

Crimping GIC 2.0 EV SERIES

(GIC 2.0 EV 系列压接)

1. Applicable Product Part Number
(适用的产品料号)

Description (产品描述)	Part No. (料号)	Wire Size (适用导线) (mm ²)	Insulation Diameter (适用绝缘直径) (mm)	Remark (备注)
Receptacle Contact (插座端子)	1971031-1	0.079~0.24	φ 0.98~ φ 1.58	Tin Plate Type (镀锡型)

2. Crimping Requirement

(压接要求)

NO. (编号)	Check Item (检验项目)	Specified Requirements (规格要求)	NO. (编号)	Check Item (检验项目)	Specified Requirements (规格要求)
①	Wire Stripping Length (剥线长度)	1.7mm±0.3	⑤	Bend – Down (向下变形)	3° Max
②	Cut-Off Tab Length (裁切凸出部长度)	0.25mm Max	⑥	Twisting (头部扭摆变形)	3° Max
③	Rear Bellmouth Length (后喇叭口长度)	0.1~0.4mm	⑦	Rolling (芯线部扭转变形)	5° Max
④	Bend – Up (向上变形)	3° Max	⑧	Wire-End Protrusion Length (芯线末端突出长度)	0~0.5mm
			⑨	Gap of contact top area (端子上部间隙)	0.12mm Max

NOTE: Front bell mouth is not accepted for this contact.

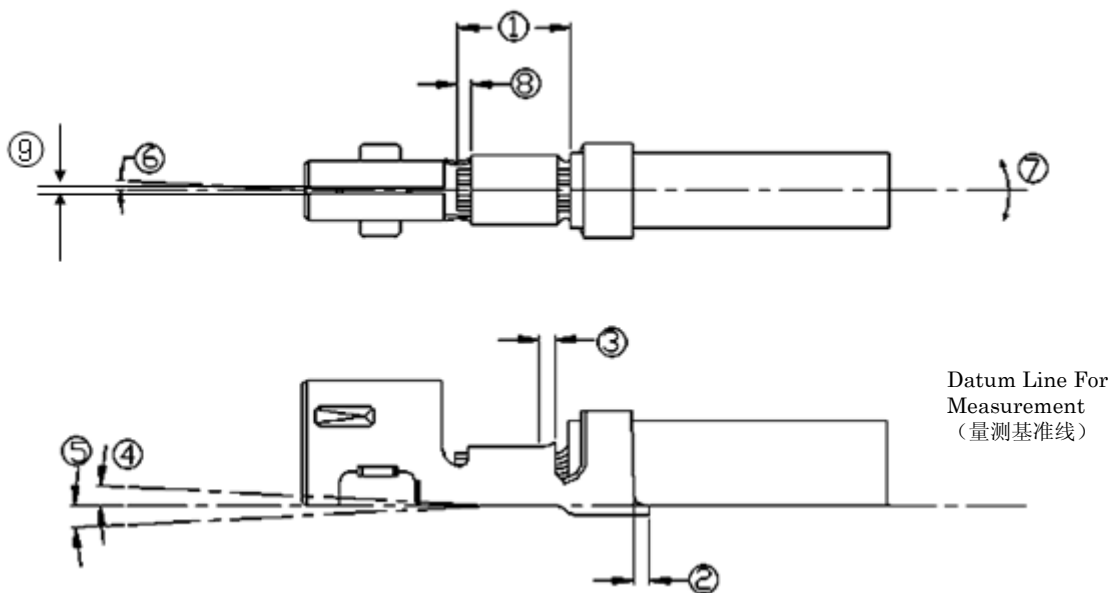


Fig 1

3 Crimping Data (压接数据)										
3.1 Applicator (压机)										
Contact Part No. (Strip) (端子料号)	Applicator Number (压机编号)	Wire Size (适用导线)		±0.3 (mm) Insulation Stripping Length (剥线长度)	Wire Crimp (芯线部压接)			Insulation Barrel Width (绝缘部压接宽度)	Finished Insulation Diameter (mm) (绝缘部压接后直径)	Crimp Tensile Strength (kg) Min (压接后拉伸强度)
		No of Conductors (芯线数量)	mm ² (AWG)		Width (芯线压接宽度)	Crimp Height (mm) (压接高度)	MARK (标示)			
1971031-1	1999135-2	10	0.079-0.093 (#28)	1.7	1.07 "F"	0.56±0.03	C	1.45 "F"	φ0.98-φ1.58	1
			0.12-0.15 (#26)			0.59±0.03	B			2
			0.20-0.24 (#24)			0.65±0.03	A			3

3 Crimping Data
 (压接数据)

3.2 hand tool

3.3 (手工压接治具)

Contact Part No. (Strip) (端子料号)	Hand Tool Number (压接治具编号)	Wire Size (适用导线)		±0.3 (mm) Insulation Stripping Length (剥线长度)	Wire Crimp (芯线部压接)			Insulation Barrel Width (绝缘部压接宽度)	Finished Insulation Diameter (mm) (绝缘部压接后直径)	Crimp Tensile Strength (kg) Min (压接后拉伸强度)
		No of Conductors (芯线数量)	mm ² (AWG)		Width (芯线压接宽度)	Crimp Height (mm) (压接高度)	MARK (标示)			
1971031-1	1999798-1	10	0.079-0.15 (#28, #26)	1.7	1.07 " F"	0.53-0.63	-	1.45 " F"	φ0.98-φ1.58	2
			0.20-0.24 (#24)			0.61-0.71	-			

APPENDIX 1

附录 1

Initial Preparation for production

生产前期准备

It is necessary to ensure that the crimp meets the parameters as listed in the application specification 114-5425, these parameters include:

必须确定端子压接符合应用规范 114-5425 中的要求，此类要求包括：

1. Verifying that the correct Tyco Electronics application tooling is used to crimp the terminal.

确定使用正确的泰科电子应用工具进行端子压接。

2. Verifying that a valid wire is being used.

确定使用正确的导线。

3. Verifying that Tyco Electronics components (crimper and anvils) are being used for crimp tooling. The components must be in good condition and properly aligned.

确定压接工具中使用泰科电子的零部件（压刀和底刀）。零部件必须处于良好状态并被正确校正。

4. Verifying that the correct crimp height dimension is being used for the particular terminal /wire/tool combination per available documentation.

确定对于特定的端子/导线/工具组合，按照应用规范采用正确的压接高度。

5. Verifying that the other crimp features (bellmouth, flash, no missed, loose or cut wire strands, wire brush, insulation displacement, etc.) meet the requirements of the application specification.

确定其他压接特性（喇叭口，披锋，无缺线，无松线，无伤线，无飞线，绝缘材料位置等）均符合应用规范要求。

APPENDIX 2

附录 2

Interpretation of cross-sectional photographs for tooling issue

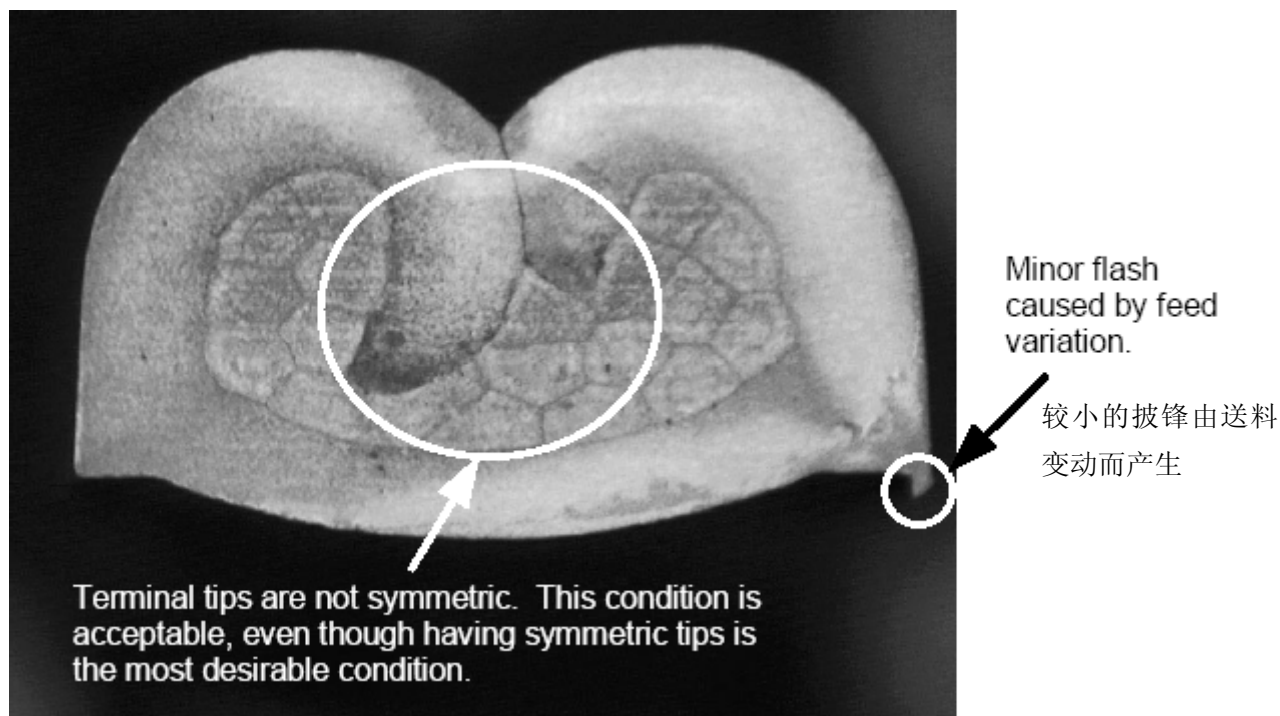
剖面图对压接工具的说明

The following cross-sectional photographs provide representative examples of various conditions that are related to worn/damaged tooling or applicator adjustments.

以下剖面图提供了与工具磨损，损坏或模具调整有关的例子。

1. Variations in feed and/or variations in setting of feed length can result in flash. Flash is formed when the terminal's base material extrudes into the clearance between the anvil and wire crimper. Variations of this nature typically result in the tips of the terminal not being symmetric. Fig2 shows an example of this condition.

送料或送料长度的变化会导致披锋。披锋是当端子基体材料挤进底刀和压刀的间隙时变形产生的。该类变化的典型后果是端子翼片的不对称。图 2 显示了在此情况下的一个例子。

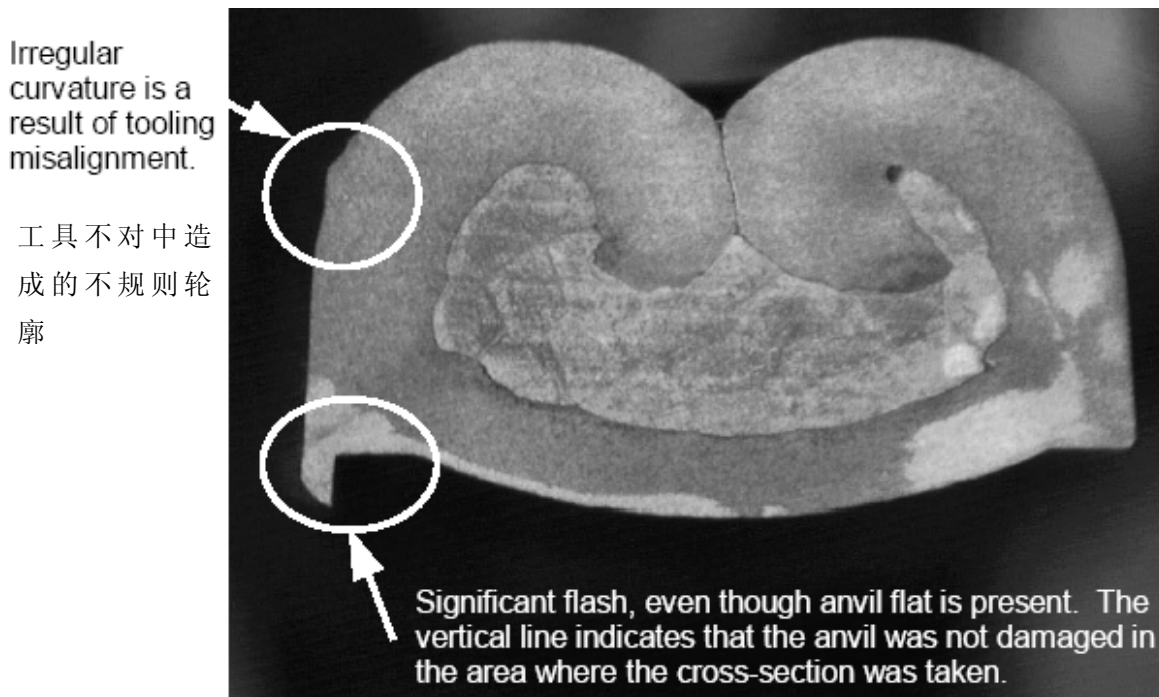


端子翼片不对称，虽然端子翼片对称是理想状态，但此类情况仍可接受。

Fig 2

- Misalignment of crimp tooling can result in variations regarding the shape. Common variations include significant flash without having any signs of anvil damage and irregular curvature of the crimp profile. Fig3 shows an example of these conditions.

工具的不对中会导致压接外形的变化。常见的变化包括没有显示底刀损伤的值得注意的披锋以及压接轮廓产生不规则曲线。图 3 显示了此类情况下的一个例子。

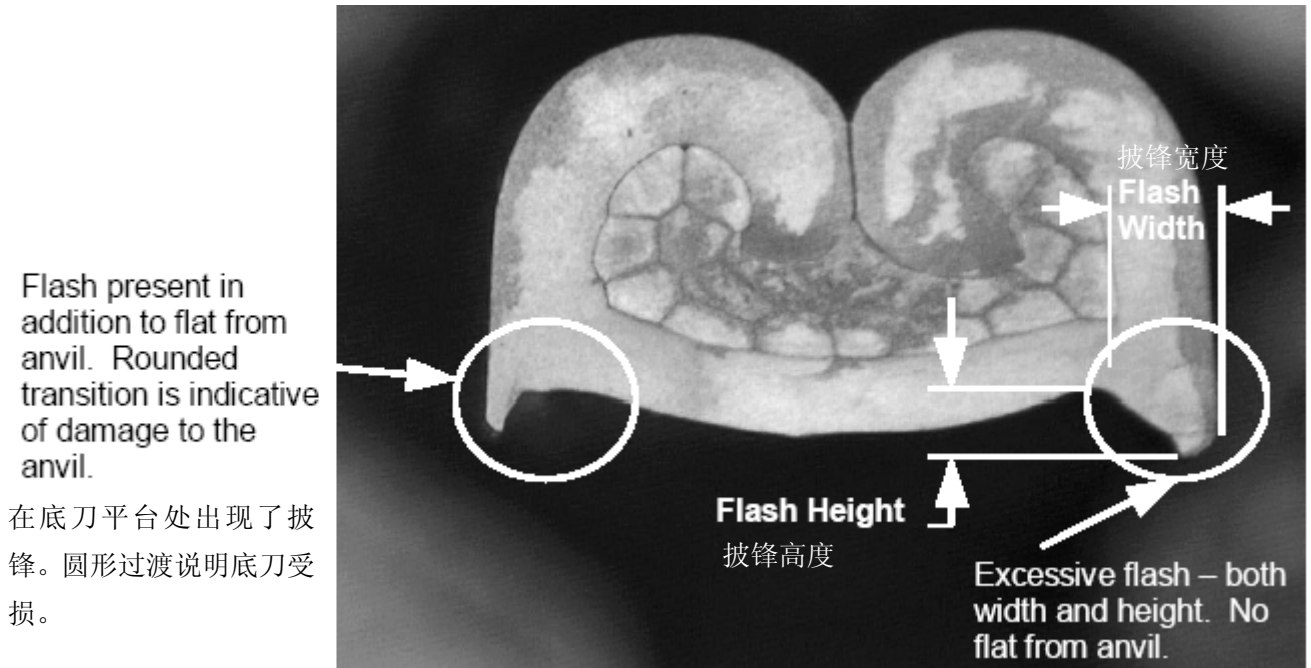


虽然有底刀平台，但是该披锋仍值得注意，垂直边表明底刀在剖面切取处没有损伤。

Fig 3

- Damaged anvils result in excessive flash. One way to identify a damaged anvil is the lack of a distinctive flat at the bottom corners of the crimp profile. This condition is shown in Fig4. Damage to the anvil can also result in cracks being formed in the bottom corner of the crimp. This condition is shown in Fig 5.

受损的底刀会导致过大的披锋。识别底刀受损的一个方法是压接轮廓的底角缺少清晰的平台，如图 4 所示。底刀的受损也会导致压接的底角产生裂纹，如图 5 所示。



宽度和高度都过大的披锋，没有底刀平台

Fig 4

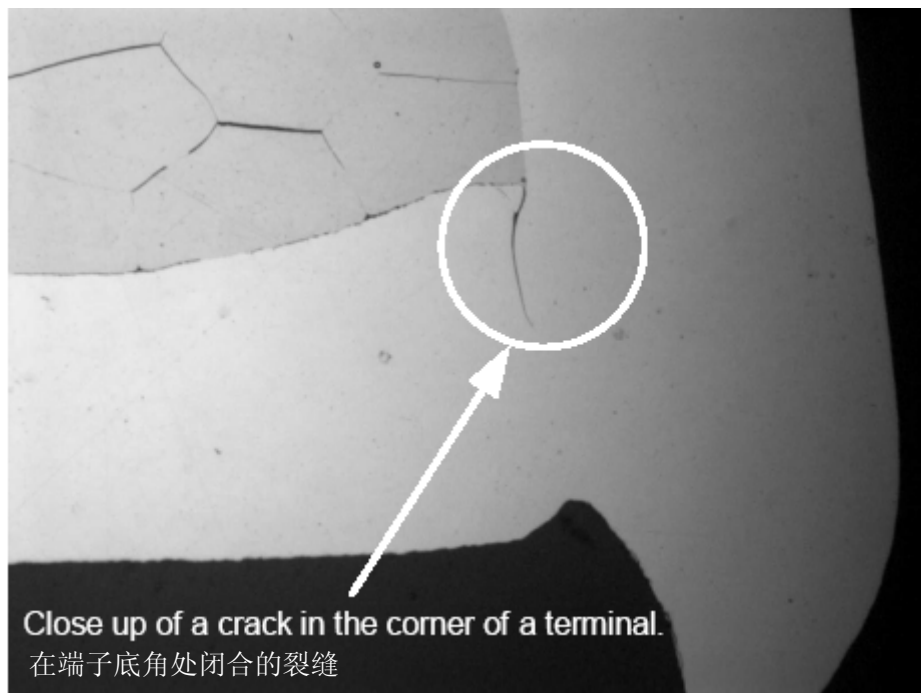


Fig 5

4. Collisions between the crimper and anvil can damage both pieces of tooling. Fig 6 shows a crimp that was made by tooling that was damaged by colliding with one another.

压刀和底刀的碰撞会使两者受损。图 6 显示了由于互撞而受损的刀具所压接的端子。

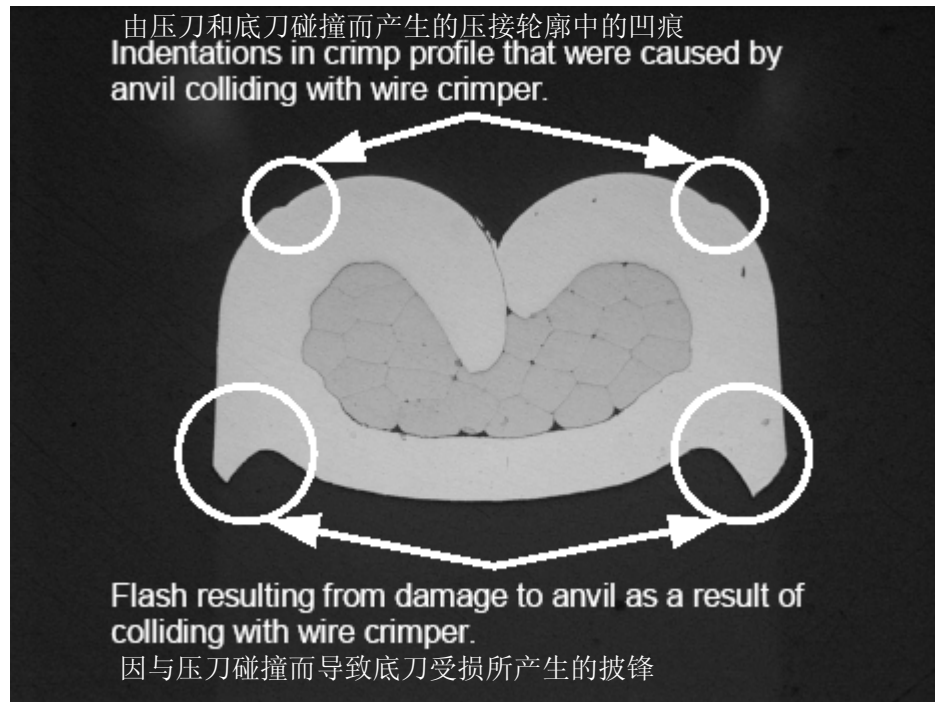


Fig 6

APPENDIX 3

附录 3

Interpretation of common cross-section characteristics

普通剖面特性的说明

A cross-sectional photograph is a diagnostic tool that can be used to evaluate a crimped termination as previously stated in appendix 2. In order for a cross-sectional photograph to be of value, the crimp must be made using the correct combination of terminal, wire and application tooling and that the crimp is made to the crimp height specified for this combination. The crimp must also meet all other crimp parameters as specified in the applicable application specification. The following cross-sectional photographs are representative of various conditions typically seen.

剖面图是一种能用于评估在附件 2 中所述的端子压接的诊断工具。为了使剖面图有效，必须使用正确的端子，导线和应用工具，并且按照指定的压接高度进行压接。压接也必须符合在应用规范中所规定的其他压接参数。以下剖面图是在不同情况下出现的典型例子。

Fig 7 is an example of a cross-sectional photograph of a good crimp. The wires are deformed, the terminal tips are symmetric and the anvil flats are visible.

图 7 是一个正确压接的剖面图示例。导线变形，端子翼片对称，且底刀平台可见。



Fig 7

Fig 8 shows a crimp where one of the terminal tips touches the bottom of the crimp. This condition is permissible if all other specified crimp parameters are met.

图 8 显示了端子的一侧翼片碰到底部的压接。该状态在其他压接参数均符合要求时是可以接受的。

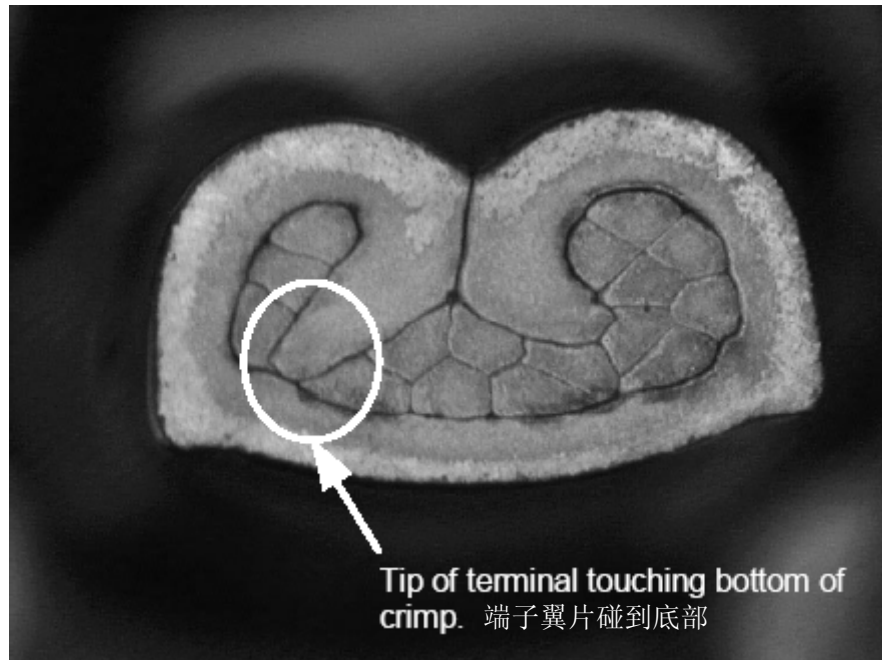


Fig 8

Fig 9 shows a crimp where both tips of the terminals are touching the sides of the crimp, a wire strand is trapped in the upper left corner of the crimp, but it is thoroughly deformed. This condition is permissible if all other specified crimp parameters are met.

图 9 显示了端子的两个翼片都碰到侧面的状况。有一条线芯包在左上角的翼片中，但它完全变形。该状态在其他压接参数均符合要求时是可以接受的。



Fig 9

Voids are acceptable in a crimp since a successful crimp is dependent on the generation of “adhesion” between the wire strands and between the strands and the body of the terminal. Adhesion occurs through the disruption of the surface films due to the deformation of two metal surfaces in contact and as they move relative to one another. Metallic bonding occurs across this interface and the combination becomes a homogeneous mass in an electrical sense. Voids may be present in the crimp since full interface contact will be obtained at deformations that are far less than required to form a void-less, homogeneous mass. Fig 10 shows a crimp that has several voids present.

成功的压接取决于芯线之间及芯线与端子本体之间的粘着，空穴是可以接受的。金属表面接触及相互移动而产生变形，表面层的破坏产生了粘着力。金属通过表面产生结合，且转化成具有相同导电性的同一体。因为导致表层完全接触所需要的变形远小于形成空穴及结合成一体所需要的变形，因此空穴可能出现在压接中。图 10 显示了一个有数个空穴出现的压接示例。

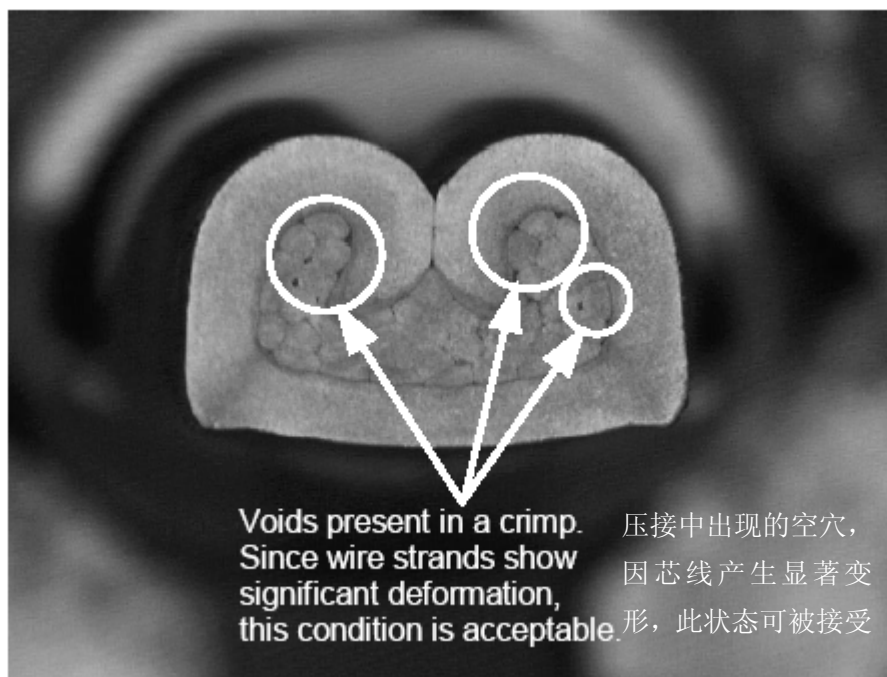


Fig 10

APPENDIX 4

附录 4

Maintenance of the crimp applicator

应用工具的维护

DAILY CLEANING

日常清洁

Applicator must be cleaned and lubricated every eight hours of operation or when removed from terminating unit to be stored.

压接工具每工作 8 小时或者放到仓库时必须清洁和润滑。

NOTE: DO NOT CLEAN APPLICATOR WITH AIR HOSE

注意：不能用气枪清洁压接工具

1. Remove applicator form terminating unit. Remove terminal strip.
把压接工具从压接机上拆下，把端子料带拆下。
2. Remove applicator ram from applicator. Don't remove tooling from ram.
把压头从压接机上拆下，不要把压刀从压头上拆下。
3. Wipe complete ram assembly with a cloth to remove old grease and dirt.
用抹布把压头上的旧的油脂和灰尘擦掉。
4. Check crimpers, anvil, and shear for excessive wear or damage and replace if necessary.
检查压刀，底刀和裁切刀，是否过度磨损或破坏有必要更换。
5. Check alignment of terminal stripper and tightness of stripper, anvil, and crimper mounting bolts.
检查挡料板的对中状况，并且检查挡料板，底刀和压刀的螺栓是否拧紧。
6. Lubricate the bearing surface of the ram and the feed cam with a light film with a light film of grease.
用一层薄的油脂润滑压头的导向面和送料凸轮。
7. Clean applicator body. Make sure all chips, dirt, and grease are removed. Place a drop of oil at all pivot points.
清洁压接工具主体，确保所有的碎屑，灰尘和油脂被清除掉。在所有的轴点滴一滴润滑油。
8. Replace ram in applicator. If applicator is to be stored, insert a short piece of terminal strip in applicator to protect tooling.
把压头安装到压接工具的原处。如果要把压接工具放入仓库，放一小段料带在压接工具中用来保护压刀和底刀。

MONTHLY CLEANING

每月一次的清洁

Applicator must be cleaned completely every thirty days to remove all grease, oil, and dirt.

押接工具上的油脂，润滑油和灰尘每 30 天要彻底清洁一次。

















1. Remove ram from applicator. Don't remove tooling from ram.
把压头从压接工具上拆下，不要把压刀从压头上拆下。
2. Remove terminals from applicator.
把端子从压接工具上取下。
3. Submerge the applicator (ram assembly and applicator body) in a cleaning solution that will not attack plastic or cast metal.
把压接工具浸没在清洁的溶液中，压接工具将不会撞击到塑料或铸铁。

CAUTION: D O NOT CLEAN IN VAPOR DEGREASER.

注意：不要用去脂蒸汽清洁。

4. Airs dry the applicator.
风干压接工具。
5. Lubricate the bearing surface of the ram and feed cam with a light film of grease.
用一层薄的油脂润滑压头导向面和送料凸轮。
6. Place a drop of oil at all pivot points.
在所有的轴点滴一滴润滑油。
7. Replace a ram in applicator. If applicator is to be stored, insert a short piece of terminal strip in applicator or some other means to protect tooling.
把压头安装到压接工具的原处。如果要把压接工具放入仓库，在压接工具中放入一小段端子来保护压刀和底刀。

General Preventive Maintenance for Applicators

	8 Hours or 25,000 Cycles	Weekly or 250,000 Cycles	Bi-Weekly or 500,000 Cycles	Monthly or 1,000,000 Cycles	Comments
GREASE/OIL					
Daily Cleaning 	X				Clean complete applicator and inspect general function.
Ram Assembly 	X				Grease Lightly
All Pivot Parts ***	X				Oil 2 to 3 Drops
*** Reference applicator assembly print for critical locations and preventive maintenance for daily cleaning. ***					
INSPECT FOR EXCESSIVE WEAR OR DAMAGE					
Wire Crimper 	X				Replace if excessive wear or damage is detected.
Insulation Crimper 		X			Replace if excessive wear or damage is detected.
Anvil 		X			Replace if excessive wear or damage is detected.
Floating Shear 			X		Inspect cutting edges. Replace if excessive wear or damage is detected.
Shear Holder 			X		Inspect cutting edges. Replace if excessive wear or damage is detected.
Upper Shear Tooling 			X		Inspect cutting edges. Replace if excessive wear or damage is detected.
Lower Shear Tooling 			X		Inspect cutting edges. Replace if excessive wear or damage is detected.
Feed Finger (Pawl) 			X		Replace if excessive wear or damage is detected.
Stock Drag 				X	Replace if excessive wear or damage is detected.
Drag Springs 				X	Replace if wear or fatigue is detected.
Shear Spring 			X		Replace if fatigue is detected.
Feed Return Spring 				X	Replace if cracks or return action is slowed.
Complete Cleaning and Inspection 				X	Any parts that show excessive signs of damage or wear should be replaced.
*** Reference preventive maintenance for monthly cleaning procedure. *** These estimates are for reference only. Tooling life is application dependent.					