是电弧电压的这类焊剂。

中性焊剂 **neutral flux** 当使用特定的焊丝时，电弧电压的大小的变化对全部焊缝金属化学成分影响不大的焊剂。

药芯焊丝弧焊 **flux cored arc welding(FCAW)** 以在连续性填充金属极（熔化极）和工件之间的电弧加热金属，使之产生接合的一种熔化极气体保护电弧焊方法。管状焊丝内部的焊剂起保护电弧的作用，也可以外加保护气体或混合保护气体起补充保护的作用。参见药芯焊丝。

药芯焊丝弧焊-电气焊(**flux cored arc welding-electro-gas(FCAW-EG)**) 这是药芯焊丝弧焊的变型，此时为了在垂直位置施焊对熔池加以限制而采用模块。也可以外加保护气体或混合气体起补充保护的作用。

左焊法 **forehand welding** 焊炬或焊枪的指向是与焊接前进方向一致的焊接技术。

频率 **frequency** 在一分钟内或其它的指定时间增量内摆动头所完成的循环次数。

摩擦焊 **friction welding(FRW)** 在两个相互摩擦的表面之间，由于机械滑动产生的热量，使材料得以接合的固态焊方法。工件借助压力得以连接在一起。

燃料气体 **fuel gas** 通常与氧气一起用作加热目的的气体，例如乙炔、天然气、氢、丙烷、稳定化的甲基乙炔丙二烯以及其它合成燃料和烃类。

大脚角焊缝 **full fillet weld** 角焊缝的尺寸等于被连接的较薄件的厚度。

熔化喷焊(热喷焊) **fused spray deposit 或 thermal spraying** 它是一种自动熔喷焊工艺，喷后随即在自身内部并与基体加热，达到接合。

熔合 **fusion** 填充金属与母材熔合在一起，或仅仅是母材相互熔合在一起，从而得到接合。

熔合线 **fusionline** 焊件中焊缝金属和基本技术之间的分界面，当不采用填充金属时为基本金属部件之间的分界面，也称接合线。

气体垫 **gas backing** 见 **backing gas**。

熔化极气体保护焊 **gas metal-arc welding(GMA)** 以连续填充金属极（熔化极）和工件之间的电弧加热，从而获得结合的弧焊方法。保护方法是采用单一气体、混合气体（可包括某一惰性气体），或焊剂和气体的混合保护（此法有时称为 MIG 焊）。

熔化极气体保护焊-电气焊 **gas metal-arc welding-electro-gas (GMAW-EG)** 此法是熔化极气体保护焊的变型。它采用模块以便在垂直位置施焊时对熔池加以限制。

熔化极气体保护焊-氩弧焊 **gas metal-arc welding-pulsed arc (GMAW-P)** 此法是熔

化极气体保护焊的变型。焊接采用脉冲电流，参见脉冲电源焊。

熔化极气体保护焊-短路焊 **gas metal-arc welding-short circuiting arc (GMAW-S)**

此法是熔化极气体保护焊的变型。其中熔化极（焊丝）是在重复性的短路过程中熔敷的，参见短路过渡。

钨极气体保护焊 **gas tungsten arc welding (GTAW)** 以钨极（非熔化极）和工件之间的电弧加热金属，从而获得结合的弧焊方法。保护方法是采用单一气体或混合气体。压力和填充金属可用可不用（此法有时不恰当地称为 TIG 焊）。

钨极气体保护焊-脉冲焊 **gas tungsten arc welding-pulsed arc (GTAW-P)** 此法是钨极气体保护焊的变型。焊接采用脉冲电流，参见脉冲电源焊。

熔滴过渡(电弧焊) **globular transfer 或 arc welding** 金属过渡的类型之一。其中熔化的填充金属是以大滴状穿越电弧的。

坡口焊缝 **groove weld** 焊缝是在两个被焊构件之间的坡口内形成的，坡口焊缝的标准型式如下：

直坡口焊缝 **square groove weld**

单面 V 形坡口焊缝 **single-Vee groove weld**

单斜边坡口焊缝 **single-bevel groove weld**

单面 U 形坡口焊缝 **single-bevel groove weld**

单面 J 形坡口焊缝 **single-J groove weld**

双面 V 形坡口焊缝 **double-Vee groove weld**

双斜边坡口焊缝 **double-bevel groove weld**

双面 U 形坡口焊缝 **double-bevel groove weld**

双面 J 形坡口焊缝 **double-J groove weld**

单面喇叭形半 V 型坡口焊缝 **single flare bevel groove weld**

单面喇叭形 V 型坡口焊缝 **single flare Vee groove weld**

双面喇叭形 V 型坡口焊缝 **double flare Vee groove weld**

双面喇叭形半 V 坡口焊缝 **double flare bevel groove weld**

表面硬质堆焊 **hard facing** 为了减少磨损和减少由于摩擦、冲击、磨蚀、擦伤和砂眼等造成的材料损失，而在母材上以堆焊法施加硬质复层的一种形式。

热影响区 **heat affected zone** 母材中由于焊接和切割热的影响，其力学性能或显微组织已经起了变化，但未发生熔化的那一部分。

感应焊 **induction welding(IW)** 由于工件电阻和感生电流而发热，以达到金属接合的焊接方法，焊接时压力可用可不用。

层间温度 **interpass temperature** 指即将焊接之前，在焊接接头中的最高温度，或者对多道焊而言，是指在下一个焊道即将开焊之前，在下一个熔敷焊缝金属某一区段中的最高温度。

接头 **joint** 已经或将要进行连接的构件边缘的节点。

接头熔深 **joint penetration** 从坡口焊缝的表面到接头内部的最小深度，不包括加强。

小孔焊接术 **keyhole** 是以集中的热源熔穿工件，使在熔化的焊缝金属前沿形成小孔的焊接技术。随着热源的向前移动，处于小孔后面的熔化金属变将小孔填满，从而形成焊缝。

搭接接头 **lap joint** 两搭接构件之间的接头。

机动焊 **machine welding** 在焊接操作工的经常观察和操纵之下，以机器进行的焊接。这种焊机对工件的装卸可进行也可不进行。参见自动焊。

手工焊 manual welding 全部以手工进行操作和控制的焊接。

熔入焊技术 melt-in 是通过调节集中热源的强度，在熔化的焊缝金属的前沿以填加填充金属的办法获得焊道的技术。

氧燃料气割 oxyfuel gas cutting(OFC) 利用高温下氧与母材发生化学反应的原理进行割断金属的切割方法群。它以特定的材料与氧燃烧所生成的火焰来保持所需的温度。

下转变温度 lower transformation temperature 在加热过程中开始向奥氏体转变的温度。

储能和连续驱动摩擦焊 inertia and continuous drive friction welding 是摩擦焊的方法和类型。(固态焊接方法)那里的结合是在压力混用力的两摩擦表面之间的运动获得热量后产生的。储能摩擦焊是利用主轴系统的飞轮旋转贮存的所有动能，连续驱动摩擦焊是利用连续驱动能源(比如电力或者水力电机)所提供的能量。

氧燃料气焊 oxyfuel gas welding(OFW) 利用氧燃料气的单个或多个火焰加热金属以达到接合的一组焊接方法，加热时外加压力可有可无，填充金属亦然。

焊道 pass 沿着接头、熔敷焊缝或基层作前进一次的焊接或表面堆焊作业。

锤击 peening 以冲击式打击对焊缝进行的机械加工。

技能评定 performance qualification 焊工或焊接操作工能否产生满足规定标准的焊缝的能力演示。

等离子弧焊 plasma arc welding(PAW) 以电极工件间的压缩电弧(转移弧)或电极-压缩喷嘴间的压缩电弧(非转移弧)加热金属，从而获得接合的弧焊方法。保护气体是从喷嘴喷出的热离子化气体，也可以再辅之以另一种气源的保护气体。保护气体可以是单一的惰性气体，也可以是混合气体。压力和填充金属可用亦可不用。

塞焊 plugweld 通过在搭接或T型接头中某一构件上的孔产生出来的圆形焊缝。孔壁可以是平行的或不平行的，面孔可以是被焊缝金属半填满或全填满(角焊的孔和点焊不得按此条定义解释)。

后热 postheating 在焊接或切割作业之后对焊缝或者焊件的加热。

焊后热处理 postweld heat treatment 在焊接后的任何热处理。

预热温度 preheat temperature 在焊接前，立即准备焊接的焊接接头的最小温度，或者在多道焊的情况下，焊接前的瞬间，以前的熔敷焊缝金属表面的最低温度。

预热 preheating 在即将焊接或切割作业前对母材的加热。

脉冲电源焊 pulsed power welding 任何弧焊方法，其电源是按照一定程序周期性地输出脉冲。这样，就可利用某一参数在短暂时期内的有效值。该参数的这种短暂值与其平均值有很大不同。相当的术语有脉冲电压焊和脉冲电流焊。参见脉冲喷射焊。

脉冲喷射焊 pulsed spray welding 使电流脉冲化，以便在平均电流不大于熔滴-喷射过渡临界电流值的条件下获得喷射型金属过渡的一种弧焊方法。

电阻缝焊 resistance seam welding(RSEW) 这是一种电阻焊方法。此法在电极压力下夹住在一起工件，由于对通过电流阻力而产生热量，从而在接触面发生接合。最终形成的焊缝是由于沿接头不断回轮的电极所造成的一连串的搭接的电阻焊点。

电阻点焊 resistance spot welding(RSW) 这是一种电阻焊方法。此法在电极压力下夹住在一起工件，由于对通过电流阻力而产生热量，从而在接触面的一个点发生接合，各个单独形成的焊点的形状和尺寸主要取决于电极的轮廓形状和尺寸。

点焊缝 spot weld 在相互搭接的构件之间或之上形成的焊缝，它是在两个相互接触的表面上，或从一个构件的表面上开始并发展的焊缝，其横截面(平面视图)近乎圆。

焊缝加强 reinforcement of weld 在坡口焊缝的正面或根部超过焊缝规定尺寸所需的焊缝金属。

电阻焊 resistance welding 这是一组焊接方法，它借助于作为电路中一个部分的工件，对通过电流阻力所产生的热量，以达到接合，焊接时施加压力。

螺柱电阻焊 resistance stud welding 这是一种电阻焊的方法，此法在螺柱和工件之间的界面上，由于对电流的阻力而产生热量，一直到被连接的两个表面达到适当地被加热时，再施加压力以达到接合。

保持块 retainer 用于保持熔池和令熔池成形的金属或非金属的、熔化或非熔化的材料（不包括气体）。

反极性 reverse polarity 在直流弧焊接时，导线的接法是令工件为焊接电弧的负极，而电极为正极，其同义词为支流电极接正。

密封焊缝 seal weld 任何主要用于能提供规定程度的密封性以防止泄漏的焊缝。

缝焊缝 seam weld 在搭接构件之间或之上形成的连续焊缝。它是在两个相互接触的表面上或从一个构件的表面上开始并发展的焊缝。这种焊缝可以是一条焊缝或一连串的点焊缝。

半自动弧焊 semiautomatic arc welding 采用只控制填充金属送进的焊机进行的电弧焊。

涂料焊条电弧焊 shielded metal arc welding(SMAW) 以涂料焊条和工件之间的电弧加热金属，从而达到结合的一种弧焊方法。以涂料的分解产物对电弧进行保护。施焊时须外加压力，填充金属即取自于焊条。

短路过渡(熔化极气体保护电弧焊) short circuiting transfer(gas metal arc welding) 从熔化电极熔化的金属，在重复短路期间熔敷的一种金属过渡形式。

单面焊对接接头 single-welded butt joint 仅从一面进行焊接的对接接头。

单面搭接接头 single-welded lap joint 只沿搭接构件两个边中的一个边进行焊接的搭接接头。

焊缝的尺寸

坡口焊缝 groove weld 焊缝尺寸为接头的熔深（倒角度加规定的根部熔深）。

角焊缝 fillet weld

等焊脚角焊缝 equal leg fillet weld 焊缝尺寸为角焊缝横截面内最大等腰三角形的边长。

不等焊脚角焊缝 unequal leg fillet weld 焊缝尺寸为角缝横截面内最大直角三角形的边长。

夹渣 slag inclusion 在焊缝金属内部或焊缝金属与母材之间包住的固态非金属物质。

试样 specimen, test specimen 见 test specimen。

喷射过渡(电弧焊) spray transfer(arc welding) 迫使熔化的填充金属以细滴状从轴向穿越电弧的一种金属过渡型式。

正极性 straight polarity 直流电弧焊中导线的接法是工件焊接电弧的正极，而电极接其负极，其同义词是直流电极接负。

直进焊道 stringer bead 以无明显横摆动动作焊成的焊道，参见摆动焊道。

螺柱焊 stud welding 将金属螺柱（或类似零件）与工件相连接的通用术语。焊接方法可采用弧焊、电阻焊、摩擦焊或者其他适当的方法。外部保护气体可用可不用。

埋弧焊 submerged arc welding(SAW) 以一个（或多个）金属裸电极与工件之间形成的一个（或多个）电弧加热金属，使后者得到接合的弧焊方法。熔化的金属和电弧被一层铺在工件上的粒状可熔性材料加以保护。不施加压力，填充金属取自电极，有时尚从焊条、焊剂、金属粒等得到补充性的填充金属。

表面堆焊	surfacing	参见堆焊层。
丁字接头	tee joint	相互之间近乎直角排列的作 T 字型的两个构件之间的接头。
试件	test coupon	用于工艺评定或技能评定的焊件(钎焊件)。试件可以取自板材、管材等等。其焊缝可以使角焊缝、熔敷焊缝等等。
试样	test specimen	为了特定的试验而从试件上切取的样品。试样可以使用于弯曲试验、拉力试验、冲击试验、化学分析、低倍检查等等。整个试件也可以是一个试样。例如射线探伤或小直径管拉力试验的试样。
热切割	thermal cutting	使被切割的金属(材料)熔化的一组切割方法。
理论厚度	theretical throat	从接头的根部开始到角焊缝截面内最大直角三角形斜边的垂直距离。
实际厚度	actual throat	从角焊缝的根部到其表面的最短距离。
有效厚度	effective throat	从焊缝根部到其表面的最短距离减去任何加强。
咬边	undercut	靠近焊缝的焊趾或根部的、在母材上熔陷的沟槽,后者未被焊缝金属所填满。
摆动焊道	weave bead	焊接时采用横向摆动所得到的焊道。
焊缝	weld	在采用或不采用填充金属的情况下,以加热金属到适当温度(压力可用可不用)或者仅采用压力的办法使金属产生的局部接合。
焊道	weld bead	焊接一道得到的熔敷焊缝,参见直进焊道和摆动焊道。
焊缝金属	weld metal	焊接时被熔化的焊缝部分。
堆焊层	weld metal overlay	为取得所需的性能和(或)尺寸,在母材表面的一层(或多层)焊缝金属。
焊工	welder	进行手工焊接或者半自动操作的人。
焊接操作工	welding operator	操作机器或者自动焊机的人。
焊件	weldment	将构成的零部件以焊接得方法连接得组合件,或含有堆焊金属的零部件。
上转变温度	upper transformation temperature	在加热期间,完成铁素体向奥氏体转变时的温度。

焊接相关英汉词汇

argon arc weld	氩弧焊
butt weld	对接焊(缝)

cluster weld 丛聚焊 (缝)
 cold weld 冷焊 (缝), 冷压接
 fillet weld 角焊 (缝)
 flash butt weld 闪光对接焊 (缝)
 full fillet weld 满角焊 (缝)
 groove weld 坡口焊 (缝)
 mash seam weld 滚压焊
 seam weld 滚焊 (缝)
 slot weld 切口焊 (缝)
 spot weld 点焊 (缝)
 tack (positioned) weld 定位【点位】焊 (组焊前)
 weldability 可焊性, 焊接性
 welder 焊工; 焊机
 welding 焊接 (法), 焊接 (的), 焊缝
 atomic hydrogen weld 原子氢焊
 attachment weld 固定焊接
 bead weld 堆焊, 狭的焊接
 braze weld 硬【钎】焊, 铜焊
 built-up weld 堆焊
 down hand weld 俯【水平】焊接
 electric arc weld 电弧焊
 flat position weld (顶面) 平【卧】焊
 flow weld 铸 (浇) 焊
 forehand weld 正手焊 (法)
 forge weld 锻焊, 锻接
 friction weld 摩擦焊
 gas shield weld 气体保护弧焊
 inert-gas metal-arc weld 焊丝惰性气体保护焊
 oxyacetylene weld 氧 (乙炔) 焊, 气焊
 percussion weld 冲击焊
 plasma-arc weld 等离子弧焊
 repair weld 补焊
 roll weld 滚压焊
 scarf weld 斜面焊, 两端搭接焊, 嵌接焊
 shield weld 气体保护焊
 union arc weld 磁性焊剂二氧化碳保护焊
 unionmelt weld 埋弧 (焊剂层下) 自动焊
 weldment 焊接件, 焊接装配
 bonding technology 焊接工艺
 fillet weld 角焊, 填角焊
 seal welding. 密封焊接
 ring joint 环接, 围缘接合
 seal fitting 密封接头, 密封配件
 weld reinforcement 焊缝补强

dimensional inspection	尺寸检验
flange gasket	法兰垫片
burn through	烧蚀
girth weld	环形焊缝
reinforcement of weld	加强焊缝
weld joint	焊缝, 焊接接头
circumferential joint	周圈接缝
butt weld	对接焊缝
arc welding	电弧焊
filler rod	焊条
shield gas	保护气体
welding rod	焊条
welding bead	焊道, 熔敷焊道, 焊珠
electrode	电焊条
longitudinal.	纵向的
horizontal line	水平线
welded joint	焊接缝 焊接节点
witness test	订货人在场的试验
Alignment:	对准, 定位调整
gas cutting.	气割
arc cutting	电弧切割
grind off	磨掉
Leveling:	校平
Fixing:	固定
Console:	控制台
material certificate	材料合格证
fabrication	加工, 制造
post weld heat treatment	焊后热处理
flushing	冲洗, 填缝
arc gouging	电弧刨削
machining	机械加工
nut	螺母
solvent	溶剂
tack welding	点焊
butt welding	对接焊
reinforcing pad.	补强垫, 增强衬板
flux	焊剂
blind	挡板
gusset plate	角撑板, 加固板
base material	基底材料
flow sheet	流程图
witnessed inspections	现场检测
drain	排水管
identification mark	识别标志

silicone paint	硅树脂油漆
fabrication drawing	制造图纸,制作图
WPS Works Process Specification	典型工艺规程
caulking metal	填隙合金[金属](材料)
weld bead	焊缝
weld mark	焊痕
bonding wire	接合线, 焊线埋弧焊
Submerged-arc Welding	电阻焊
Resistance Welding	滚焊
Seam welding throat thickness	焊缝厚度
weldability	可焊性, 焊接性
Weldable steel	焊接钢
Weldability of metal	金属可焊性
Weldability test	可焊性试验
Weld all around	围焊
Weldable copper	可焊复合铜板
Weld assembly	焊接件
Weld bond	熔合线, 焊口
Weld cap	焊帽
Weld collar	加强焊缝焊瘤
Weld crack	焊接裂缝
Weld crater	熔池
Weld crosswise	交叉焊接
Weld decay	焊缝腐蚀, 焊接接头晶间
Weld defect	焊接缺陷
Weld deposit	堆焊, 焊缝熔敷
Welded all round	沿周边焊接的
Welded armor	焊接甲板
Welded body	焊接车身
Welded bridge	焊接桥
Welded bond	焊接轨隙连接器, 焊接导接线
Welded cathode	焊接阴极
Welded chain	焊接链
Welded connection	焊接合, 焊接头
Welded construction	焊接结构
Welded—contract rectifier	焊接整流器
Welded corner joint	角焊接
Welded eye	焊眼
Welded fissure	焊接裂缝
Welded fitting	焊接式管接头
Welded flange	焊接翼缘
Welded frame	焊接车架, 焊接框架
Welded frog	焊接辙差
Weld edgewise	沿边焊接

Welded metal 焊接金属
Welded pipe 焊接管
Welded module 焊接微型组件
Welded on head 焊制封头, 焊制端盖
Welded plate 焊合板
Welded seam 焊缝
Welded shell course 焊接锅炉筒
Welded shell ring 焊接锅炉筒
Welded splice 焊接接头
Welded steel 焊接钢
Welded steel fabric 焊接钢筋网
Welded steel forging 熔焊钢锻件
Welded steel pipe 焊接钢管
Welded steel pipe pile 焊接钢管桩
Welded structural shape 焊接结构型钢
Welded structural 焊接结构
Welded truss 焊接桁架
Welded tube 焊缝[接]管
Welded turret 焊合转塔
Welded wire fabric 焊接钢丝网
Welder 焊机, 焊工
Welder construction 焊接结构
Welder performance qualification test 焊工技术鉴定试验
Welder' s gauntlets 电焊工的长手套
Welder' s gloves 电焊工手套
Welder' s goggles 焊工护目镜
welder' s hand shield 焊工手持护目镜
Welder' s head shield 焊工护目帽罩
Welder' s health 焊工保健
Welder' s helmet 焊工帽罩
Welders spatter ease 焊接易飞溅液
Welder with condenser 带电容弧焊机
Welder with taps 抽头式焊机
Weld flaw 焊接缺陷, 焊接裂纹
Weld flush 焊缝隆起
Weld flux 焊剂, 焊药
Weldforged 锻焊
Weld gauge 焊缝量规
Weld handle 焊把
Weld holder 焊接架
Welding 焊接法, 熔接, 定位焊接; 粘结
Welding agent 焊药
Welding alloy 焊接合金
Welding and cutting torch 焊割两用气焊枪

Welding— and —forming mill 成型焊管机
Welding apron 焊工的围裙
Welding arc 焊弧
Welding arc voltage 焊弧电压
Welding assembly 焊接构件
Welding base metal 焊条金属
Welding beading 焊瘤 Welding
bead length 焊缝长度
Welding bell 碗模（焊管用的），拔管模，喇叭模
Welding bench 焊接工作台
Welding blew lamp 焊炬
Welding blowpipe 气焊吹管
Welding booth 焊接室
Welding burner 焊炬喷嘴
Welding by both sides 双面焊
Welding by forging 锻焊
Welding by one side 单面焊
Welding cable 电焊电缆，电焊引线
Welding characteristics 焊接特性
Welding compound 焊【接】剂
Welding conditions 焊接规范
Welding connector 电缆夹头
Welding contactor 电焊接触器
Welding control 接触焊机断流器
Welding crack 焊裂缝
Welding current 焊接电流
Welding cut bit 焊接工具
Welding deformations 焊接变形
Welding direction 焊接方向
Welding dynamo 焊接发电机
Welding electrode 电焊条，电焊电极
Welding electrode hold 焊条夹
Welding equipment 焊接设备
Welding fixture 焊接夹具
Welding flame 焊接火焰
Welding flash 弧光灼伤
Welding fluid 熔【焊】剂
Welding flux 焊剂，焊药
Welding force 阻焊加压；电极压力
Welding from both sides 双面焊
Welding from one side 单面焊
Welding furnace 烧结炉
Welding gauge 确定焊缝尺寸用样板
Welding gang 焊工班，焊接组

Welding generator 电焊发动机
Welding generator with differential excitation 差激电焊发动机
Welding generator with split-Poles 裂极电焊发动机
Welding glass 黑玻璃
Welding gloves 焊接手套
Welding goggles 焊工护目镜
Welding grade argon 焊接极氩, 焊接用氩
Welding grade gas 焊接级保护气体
Welding ground 电焊地线
Welding gun 焊枪, 喷灯
Welding gutter 焊管拉模
Welding handle 焊条夹, 电极夹钳
Welding head 焊头, 烙铁头, 焊接机头
Welding heat 焊热
Welding heat input 焊接输入热量
Welding helmet 焊工帽罩
Welding holder 焊工握把
Welding impulse 电焊脉冲
Welding inspection 焊接检查
Welding iron 烙铁
Welding jig 焊接夹具
Welding joint 焊接接头
Welding lead 焊接引线
Welding machine 焊机
Welding manipulator 焊件支架
Welding metal cracking 焊缝金属裂纹
Welding method 焊接方法
Welding motor generator 电动旋转式电焊机
Welding neck (flange) 对焊法兰
Welding-on 焊合, 镶焊, 焊上
Welding operation 焊接操作
Welding operator 自动焊工
Welding outfit 焊接配备
Welding paste 焊接涂料
Welding performance 焊接性能
Welding pipe 焊接管
Welding pistol 焊枪
Welding point 焊接接头
Welding pool 焊接熔池
Welding portion 焊接部位, 施焊部位
Welding position 焊接部位
Welding positioner 焊接胎架, 可动焊接工作台
Welding positioner roller 焊接定位滚轮
Welding powder 焊粉

Welding power lead 焊接用输电线
Welding press 焊接压力机
Welding pressure 焊接压力
Welding procedure 焊接工艺, 焊接程序
Welding process 焊接法
Welding quality 焊接质量
Welding rectifier 电焊整流器
Welding regulator 焊接[电流]调节器
Welding research council 焊接研究委员会
Welding residual stress 焊接残余应力
Welding resistor 焊接电阻器
Welding rod 焊条
Welding rod coating 焊条上的焊药
Welding rod core 焊条芯
Welding rod extrusion press 焊条自动涂抹机, 焊条压涂机
Welding rolls 焊条辊
Welding rules 焊接规则
Welding screen 电焊遮光罩
Welding seam 焊缝
Welding sequence 焊接程序
Welding set 焊接装置, 电焊机组
Welding set with a surge injector 脉冲稳弧焊接装置
Welding set with DC suppression capacitors 电容抑制直流成分的焊接设备
Welding set with H.F. ionizer 带高频电离的焊接装置
Welding shop 焊接车间
Welding slag 焊渣
Welding sleeves [焊接用]套轴
Welding socket 焊接管套(管接头)
Welding source 焊接电源
Welding spats 焊接用护脚
Welding spatter 焊渣
Welding steel 焊接钢
Welding stick 焊丝, 焊条
Welding strain 焊接应变
Welding stress 焊接应力
Welding symbol 焊接符号, 焊接代号
Welding table 焊接工作台
Welding temperature 焊接温度
Welding thermit [铝]热剂(焊接用)
welding tip 焊嘴, 焊接吹管火口
Welding tongs 焊钳
Welding tool 焊接工具
Welding torch 焊接喷灯, 焊接吹管, 焊炬
Welding torch pipe 焊枪管

Welding transformer 电焊变压器
Welding tub 焊接熔池
Welding wheel 盘状电极
Welding wire 焊条, 焊丝
Welding—wire reel 焊丝卷圈
Welding with backing 垫板焊
Welding with flux backing 焊剂垫焊
Welding with pressure 压焊
Welding with weaving 横向摆动焊接
Welding work 焊工工作
Welding—in nozzle 焊入式喷嘴
Welding interface 焊接界面
Weld jig 焊接夹具
Weld joint 焊缝, 焊接接头
Weld junction 熔合线, 焊口
Welding layer 焊接层
Weld length 焊缝长度
Weldless 无焊缝的, 无缝的
Weldless connection 非焊接式接头
Weldless drawn pipe 拉制无缝管
Weldless fitting 非焊接式接头
Weldless pipe 无缝管
Weldless steel tube 无[焊]缝
钢管 Weld line 焊接线
Weld machined flush 削平补强的焊缝
Weld mark 焊接痕, 焊波
Weldment 焊接件, 焊接装配
Weld mesh crate 焊接网格
Weld metal 焊接金属, 焊缝金属
Weld metal cracking 焊缝裂纹
Weld metal zone 焊接金属熔化区
Weld on bottom 底焊
Weldor 焊工
Weld pass 焊接通道
Weld penetration 焊穿, 焊透深度, 熔深
Weld period 焊接时间
Weld preparation 焊缝坡口加工
Weld puddle 熔池
Weld reinforcement 焊缝补强
Weld ripple 焊缝波纹
Weld rod 焊条
Weld rotation 焊缝转角
Weld seam 焊缝
Weld slope 焊缝倾角

Weld strain 焊接应变
Weld strength 焊接强度, 焊缝强度
Weld surface 焊缝表面
Weld time [接触焊的]通电时间
Weld trimmer 焊缝清理机
Weld up 焊补, 焊封
Weld wire 包钢铜丝
Weldwood 胶合板
Weld zone 焊接区
Lack of fusion 未熔合
Sharp edge 锐边
Serrated edge 锯齿形边
Torch cut 火焰切割
Sawn 锯
Air tight 气密性
acetylene 乙炔
ampere 电流安培
angle welding 角焊
arc 电弧
argon arc welding 氩弧焊接
bare electrode 光熔接条
butt welding 对接焊接
camber 电弧弯曲
cascade 阶叠熔接法
clad weld 被覆熔接
crator 焊疤
excess metal 多余金属
filler rod 焊条
fillet weld 填角焊接
gas shield 气体遮蔽
groove welding 起槽熔接
hand face shield 手握面罩
hard facing 硬表面堆焊
jig welding 工模焊接
laser beam welding 雷射光焊接
metal electrode insert gas welding MIG 熔接
nugget 点焊熔核
overlaying 堆焊
peening of welding 珠击熔接法
plug welding 塞孔熔接
positioned welding 正向熔接
pressure welding 压焊
propane gas cutting 丙烷气切割
pure nickel electrode 纯镍熔接条

reinforcement of weld 加强焊接
resist 抗蚀护膜
root running 背面熔接
seam 焊缝
seaming 接合
seam welding 流缝熔接
series seam welding 串联缝熔接
skip welding process 跳焊法
spark 火花
spot welding 点焊接
stitch welding 针角焊接
stud arc welding 电弧焊接
under laying 下部焊层
void 焊接空隙
weld flow mark 焊接流痕
weld flush 焊缝凸起
weld line 焊接纹
weld mark 焊接痕
weld penetration 熔接透入
weld zone 焊接区
welding 焊接
welding bead 焊接泡
welding direction 焊接方向
welding distortion 焊接变形
welding flux 焊剂
welding ground 电熔接地
welding interval 焊接周期
welding stress 熔接应变
welding torch 熔接气炬
熔接 fusion welding
压接 pressure welding
焊接过程 welding process
焊接技术 welding technique
焊接工艺 welding technology/procedure
焊接操作 welding operation
焊接顺序 welding sequence
焊接方向 direction of welding
焊接位置 welding position
熔敷顺序 build-up sequence
焊缝倾角 weld slope/inclination of weld axis
焊缝转角 weld rotation/angle of rotation
平焊位置 flat position of welding
横焊位置 horizontal position of welding
立焊位置 vertical position of welding

仰焊位置 overhead position of welding
平焊 downhand welding/flat position welding
横焊 horizontal position welding
立焊 vertical position welding
仰焊 overhead position welding
全位置焊 all position welding: 熔焊时, 焊件接缝所处空间位置包括平焊、横焊、仰焊等位置所进行的焊接。如水平固定管所进行的环缝焊接
向下立焊 vertical down welding/downward welding in the vertical position
向上立焊 vertical up welding/upward welding in the vertical position
倾斜焊 inclined position welding
上坡焊 upward welding in the inclined position
下坡焊 downward welding in the inclined position
对接焊 butt welding
角焊 fillet welding
搭接焊 lap welding
船形焊 fillet welding in the downhand position/fillet welding in the flat position
平角焊 horizontal fillet welding
立角焊 fillet welding in the vertical position
仰角焊 fillet welding in the overhead position
坡口焊 groove welding
I 形坡口对接焊 square butt welding
喇叭形坡口焊 flare groove welding
卷边焊 flanged edge welding
纵缝焊接 welding of longitudinal seam
横缝焊接 welding of transverse seam
环缝焊接 girth welding/ circumferential
螺旋缝焊接 welding of spiral seam/welding of helical seam
环缝对接焊 butt welding of circumferential seam
定位焊 tack welding
单面焊 welding by one side
双面焊 welding by both sides
单道焊 single pass welding/single run welding
多道焊 multi-pass weldin
单层焊 single layer welding
多层焊 multi-layer welding
分段多层焊 block sequence/ block welding
分层多道焊 multi-layer and multi-pass welding
连续焊 continuous welding
断续焊 intermittent welding
打底焊 backing weld
封底焊 back sealing weld
盖面焊 cosmetic welding
深熔焊 deep penetration welding
摆动焊 welding with weaving/weave bead welding

前倾焊 forward welding (英国)/ forehand welding (美国)
后倾焊 backward welding(英国)/ backhand welding(美国)
分段退焊 backstep welding
跳焊 skip welding
对称焊 balanced welding/ balanced welding sequence
焊法 leftward welding forehand welding
立角焊 fillet welding in the vertical position
仰角焊 fillet welding in the overhead position
坡口焊 groove welding
I 形坡口对接焊 square butt welding
喇叭形坡口焊 flare groove welding
卷边焊 flanged edge welding
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螺旋缝焊接 welding of spiral seam/welding of helical seam
环缝对接焊 butt welding of circumferential seam
定位焊 tack welding
单面焊 welding by one side
双面焊 welding by both sides
单道焊 single pass welding/single run welding
多道焊 multi-pass welding
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前倾焊 forward welding (英国)/ forehand welding (美国)
后倾焊 backward welding(英国)/ backhand welding(美国)
分段退焊 backstep welding
跳焊 skip welding
对称焊 balanced welding/ balanced welding sequence
左焊法 leftward welding forehand welding
焊接电流衰减时间 welding current downslope time
电流密度 current density
短路电流 short circuit current
脉冲电流 pulse level/pulse current level
脉冲电流幅值 pulse current amplitude

基值电流 background level
脉冲频率 pulse frequency
脉冲焊接电流占空比 duty cycle of pulse duration
电弧电压 arc voltage
再引弧电压 reignition voltage
焊接速度 welding speed
行走速度 rate of travel/travel speed
送丝速度 wire feed rate
线能量 heat input/energy input
热输入 heat input
预热 preheat
后热 postheat
焊后热处理 posweld heat treatment/postheat treatment
预热温度 preheat temperature
层间温度 interpass temperature
焊接终了温度 finishing temperature
后热温度 postheating temperature
焊丝伸出长度 wire extension
弧长 arc length
熔化速度 melting rate
熔化时间 melting time
熔化系数 melting coefficient
熔敷速度 rate of deposition/deposition rate
熔敷系数 deposition coefficient
熔敷效率 deposition efficiency
损失系数 loss coefficient
飞 spatter
飞溅率 spatter loss coefficient
融合比 fusion ratio
稀释 dilution
稀释率 rate of dilution
合金过度系数 transfer efficiency/recovery (of an element)
坡口 groove
坡口面 groove face
坡口面角度 angle of bevel (英国)/ bevel angle (美国)
坡口角度 included angle(英国)/groove angle(美国)
坡口高度 groove depth
钝边 root face
钝边高度 thickness of root face/width of root face
根部间隙 root gap(英国)/root opening (美国)
根部半径 root radius/groove radius
根部锐边 root edge
卷边高度 height of flange
卷边半径 radius of flange

单面坡口 single groove
双面坡口 double groove
坡口形式 groove type
I 形坡口 square groove
V 形坡口 single V groove
Y 形坡口 single V groove with root face
双 Y 形坡口 double V groove with root face
带钝边 U 形坡口 single U groove
带钝边双 U 形坡口 double U groove
VY 形坡口 single compound angle groove
带钝边 J 形坡口 single J groove
带钝边双 J 形坡口 double J groove
单边 V 形坡口 single bevel groove
双 V 形坡口 double V groove
不对称双 V 形坡口 asymmetric double V groove
双单边 V 形坡口 double bevel groove K groove
带垫板 V 形坡口 V groove with backing/ single V groove with backing
喇叭形坡口 flare groove
锁底坡口 single bevel groove with backing locked
坡形板边 tapered edge
焊缝 weld
接缝 seam
焊缝符号 welding symbol
焊缝金属 weld metal
填充金属 filler metal
熔敷金属 deposited metal
焊缝表面 weld face/ face of weld
焊缝背面 back of weld
焊缝轴线 axis of weld
焊缝尺寸 size of weld
焊缝宽度 weld width/ width of weld
焊缝长度 weld length/ length of weld
焊缝有效长度 effective length of weld
焊缝厚度 throat depth/ throat thickness
焊缝计算厚度 theoretical throat
焊缝实际厚度 actual throat
熔深 penetration/ depth of penetration
焊缝成形 appearance of weld
焊缝成形系数 form factor of weld
余高 reinforcement/ excess weld metal
背面余高 root reinforcement
削平焊缝 flush weld/ weld machined flush
对接焊缝 butt weld
角焊缝 fillet

焊脚 leg/ fillet weld leg
角焊缝断面形状 profile of fillet weld
平形角焊缝 flat fillet
凸形角焊缝 convex fillet weld
凹形角焊缝 concave fillet weld
角焊缝凹度 concavity
侧面角焊缝 side fillet weld/ fillet weld in parallel shear
正面角焊缝 front fillet weld/ fillet weld in normal shear
立角焊缝 fillet weld in the vertical position
横角焊缝 fillet weld in the horizontal position
平角焊缝 fillet weld in the flat position
斜角焊缝 oblique fillet weld
连续焊缝 continuous weld
断续焊缝 intermittent weld
连续角焊缝 continuous fillet weld
断续角焊缝 intermittent fillet weld
交错断续角焊缝 staggered intermittent fillet weld
并列断续角焊缝 chain intermittent fillet weld
端接焊缝 edge weld
卷边焊缝 flanged edge weld
塞焊焊缝 plug weld
纵向焊缝 longitudinal weld
横向焊缝 transverse weld
环行焊缝 girth weld/ circumferential weld
螺旋形焊缝 spiral weld/ helical weld
密封焊缝 seal weld
承载焊缝 strength weld
联系焊缝 connective weld
定位焊缝 tack weld
焊道 bead/ run/ pass
焊波 ripple
焊根 weld root/ root of weld
焊趾 weld toe/ toe
封底焊道 sealing run (after making main weld)/ back weld
打底焊道 backing weld (before making main weld)/ back weld
根部焊道 root pass/ root run
填充焊道 filling bead
盖面焊道 cosmetic bead/ cover pass
回火焊道 temper bead/ annealing bead
熔透焊道 penetration bead
焊层 layer
焊接接头 welded joint
接头形状 joint geometry
等强匹配接头 equalmatching weld joint

低强匹配接头 undermatching weld joint
超强匹配接头 overmatching weld joint
接头根部 root of joint
对接接头 butt joint
I 形对接接头 square butt joint
V 形对接接头 single V butt joint
U 形对接接头 single U butt joint
J 形坡口接头 single J butt joint
双 V 形对接接头 double V butt joint
双单边 V 形对接接头 double bevel butt joint/ K groove butt joint
带钝边 U 形对接接头 double U butt joint
带钝边 J 形坡口接头 double J joint
角接接头 corner joint
T 形接头 T joint
斜 T 形接头 inclined T joint
十字接头 cruciform joint/ cross-shaped joint
三联接头 joint among three members
搭接接头 lap joint
套管接头 muff joint/ sleeve joint
双盖板接头 double strapped joint
盖板接头 strapped joint
端接接头 edge joint
卷边接头 flanged edge joint
锁底对接接头 lock butt joint
斜对接接头 oblique butt joint
混合接头 mixed joint/ composite joint
有间隙接头 open joint
无间隙接头 closed joint
焊接电弧 welding arc
电弧形态 arc shape
电弧物理行为 arc physics behaviour
引弧 striking arc
引弧电压 striking voltage
电弧气氛 arc atmosphere
阴极 cathode
热阴极 hot cathode
冷阴极 cold cathode
阴极斑点 cathode spot
阴极区 cathode region
阴极区电场强度 intensity of the electric field in the cathode region
阴极压降 cathode drop
阳极 anode
阳极斑点 anode spot
斑点压力 spot pressure

阳极区 anode region
阳极区电场强度 intensity of the electric field in the anode region
阳极压降 anode drop
弧柱 arc column/ arc stream
弧柱压降 voltage drop in arc column
弧柱电位梯度 potential gradient in the arc column
弧焰 arc flame
弧心 arc core
硬电弧 forceful arc/ hard arc
软电弧 soft arc
旋转电弧 rotating arc
脉冲电弧 pulsed arc
脉冲喷射电弧 pulsed spray arc
起皱现象 puckering phenomena
起皱电弧 puckering arc
起皱临界电流 puckering critical current
间接电弧 indirect arc
压缩电弧 compressive arc
磁控电弧 magnetic controlling arc
电弧力 arc force
电磁力 electromagnectic force
电磁收缩效应 pinch effect
电弧飘移 wandering of arc
电弧稳定性 arc stability
电弧静特性 static characteristic of arc
电弧动特性 dynamic characteristic of arc
最小电压原理 principle of minimum voltage
电弧挺度 arc stiffness
电弧偏吹 arc blow
磁偏吹 magnetic blow
阴极清理作用 cleaning action of the cathode
电弧自身调节 arc self-regulation
挖掘作用 digging action
极性效应 polarity effect
熔滴 droplet
熔滴比表面积 specific surface of droplet
熔滴过渡 metal transfer
过度频率 transition frequency
粗滴过渡 globular transfer; drop transfer
短路过渡 short circuiting transfer
喷射过渡 spray transfer
旋转喷射过渡 rotating spray transfer
脉冲喷射过渡 pulsed spray transfer
爆炸过渡 explosive transfer

渣壁过渡 flux wall guided transfer
熔池 molten pool
沸腾状熔池 boiling molten pool
弧坑 crater
熔渣 slag
渣系 slag system
渣系相图 slag system diagram
碱性渣 basic slag
酸性渣 acid slag
碱度 basicity
酸度 acidity
长渣 long slag
短渣 short slag
粘性熔渣 viscous slag
氧化物型熔渣 oxide melting slag
盐型熔渣 salt melting slag
盐-氧化物型熔渣 salt-oxide melting slag
熔渣流动性 fluidity of the slag; slag fluidity
熔渣 solidified slag
多孔焊渣 porous slag
玻璃状焊渣 vitreous slag
自动脱落焊渣 self-releasing slag
脱渣性 slag detachability
焊接设备 welding equipment; welding set
焊机 welding machine; welder
电焊机 electric welding machine; electric welder
焊接电源 welding power source

二 金属焊接行为

1. 焊接热过程

焊接热循环 weld thermal cycle
焊接温度场 field of weld temperature; weld temperature field
准稳定温度场 quasi-stationary temperature field
焊接热源 welding heat source
点热源 point heat source
线热源 linear heat source
面热源 plane heat source
瞬时集中热源 instantaneous concentration heat source
热效率 thermal efficiency
热能集中系数 coefficient of heat flow concentration
峰值温度 peak temperature
瞬时冷却速度 momentary cooling rate
冷却时间 cooling time

2. 化学冶金

置换氧化 substitutionary oxydation

扩散氧化 diffusible oxydation
脱氧 desoxydation
先期脱氧 precedent desoxydation
扩散脱氧 diffusible desoxydation
沉淀脱氧 precipitation desoxydation
扩散氢 diffusible hydrogen
初始扩散氢 initial diffusible hydrogen
100°C残余扩散氢 diffusible hydrogen remained at
残余氢 residual hydrogen
去氢 dehydrogenation
去氢热处理 heat treatment for dehydrogenation
脱硫 desulphurization
脱磷 dephosphorization
渗合金 alloying
微量合金化 microalloying

3 物理冶金

一次结晶组织 primary solidification structure
二次结晶组织 secondary solidification structure
联生结晶 epitaxial solidification
焊缝结晶形态 solidification mode in weld-bead
结晶层状线 ripple
多边化边界 polygonization boundary
结晶平均线速度 mean solidification rate
针状铁素体 acicular ferrite
条状铁素体 lath ferrite
热效率 thermal efficiency
热能集中系数 coefficient of heat flow concentration
峰值温度 peak temperature
瞬时冷却速度 momentary cooling rate
冷却时间 cooling time

2. 化学冶金

置换氧化 substitutionary oxydation
扩散氧化 diffusible oxydation
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扩散氢 diffusible hydrogen
初始扩散氢 initial diffusible hydrogen
100°C残余扩散氢 diffusible hydrogen remained at
残余氢 residual hydrogen
去氢 dehydrogenation
去氢热处理 heat treatment for dehydrogenation
脱硫 desulphurization

脱磷 dephosphorization
渗合金 alloying
微量合金化 microalloying
3 物理冶金
一次结晶组织 primary solidification structure
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结晶层状线 ripple
多边化边界 polygonization boundary
结晶平均线速度 mean solidification rate
针状铁素体 acicular ferrite
条状铁素体 lath ferrite
5. 焊接性
焊接性 weldability
使用焊接性 service weldability
工艺焊接性 fabrication weldability
冶金焊接性 metallurgical weldability
热焊接性 thermal weldability
母材 base metal; parent metal
焊接区 weld zone
焊态 as-welded (AW)
母材熔化区 fusion zone
半熔化区 partial melting region
未混合区 unmixed zone
熔合区 bond area
熔合线 weld junction (英); bond line (美)
热影响区 heat-affected zone (HAZ)
过热区 overheated zone
粗晶区 coarse grained region
细晶区 fine grained region
过渡区 transition zone
硬化区 hardened zone
碳当量 carbon equivalent
铬当量 chromium equivalent
镍当量 nickel equivalent
舍夫勒组织图 Schaeffler' s diagram
德龙组织图 Delong' s diagram
连续冷却转变图 (CCT 图) continuous cooling transformation
裂纹敏感性 cracking sensibility
焊接裂纹 weld crack
焊缝裂纹 weld metal crack
焊道裂纹 bead crack
弧坑裂纹 crater crack

热影响区裂纹 heat-affected zone crack
纵向裂纹 longitudinal crack
横向裂纹 transverse crack
微裂纹 micro-crack; micro-fissure
热裂纹 hot crack
凝固裂纹 solidification crack
晶间裂纹 intercrystalline crack
穿晶裂纹 transcrytalline crack
多边化裂纹 polygonization crack
液化裂纹 liquation crack
失延裂纹 ductility-dip crack
冷裂纹 cold crack
延迟裂纹 delayed crack
氢致裂纹 hydrogen-induced crack
焊道下裂纹 underbead crack
焊根裂纹 root crack
焊趾裂纹 toe crack
锯齿形裂纹 chevron cracking
消除应力处理裂纹 stress relief annealing crack (SR crack)
再热裂纹 reheat crack
焊缝晶间腐蚀 weld intercrytalline corrosion
刀状腐蚀 knife line attack
敏化区腐蚀 weld decay
层状撕裂 lamellar tearing
焊接性试验 weldability
裂纹试验 cracking test
IIW 裂纹试验 IIW cracking test
Y 形坡口裂纹试验 slit type cracking test
分块形槽热裂纹试验 segmented circular groove cracking tes
H 形裂纹试验 H-type cracking test
鱼骨形裂纹试验 fishbone cracking test
指形裂纹试验 finger (cracking) test
T 形裂纹试验 Tee type cracking test
环形槽裂纹试验 circular-groove cracking test
可调拘束裂纹试验 varestraint test
BWRA 奥氏体钢裂纹试验 BWRA cracking test for austenitie steel
圆棒裂纹试验 bar type cracking test; round bar cracking test
里海裂纹试验 Lehigh restraint cracking test
圆形镶块裂纹试验 circular-path cracking test
十字接头裂纹试验 cruciform cracking test
Z 向窗口拘束裂纹试验 Z-direction window type restraint cracking test
G-BOP 焊缝金属裂纹试验 G-BOP weld metal crack test
巴特尔焊道下裂纹试验 Battelle type underbead cracking test
U 形拉伸试验 U-tension test

缪雷克期热裂纹试验 Murex hot cracking test
菲斯柯裂纹试验 FISCO (type) cracking test
CTS 裂纹试验 controlled thermal severity
拉伸拘束裂纹试验 (TRC 试验) tensile restraint cracking test
刚性拘束裂纹试验 (RRC 试验) rigid restraint cracking test
插销试验 implant test
Tigamajig 薄板焊接裂纹试验 Tigamajing thin plate cracking test
焊道纵向弯曲试验 longitudinal-bead test
柯麦雷尔弯曲试验 Kommerell bead bend test
肯泽尔弯曲试验 Kinzel test
缺口弯曲试验 notch bend test
热塑性试验 hot-ductility test
热影响区冲击试验 impact test of HAZ
热影响区模拟试验 synthetic heat-affected zone test
最高硬度试验 maximum hardness test
落锤试验 NRL (Naval Research Laboratory)
测氢试验 Hydrogen test
焊接材料
电极
焊接材料 welding consumables
电极 electrode
熔化电极 consumable electrode
不熔化电极 nonconsumable electrode
钨电极 tungsten electrode
焊丝 welding wire. Welding rod
实心焊丝 solid wire
渡铜焊丝 copper-plating welding wire
自保护焊丝 self-shielded welding wire
药芯焊丝 flux-cored wire
复合焊丝 combined wire
堆焊焊丝 surfacing welding rod
填充焊丝 filler wire
焊条 electrode/ covered electrode
焊芯 core wire
药皮 coating (of an electrode)/ covering (of an electrode)
涂料 coating flux/coating material
造气剂 gas forming constituents
造渣剂 slag forming constituents
合金剂 alloying constituent
脱氧剂 dioxidizer
稳弧剂 arc stabilizer
粘接剂 binder
水玻璃 water glass
水玻璃模数 modules of water glass

酸性焊条 acid electrode
高钛型焊条 high titania (type) electrode
钛钙型焊条 lime titania type electrode
钛铁矿形焊条 ilmenite type electrode
氧化铁型焊条 iron oxide type electrode/ high iron oxide type electrode
高纤维素型焊条 high cellulose (type) electrode
石墨型焊条 graphite type electrode
碱性焊条 basic electrode/ lime type covered electrode
低氢型焊条 low hydrogen type electrode
高韧性超低氢焊条 high toughness super low hydrogen electrode
奥氏体焊条 austenitic electrode
铁素体焊条 ferritic electrode
不锈钢焊条 stainless steel electrode
珠光体耐热钢焊条 pearlitic heat resistant steel electrode
低温钢焊条 low temperature steel electrode/ steel electrode for low temperature
铝合金焊条 aluminum alloy arc welding electrode
铜合金焊条 copper-alloy arc welding electrode
铜芯铸铁焊条 cast iron electrode with steel core
纯镍铸铁焊条 pure nickel cast iron electrode
球墨铸铁焊条 electrode for welding spheroidal graphite cast iron
铸芯焊条 electrode with cast core wire
镍基合金焊条 nickel base alloy covered electrode
蒙乃尔焊条 Monel electrode
纯铁焊条 pure iron electrode
渗铝钢焊条 aluminized steel electrode
高效率焊条 high efficiency electrode
铁粉焊条 iron powder electrode
底层焊条 backing welding electrode
深熔焊条 deep penetration electrode
重力焊条 gravity electrode
立向下焊条 electrode for vertical down position welding
节能焊条 saving energy electrode
水下焊条 underwater welding electrode
耐海水腐蚀焊条 seawater corrosion resistant steel electrode
低尘低毒焊条 low-fume and harmfulless electrode/
low-fume and low-toxic electrode
堆焊焊条 surfacing electrode
耐磨堆焊焊条 hardfacing electrode
钴基合金堆焊焊条 cobalt base alloy surfacing electrode
碳化钨堆焊焊条 tungsten carbide surfacing electrode
高锰钢堆焊焊条 high manganese steel surfacing electrode
双芯焊条 twin electrode
绞合焊条 stranded electrode
编织焊条 braided electrode

双层药皮焊条 double coated electrode
管状焊条 flux-cored electrode
气渣联合保护型药皮 semi-volatile covering
焊条工艺性 usability of the electrode/ technicality of the electrode
焊条使用性 running characteristics of an electrode/ operating characteristics of an electrode
焊条熔化性 melting characteristics of an electrode
焊条直径 core diameter
焊条偏心度 eccentricity (of an electrode)
药皮重量系数 gravity coefficient of coating
焊条药皮含水量 percentage of moisture for covering
焊条夹吃持端 bare terminal (of an electrode)
焊条引弧端 striking end (of an electrode)
焊剂 welding flux/ flux
熔炼焊剂 fused flux
粘结焊剂 bonded flux
烧结焊剂 sintered flux/ agglomerated flux
窄间隙埋弧焊焊剂 flux for narrow-gap submerged arc welding
低氢型焊剂 low hydrogen type flux
高速焊剂 high speed welding flux
无氧焊剂 oxygen-free flux
低毒焊剂 low poison flux
磁性焊剂 magnetic flux
电弧焊 arc welding
直流电弧焊 direct current arc welding
交流电弧焊 alternating current arc welding
三相电弧焊 three phase arc welding
熔化电弧焊 arc welding with consumable
金属极电弧焊 metal arc welding
不熔化极电弧焊 arc welding with nonconsumable
碳弧焊 carbon arc welding
明弧焊 open arc welding
焊条电弧焊 shielded metal arc welding (SMAW)
躺焊 fire cracker welding
电弧堆焊 arc surfacing
自动堆焊 automatic surfacing
躺板极堆焊 surfacing by fire cracker welding
带极堆焊 surfacing with band-electrode
振动电弧堆焊 vibratory arc surfacing
耐磨堆焊 hardfacing
埋弧焊 submerged arc welding (SAW)
多丝埋弧焊 multiple wire submerged arc welding
纵列多丝埋弧焊 Tandem sequence (submerged-arc welding)
横列多丝埋弧焊 series submerged arc welding (SAW-S)
横列双丝并联埋弧焊 transverse submerged arc welding

热丝埋弧焊 hot wire submerged-arc welding
窄间隙埋弧焊 narrow-gap submerged arc welding
弧压反馈电弧焊 arc voltage feedback controlling arc welding
自调节电弧焊 self-adjusting arc welding
适应控制焊接 adaptive control welding
焊剂层 burden; flux layer
气体保护电弧焊 gas shielded arc welding
保护气体 protective atmosphere
惰性气体 inert-gas
活性气体 active-gas
惰性气体保护焊 inert-gas (arc) welding
氩弧焊 argon arc welding
熔化极惰性气体保护电弧焊 metal inert-gas arc welding
钨极惰性气体保护电弧焊 tungsten inert-gas arc welding
钨极氢弧焊 argon tungsten arc welding
脉冲氢弧焊 pulsed argon arc welding
熔化极脉冲氢弧焊 argon metal pulsed arc welding
钨极脉冲氢弧焊 argon tungsten pulsed arc welding
热丝 MIG 焊 hot wire MIG welding
热丝 TIG 焊 hot wire TIG welding
氦弧焊 helium-arc welding
活性气体保护电弧焊 metal active-gas arc welding
混合气体保护电弧焊 mixed gas arc welding
二氧化碳气体保护电弧焊 carbon-dioxide arc welding; CO₂ arc welding
细丝 CO₂ 焊 CO₂ arc welding with thin wire
粗丝 CO₂ 焊 CO₂ arc welding with thick wire
磁性焊剂 CO₂ 焊 unionarc welding
药芯焊丝 CO₂ 焊 arcos arc process; dual shield arc welding
气电立焊 electrogas (arc) welding
氮弧焊 nitrogen-arc welding
水蒸气保护电弧焊 water vapour arc welding
原子氢焊 atomic hydrogen welding
冲器室中电弧焊 controlled atmosphere arc welding
旋转电弧焊 rotating arc welding
短路过渡电弧焊 short circuiting arc welding
焊丝横摆频率 weaving speed of wire
焊丝停摆时间 electrode keep time of slider
等离子弧焊 plasma arc welding (PAW)
等离子弧 plasma arc
等离子流 plasma jet
转移弧 transferred arc
非转移弧 nontransferred arc
联合型等离子弧 combined plasma arc
主弧 main arc

维弧 pilot arc
 维弧电流 pilot arc current
 双弧现象 double arcing
 双弧临界电流 critical current of double arcing
 等离子弧焊枪 plasma (welding) torch
 压缩喷嘴 constricting nozzle
 单孔喷嘴 single port nozzle
 多孔喷嘴 multiport nozzle
 压缩喷嘴孔径 orifice diameter
 孔道长度 orifice throat length
 孔道比 orifice throat ratio
 等离子气 plasma gas; orifice gas
 电极内缩长度 electrode setback
 小孔效应 keyhole effect
 小孔型等离子弧焊 keyhole-mode welding
 熔透型等离子弧焊 fusion type plasma arc welding
 大电流等离子弧焊 high-current plasma arc welding
 中电流等离子弧焊 intermediate-current plasma arc welding
 小电流等离子弧焊 low-current plasma arc welding
 微束等离子弧焊 micro-plasma arc welding
 交流等离子弧焊 AC plasma arc welding
 脉冲等离子弧焊 pulsed plasma arc welding
 等离子弧堆焊 plasma arc surfacing
 热丝等离子弧堆焊 hot wire plasma arc surfacing
 粉末等离子弧堆焊 plasma arc powder surfacing
 等离子-熔化极惰性气体保护电弧焊 plasma MIG welding
 转移弧电源 transferred arc power supply
 非转移弧电源 nontransferred arc power supply
 电弧焊设备 arc welding equipment
 电弧焊机 arc welding machine
 直流弧焊机 DC arc welding machine
 交流弧焊机 AC arc welding machine
 交直流两用弧焊机 AC/DC arc welding machine
 单站弧焊机 single operator arc welding machine
 多站弧焊机 multi-operator arc welding set
 固定式弧焊机 stationary arc welding machine
 移动式弧焊机 portable arc welding machine
 台式弧焊机 bench arc welding machine
 内燃机驱动式弧焊机 combustion engine driven arc welding set
 电动机驱动式弧焊机 motor driven arc welding set
 熔化极弧焊机 arc welding machine using a consumable electrode
 不熔化极弧焊机 arc welding machine using a non-consumable electrode
 脉冲弧焊机 pulsed arc welding machine
 气体保护弧焊机 gas shielded arc welding machine

氩弧焊机 argon arc welding machine
二氧化碳弧焊机 CO₂ arc welding machine
钨极惰性气体保护弧焊机 tungsten inert-gas welding machine
熔化钨极惰性气体保护弧焊机 metal inert-gas welding machine
气电立焊机 electrogas (arc) welding machine
等离子弧焊机 plasma arc welding machine
微束等离子弧焊机 micro-plasma welding equipment
原子氢焊机 atomic hydrogen welding apparatus
埋弧焊机 submerged arc welding machine
弧焊电源 arc welding power source
直流弧焊电源 DC arc welding power source
交流弧焊电源 AC arc welding power source
交直流两用弧焊电源 AC/DC arc welding power source
脉冲弧焊电源 pulsed arc welding power source
上升特性弧焊电源 rising characteristic arc welding power source
平特性弧焊电源 constant - voltage arc welding power source
下降特性弧焊电源 dropping characteristic arc welding power source
垂降特性弧焊电源 constant-current arc welding power source
多特性弧焊电源 slope-controlled arc welding power source
逆变式焊接电源 inverter welding power source
晶体管弧焊电源 transistor arc welding power source
电源动特性 dynamic characteristic
电源外特性 external characteristic
弧焊变压器 arc welding transformer
弧焊整流器 arc welding rectifier
硅弧焊整流器 silicon arc welding rectifier
晶闸管弧焊整流器 SCR arc welding rectifier; arc welding silicon controlled rectifier
脉冲弧焊整流器 pulsed arc welding rectifier
弧焊发电机 arc welding generator
焊车 welding tractor
焊接机头 welding head
行走机构 traveller
送丝机构 wire feeder
等速送丝方式 constant wire-feed system
变速送丝方式 alternate wire-feed system
跟踪装置 tracer
焊丝盘 wire reel
焊钳 electrode holder
焊枪 welding gun
电极夹 electrode holder
导电嘴 tip; contact tube
喷嘴 nozzle
焊剂漏斗 flux-hopper
高频振荡器 oscillator; HF unit

脉冲引弧器 pulsed arc starter; surge injector
 脉冲稳弧器 pulsed arc stabilizer
 脉冲激弧器 pulsed arc exciter
 输出电抗器 out put reactor
 镇定变阻器 ballast rheostat
 直流分量抑制器 direct current suppressor
 焊接回路 welding circuit
 额定焊接电流 rated welding current
 焊接电流调节范围 range of welding current regulation
 空载电压 open circuit voltage(no load voltage)
 约定负载电压 conventional load voltage
 负载持续率 duty cycle
 额定负载持续率 rated duty cycle; standard service
 手工弧焊机 manual arc welding machine
 电焊渣 electroslag welding (ESW)
 手工电渣焊 manual electroslag welding
 丝极电渣焊 electroslag welding with wire electrode
 板极电渣焊 electroslag welding with plate electrode
 熔嘴电渣焊 electroslag welding with consumable nozzle
 管极电渣焊 electroslag welding with tube electrode
 窄间隙电渣焊 narrow-gap electroslag welding
 电渣堆焊 electroslag surfacing
 电渣焊机 electroslag welding machine
 熔嘴 consumable nozzle; consumable wire
 钢档板 steel shoe
 钢冷却板 Cu-cooling plate
 铜滑板 copper shoe
 渣池 slag bath
 渣池深度 depth of slag bath
 渣池电压 voltage of slag bath
 电渣过程稳定性 electroslag process stability
 焊丝间距 distance between welding wires
 电子束焊、激光束
 电子束焊 electron beam welding (EBW)
 脉冲电子束焊 pulsed electron beam welding
 加速电压 acceleration voltage/ operating voltage
 电子束电流 beam current
 电子束功率 beam power
 电子束功率密度 beam power density
 焦点 focal spot
 焦距 focal length
 工作距离 work distance
 电子束焊机 electron beam welding machine
 高真空电子束焊机 full vacuum electron beam welder

低真空电子束焊机 partial vacuum electron beam welder
非真空电子束焊机 nonvacuum electron beam welder
真空度 vacuum
电子枪 electron gun
二极管电子枪 diode gun
三极管电子枪 triode gun
偏压电极 bias electrode
电磁透镜 electromagnetic lens
电子束偏转线圈 electron beam deflection coils
导流系数 perveance
钉尖 spiking
激光焊 laser welding/ laser beam welding
连续激光焊 continuous laser welding
脉冲激光焊 impulsed laser welding
激光焊机 laser welding equipment
气体激光器 gas laser
固体激光器 solid laser
焦斑直径 focussed diameter of the beam
离焦量 clearance between focal point and (plate) surface
焊缝深宽比 weld seam depth-to-width ratio
气焊 gas welding
氧乙炔焊 oxy-acetylene welding
氢氧焊 oxy-hydrogen welding
空气乙炔焊 air-acetylene welding
氧乙炔焊 oxy-acetylene flame
氢氧焰 oxy-hydrogen flame
氧煤气焰 oxy-coal gas flame
焊接火焰 welding flame
混合比 mixing ratio
混合气体可燃范围 inflammable limit of the gaseous
一次燃烧 primary combustion
二次燃烧 secondary combustion
燃烧速度 combustion rate
燃烧强度 combustion intensity
火焰热效率 flame heating efficiency
焰芯 inner cone; flame cone
内焰 internal flame
外焰 flame envelope
中性焰 neutral flame
氧化焰 oxidizing flame
碳化焰 carburizing flame
还原区 reducing zone
火焰稳定性 flame stability
回火 flashback

逆火 backfire
回烧 flashback
气体发生速度 gasification speed
焊炬 torch; blow pipe
等压式焊炬 balanced pressure torch
射吸式焊炬 injector torch
氧乙炔焊炬 oxy-acetylene torch
焊割两用炬 combined cutting and welding torch
混合室 mixing chamber
喷射器 injector
焊嘴 welding nozzle; welding tip
液氧气化器 oxygen evaporator
气瓶 gas cylinder
乙炔瓶 acetylene cylinder
阀罩 cylinder cap
气瓶阀 cylinder valve
汇流排 cylinder manifold
减压器 pressure regulator; gas regulator
单级减压器 single stage regulator
两级减压器 two stage regulator
回火防止器 flashback arrestor
干式回火防止器 dry flashback arrestor
水封式回火防止器 water-closing type arrestor
净化器 purifier
乙炔发生器 acetylene generator
低压乙炔发生器 low pressure acetylene generator
热剂焊 thermit welding (TW)
热剂补焊 thermit repair welding
钢轨热剂焊 thermit rail welding
热剂 thermit powder
热剂钢水 thermit steel
热剂反应 thermit reaction
热剂溶渣 thermit slag
热剂铸模 thermit mold; mold for thermit weld
热剂坩埚 thermit crucible
焊筋 collar
水下焊 underwater welding
水下气体保护电弧焊 underwater gas shielded arc welding
水下等离子弧焊 underwater plasma arc welding
湿式水下焊 wet method underwater welding
干式水下焊 dry method underwater welding
局部干式水下焊 local dry underwater welding
水帘局部干式水下焊 water curtain type dry underwater welding
遥控水下焊 remote controlled underwater welding

电弧空腔 arc bubble
电阻焊 resistance welding (RW)
点焊 spot welding; resistance spot welding
凸焊 projection welding
缝焊 seam welding
滚点焊 roll-spot welding
连续点焊 stitch welding
多点焊 multiple spot welding
手压点焊 push welding; poke welding
脉冲点焊 pulsation spot welding; multiple-impulse welding
双面点焊 direct spot welding
单面点焊 indirect spot welding
串联点焊 series spot welding
多点凸焊 multiple projection welding
频道进缝焊 step-by-step seam welding
压平缝焊 mash seam welding
串联缝焊 series seam welding
对接缝焊 butt seam welding; foil-butt seam
电阻对焊 upset butt welding
闪光对焊 flash butt welding (FBW)
储能焊 stored energy welding
电容储能点焊 condenser discharge spot welding
高频电阻焊 high frequency resistance welding
冲击电阻焊 percussion welding
胶接点焊 spot weld-bonding; weld-bonding
闪光 flashing; flash
过梁 bridge; lintel
顶锻 upsetting; upset
夹紧力 clamping force
顶锻力 upsetting force; upset force
电极压力 electrode force; electrode pressure
电极滑移 electrode skid
焊接循环 welding cycle
预压时间 squeeze time
锻压时间 forge-delay time; forge time
焊接通电时间（电阻焊）welding time (resistance welding)
预热时间 preheat time
加热时间 heat time
冷却时间 cool time
间歇时间 quench time; chill time
回火时间 temper time
维持时间 hold time
休止时间 off time
闪光时间 flash time; flashing time

顶锻时间 upset time; upsetting time
有电顶锻时间 upset current time
无电顶锻时间 upset current-off time
闪光速度 flashing speed
闪光电流 flashing current; flash current
顶锻电流 upset current
预热电流 preheat current
回火电流 temper current
调伸长度 initial overhange; extension
总留量 total allowance
闪光留量 flash allowance
顶锻留量 upset allowance
顶锻速度 upset speed
电极接触面 electrode contact surface
贴合面 faying surface
焊点 welding spot
熔核 nugget
熔核直径 diameter of nugget
塑性金属环区 corona bond
焊透率 penetration rate
压痕 indentation
压痕深度 depth of indentation
压深率 indentation ratio
翘离 sheet separation
缩孔 shrinkage cavity
胡须 intrusion
电极粘损 electrode pick up
喷溅 splash/ expulsion
毛刺 fin
飞边 upset metal/ fin
焊点距 weld spacing/ spot weld spacing
边距 edge distance
分流 shunt current
接触电阻 contact resistance
电阻焊机 resistance welding machine
点焊机 spot welding machine
多点焊机 multiple spot welding machine
移动式点焊机 portable spot welding machine
缝焊机 seam welding machine
纵横两用缝焊机 universal seam welder
对焊机 butt resistance welding machine
凸焊机 projection welding machine
三相低频焊机 three phase low frequency welder
二次整流电阻焊机 direct current resistance welder secondary rectification

电容储能电阻焊机 condenser discharge resistance welder
电容储能点焊机 condenser type spot welder/ capacitor spot welding machine
工频电阻焊机 mains frequency resistance welding machine
低频电阻焊机 frequency converter resistance welding machine
高频焊机 high frequency induction welder
逆变式电阻焊机 inverter type resistance welding machine
全波阻焊电源 full wave resistance welding power source
斩波阻焊电源 chopped wave resistance welding power source
旋转焊接变压器 rotary welding transformer
点焊钳 spot welding head
C 形点焊钳 C-type welding head/ C-type gun
X 形点焊钳 pincer spot welding head/ pliers spot welding head
断续器 contactor
同步断续器 synchronous contactor
异步断续器 non-synchronous contactor
程序控制器 sequencer
程序时间调节器 sequencer timer
电极臂 arm
电极握杆 electrode holder
电极台板 backup die/ bolster
电极水冷管 electrode cooling tube
电极头 electrode tip
电极帽 electrode cap
锥头电极 truncated tip electrode
平头电极 flat tip electrode
尖头电极 pointed tip electrode
球面电极 radius tip electrode
偏心电极 offest electrode
直电极 straight electrode
弯电极 cranked electrode
双弯电极 double cranked (swannecked) electrode
滚轮电极 circular electrode/ welding wheel
斜棱滚轮电极 bevelled wheel
顶锻机构 upsetting mechanism
电极总行程 total electrode stroke
工作行程 operational stroke
辅助行程 electrode travel/ electrode stroke
臂间距离 horn spacing/ throat opening
电极臂伸出长度 arm extension
摩擦焊 friction welding (FW)
转速 friction speed
摩擦压力 friction pressure/ heating pressure
摩擦转矩 friction torque
摩擦时间 friction time

摩擦变形量 burn-off length
摩擦变形速度 burn-off rate
停车时间 stopping time
顶锻变形量 forge length
顶锻变形速度 forge rate
摩擦表面 friction surface
储能摩擦焊 fly-wheel type friction welding
径向摩擦焊 radial friction welding
扩散焊 diffusion welding (DW)
过渡液相扩散焊 transient liquid phase diffusion welding
热等静压扩散焊 hot isotatic pressure diffusion welding
热轧扩散焊 roll diffusion welding
扩散缝焊 seam diffusion welding
超塑成形扩散焊 supperplastic forming diffusion bounding
隔离剂 buttering material
爆炸焊 explosive welding (EW)
爆炸点焊 explosive spot welding
爆炸线焊 explosive line welding
多层板爆炸焊 explosive welding of multiplayer plates
多层管爆炸焊 explosive welding of multiplayer tubes
覆板（覆管）cladding plat (tube)/ flyer plate (tube)
基板（基管）base plate(tube)/ parent plate (tube)
保护层 buffer/ protector
基础 base
预置角 preset angle
间距 initial stand-off/ spacing
装药量 explosive load
装药密度 charge density/ loading density
质量比 mass ratio
平行法 parallel plate configuration
角度法 preset angle configuration
均匀布药 average arranging explosive
梯形布药 gradient arranging explosive
爆炸焊参数 explosive welding parameters
初始参数 initial parameters
动态参数 dynamic parameters
界面参数 interface parameters
爆轰速度 detonation velocity
覆板速度 cladding plate velocity
碰撞点 impact point
碰撞点速度 velocity of the impact point
弯折角 bending angle
碰撞角 collision angle
碰撞压力 impact pressure

格尼能 Gurney energy
垂直碰撞 normal impact
倾斜碰撞 oblique impact/ inclined impact
对称碰撞 symmetrical impact
来流 upper stream
出流 down stream
再入射流 re-entrant jet
自清理 oneself cleaning
结合区 bond zone
平面结合 plane bond
波状结合 wave-like bond
界面波长 length of the interfacial wave
界面波幅 amplitude of the interfacial wave
熔化层 molten layer
熔化袋 molten pocket
雷管区 detonator zone
边界效应 edge effect
焊接性窗口 weldability windows
焊着率 ratio of welding area
起爆方法 method of initiation
内爆法 internal explosion process
外爆法 external explosion process
半圆柱试验法 semi-cylinder experiment method
超声波焊 ultrasonic welding (UW)
超声波点焊 ultrasonic spot welding
超声波缝焊 ultrasonic seam welding
超声波点焊机 ultrasonic spot welder
超声波缝焊机 ultrasonic seam welder
冷压焊 cold pressure welding (CPW)
热压焊 hot pressure welding
热轧焊 hot roll welding
旋弧压力焊 rotating arc pressure welding
埋弧压力焊 submerged arc pressure welding
电渣压力焊 electroslag pressure welding
气压焊 gas pressure welding
锻焊 forge-welding/ blacksmith welding
磁力脉冲焊 magnetic-pulse welding
硬钎焊 brazing
软钎焊 soldering
烙铁钎焊 iron soldering
火焰钎焊 torch brazing/ torch soldering
热风钎焊 hot gas soldering
感应钎焊 induction brazing
电阻钎焊 resistance brazing

接触反应钎焊 contact-reaction brazing
电弧钎焊 arc brazing
浸渍钎焊 dip brazing/ dip soldering
盐浴钎焊 saltbath dip brazing (soldering)
金属浴钎焊 molten metal bath dip brazing
炉中钎焊 furnace brazing/ furnace soldering
保护气氛钎焊 brazing in controlled atmosphere
真空钎焊 vacuum brazing
蒸气钎焊 vapor phase soldering
超声波钎焊 ultrasonic soldering
扩散钎焊 diffusion brazing
波峰钎焊 flow soldering/ wave soldering
分级钎焊 step brazing/ step soldering
不等间隙钎焊 brazing with the unparallel clearance
红外线钎焊 infra-red brazing (soldering)
光束钎焊 light soldering (brazing)
激光钎焊 laser brazing (soldering)
电子束钎焊 electron beam brazing
钎接焊 braze-welding
钎料 brazing filler metal/ solder
硬钎料 brazing filler metal
软钎料 solder (m)
自钎剂钎料 self-fluxing brazing alloy/ self-fluxing filler metal
活性钎料 active filler metal/ active metal brazing alloy
成形钎料 preformed filler metal/ solder preform
非晶态钎料 amorphous filler metal
粉状钎料 powdered filler meta
钎料膏 braze cream/ braze paste/ solder cream/ solder paste
药皮钎料 flux coated brazing(soldering)rod
层状钎料 sandwich filler metal
药芯钎料丝 flux-cored colder wire
敷钎料板 clad brazing sheet
钎剂 brazing flux; soldering flux
气体钎剂 gas flux
反应钎剂 reaction flux
松香钎剂 colophony flux; rosin flux
钎剂膏 flux paste
阻流剂 stopping-off agent
钎剂活性 flux activity
钎剂活性温度范围 activation temperature range of flux
钎剂热稳定性 thermal stability of flux
钎焊过程 brazing (soldering) process
钎焊操作 brazing (soldering) operation
工艺镀层 technological coating

钎焊面 faying face
钎缝间隙 joint gap; joint clearance
钎焊参数 brazing process variables
钎焊温度 brazing temperature
钎焊时间 brazing time
钎焊保温时间 holding time of brazing
钎缝 brazing seam; soldering seam
钎缝界面区 interfacial region
钎缝金属 brace metal
钎角 fillet
钎焊接头 braced joint; soldered joint
平面搭接头 joggled lap joint; flush lap joint
搭接对接接头 butt and lap joint
搭接 T 形接头 lapped T-joint; flanged T-joint
锁缝接头 folded joint
平面锁缝接头 lock side seam joint; flat lock seam joint
锁缝角接接头 lock corner joint; corner double seam
嵌入 T 形接头 inset T joint
T 形管接头 branch T saddle joint
套管接头 socket joint
外喇叭口套管接头 flare tube fitting
扩口套管接头 spigot joint
钎焊性 brazability; solderability
润湿性 wettability
润湿角 wetting angle; contact angle
铺展性 spreadability
铺展系数 spread factor; coefficient of spreading
钎着率 brazed rate
脱钎 de-brazing; de-soldering
润湿称量试验 wetting balance test
铺展性试验 spreadability test
填缝性试验 clearance fillability test
未钎透 incomplete penetration
虚钎 cold soldered joint
钎料熔析 liquation of filler metal
溶蚀 erosion
钎料流失 brazing filler metal erosio
钎剂夹杂 flux inclusion
晶间渗入 intergranular penetration
波峰钎焊机 wave soldering machine
冷壁真空钎焊炉 cold wall type vacuum brazing
热壁真空钎焊炉 hot wall type vacuum brazing furnace
钎焊盒 brazing retort
钎剂涂敷器 fluxer

钎炬 brazing (soldering) blowpipe
喷灯 brazing lamp
烙铁 solder iron
热喷涂 thermal spraying
火焰喷涂 flame spraying
电弧喷涂 electric arc spraying
等离子喷涂 plasma spraying
高频感应喷涂 high frequency spraying
气体爆燃式喷涂 detonation flame spraying
金属喷涂 metal spraying; metallizing
塑料喷涂 plastic spraying
陶瓷喷涂 ceramic spraying
喷熔 spray-fusing
表面粗糙化处理 surface roughening
电火花拉毛 electrospark roughening
抛锚效应 anchoring
喷涂层 spray-fused coating
喷熔层 spray-fused coating
结合层 bond coating; under coating
工作层 work coating
结合强度 adhesive strength
涂层强度 strength of coating
封孔处理 sealing
封孔剂 sealant
喷涂率 spray rate
沉积效率 deposition efficiency
孔隙率 porosity
喷涂材料 spraying material
自熔剂合金粉末 self-fluxing alloy powder
喷炬(枪) spray torch;
热切割 thermal cutting (TC)
气割 gas cutting; oxygen cutting
氧溶剂切割 powder cutting
氧-石英砂切割 quartz powder cutting
电弧切割 arc cutting
氧气电弧切割 oxy-arc cutting
空气电弧切割 air arc cutting
等离子弧切割 plasma arc cutting (PAC)
空气等离子弧切割 air plasma arc cutting
氧等离子切割 oxygen plasma arc cutting
水再压缩空气等离子弧切割 air plasma water injection arc cutting
双层气流等离子弧切割 dual gas plasma arc cutting; shielded gas plasma arc cutting
激光切割 laser cutting(LC); laser beam cutting
电子束切割 electron beam cutting

喷气激光切割 gas jet laser cutting
碳弧切割 carbon arc cutting
水下切割 underwater cutting
喷水式水下电弧切割 waterjet method underwater arc cutting
氧矛切割 oxygen lancing; oxygen lance cutting
溶剂氧切割 powder lancing
手工气割 manual oxygen cutting
自动气割 automatic oxygen cutting
仿形切割 shape cutting
数控切割 NC (numerical-control) cutting
快速切割 high-speed cutting
垂直切割 square cut
叠板切割 stack cutting
坡口切割 beveling; bevel cutting
碳弧气割 carbon arc air gouging
火焰气刨 flame gouging
火焰表面清理 scarfing
氧熔剂表面修整 powder washing
预热火焰 preheat flame
预热氧 preheat oxygen
切割氧 cutting oxygen/ cutting stream
切割速度 cutting speed
切割线 lone of cut/ cut line
切割面 face of cut/ cut face
切口 kerf
切口上缘 cutting shoulder
切口宽度 kerf width
后拖量 drag
切割面平面度 evenness of cutting surface/ planeness of cutting surface
割纹深度 depth of cutting veins/ stria depth
切割面质量 quality of cut face
上缘熔化度 shoulder meltability/ melting degree of shoulder
切口角 kerf angle
缺口 notch
挂渣 adhering slag
结瘤 dross
割炬 cutting torch/ cutting blowpipe/ oxygen-fuel gas cutting torch
割枪 cutting gun
割嘴 cutting nozzle/ cutting tip
快速割嘴 divergent nozzle/ high-speed nozzle
表面割炬 gouging blowpipe
水下割炬 under-water cutting blowpipe
水下割条 electrode for under-water cutting
粉剂罐 powder dispenser

数控切割机 NC cutting machine
门式切割机 flame planer
光电跟踪切割机 photo-electric tracing cutting
火焰切管机 pipe flame cutting machine
磁轮式气割机 gas cutting machine with magnetic wheels
焊接结构 welded structure/ welded construction
焊件 weldment
焊接部件 weld assembly
组装件 built-up member
接头设计 joint design
焊接应力 welding stress
焊接瞬时应力 transient welding stress
焊接残余应力 welding residual stress
热应力 thermal stress
收缩应力 contraction stress
局部应力 local stress
拘束应力 constraint stress
固有应力 inherent stress
固有应变区 inherent strain zone
残余应力测定 residual stress analysis
逐层切割法 Sach' s method
X 射线衍射法 X-ray stress analysis
小孔释放法 Mathar method
固有应变法 inherent strain method
消除应力 stress relieving
局部消除应力 local stress relieving
应力重分布 stress redistribution
退火消除应力 stress relieving by annealing
温差拉伸消除应力 low temperature stress relieving
机械拉伸消除应力 mechanical stress relieving
应力松弛 stress relaxation
焊接变形 welding deformation
焊接残余变形 welding residual deformation
局部变形 local deformation
角变形 angular distortion
自由变形 free deformation
收缩变形 contraction deformation
错边变形 mismatching deformation
挠曲变形 deflection deformation
波浪变形 wave-like deformation
火焰矫正 flame straightening
反变形 backward deformation
焊接力学 welding mechanics
断裂力学 fracture mechanics

弹塑性断裂变形 elasto-plastic fracture mechanics
线弹性断裂力学 linear elastic fracture mechanics
延性断裂 ductile fracture
脆性断裂 brittle fracture
应力腐蚀开裂 stress corrosion cracking
热应变脆化 hot straining embrittlement
临界裂纹尺寸 critical crack size
裂纹扩展速率 crack propagation rate
裂纹张开位移 (COD) crack opening displacement
拘束度 restraint intensity
拘束系数 restraint coefficient
应变速率 strain rate
断裂韧度 fracture toughness
应力强度因子 stress intensity factor
临界应力强度因子 critical stress intensity factors
应力腐蚀临界应力强度因子 critical stress intensity factor of stress corrosion cracking
J 积分 J-integration
罗伯逊止裂试验 Robertson crack arrest test
ESSO 试验 ESSO test
双重拉伸试验 double tension test
韦尔斯宽板拉伸试验 Well's wide plate test
帕瑞斯公式 Paris formula
断裂分析图 fracture analysis diagram
焊接车间 welding shop
焊接工作间 welding booth
焊接工位 welding post/ welding station
焊接环境 welding surroundings
焊工 welder
电焊工 manual arc welder
气焊工 gas welder
焊接检验员 weld inspector
焊工培训 welders training
焊工模拟训练器 trainer of synthetic weld
焊工考试 welder qualification test
焊工合格证 welder qualification/ welder qualified certification
钢板预处理 steel plate pretreatment
喷沙 sand blast
喷丸 shot blast
矫正 straighten
开坡口 bevelling (of the edge)/ chanfering
装配 assembly/ fitting
安装 erect
刚性固定 rigid fixing
装配焊接顺序 sequence of fitting and welding

焊接工艺评定 welding procedure qualification

焊接工艺规程 welding procedure specification

焊接工艺试验 welding procedure test

焊接工艺卡 welding procedure card

工序 operational sequence