Supplier Safe Launch Procedure

1. 目的 Purpose

Safe launch is a joint effort between the supplier and TE to have coordinated Safe Launch Plans at both the shipping and receiving facilities. The activity is geared toward supplier and customer correlation of inspection methods and to establish a common understanding for acceptable product.

1.1. Safe Launch Plans (SLP) are implemented to verify product & process stability in an organized manner. SLP is also intended to be a learning period. Collected data will be monitored, analyzed and where product & process adjustments will be made when deemed necessary.

1.2. Safe Launch encompasses:

a) Reliability: SLP supports the verification of product and process robustness & reliability. It is production implemented to minimize or protect risk parts assumed to be acceptable and meeting customer requirements when the parts are actually non-conforming, to provide documented evidence of process stability, and to establish the process reliability growth baseline.

b) Plan: SLP requires the creation of an enhanced Pre-Launch Control Plan. The implementation of an elevated, short-term Quality Inspection process is usually required. When creating a SLP product critical, significant and Fit/Form/Function characteristics, customer contact points & appearance items, potential areas of concern identified during the APQP/PPAP process, production complaints, and labeling & packaging requirements should be taken into consideration.

c) Application: SLP is recommended in the following situations.

i) Process: new, changed, moved, or re-sourced processes.

ii) Product: new, transferred, or changed product

iii) Suppliers: new suppliers or existing suppliers on modified or new product

iv) Correlation Activities: correlation of testing, inspection, or gage equipment.

SLP principles may be required in case of high risk, complex or long-distance supply chain to minimize risk that non-conforming parts are causing production line stops.

2. 范围 Scope

This procedure applies to TE Connectivity Automotive China A type supplier.

3. 相关文件 References

Supporting references mentioned throughout this document.

Ref #	Doc. #	Title	Filename / Location
1	102-86006	Supplier Management Procedure	DSD
2	102-86054	Advanced Supplier quality requirements	DSD
3	102-86089	Supplier CTP & PTC Procedure	DSD
4	102-86088	Supplier Sample Quality Control Procedure	DSD
5	102-86031	Engineering change procedure	DSD
6	TEC-1005	Total Quality Management Requirement for Supplier	DSD

4. 定义 Definitions

a) 缩写 Acronyms

Acronyms	Acronyms Meaning
SLP	Safe Launch Plan
SQE	Supplier Quality Engineer
ASQ	Advance Supplier Quality Engineer
APQP	Advanced Product Quality Planning
PPAP	Production Part Approval Process
TECHS	TE Complaint Handling System

b) 定义 Definitions

Terms	Definitions
Safe-Launch	Safe launch 是指在PSW提交后，由于产线设备、夹具、工装没有经过批量验证以及人员不熟练等可能存在一定的质量风险，通过额外的控制手段，确保产品质量符合客户要求。 After PSW submission, due to production equipment, fixture, Jig, the proficiency of person without mass validation which lead to some quality risk, need additional control method to ensure product quality meet customer requirement, this is safe launch means.

5. 变更历史 Revision Changes

Rev. #	Revision Date	Author	Approver	Change contents
A	13 08 2017	Fu，Lily	祝大伟	New
B	12.12.2019	Claire Xu	David Zhu	Modify SLP during/time and execution detail
C	11.18.2020	Claire Xu	David Zhu	Modify directly shipping parts SLP duration
D	02.08.2023	Renbing Li	David Zhu	Modify SLP label format
E	11.07.2024	Dylan Wang	David Zhu	Modify SLP exit criteria and GAD-CN-0296 format

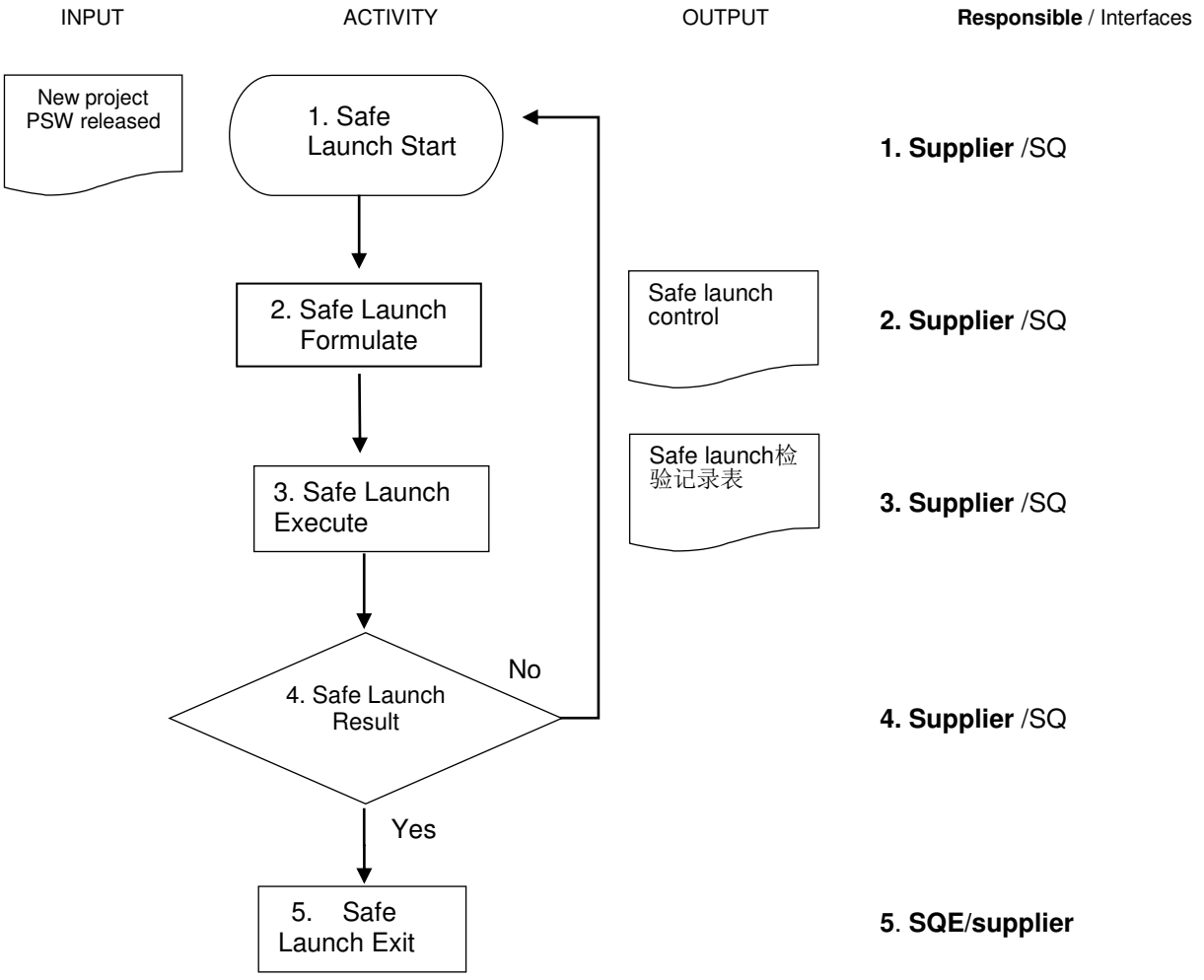
6. 记录 Record Requirements

No	Record No	Record Name	Record completed by	Retention period	Record Retention owner	Retention medium
1	GAD-CN-0296	Safe launch control	supplier	Long Term	supplier	DSD

7. 测量指标 Measure Of Performance (MOP´s)

Measurable	Unit	Frequency	Reporting Tool
Issue Q'ty	pcs	daily	Safe launch record

8. 流程 Process Description



8.1 Safe Launch Plan Requirements:

The SLP is part of the APQP process and shall be developed and agreed between supplier and TE Project Team. SC list will be generated and SLP activity will be noted.

TE SLP template for documenting, controlling and reporting this inspection process will be used. The plan,

at a minimum, shall include the product name, part number, inspection features (dimensions, notes, etc.),

inspection method, and the SLP Exit Criteria. The plan should allow for approval and revision.

Additional remarks to followed conditions which safe launch not required:

(1) Standard parts, Raw material (Resin, Metal, Glue, Chemical and others),

(2) TE suzhou un-customized material from TE internal group.

(3) Components already released in other TE auto plants and PSW approved over 3months.

(4) EC technical evaluation which a safe launch is not required.

(5) Other Customer approved exemption from safe launch

TE will follow customer special requirements if there are.

The SLP during/quality defined as below:

For components assembly in TE production line, Per shift capacity of different products, amount or time refer to definition as following:

Capacity/shift	Duration	Q'ty	Comments
<1K	3months	10K	1. Apply for safe launch exit if meet total Q'ty. 2. If safe launch has executed over 3months, can apply for exit if 3batches completed, if less than 3batches postponed. 3. Safe launch duration cannot be longer than 6 months in maximum, in condition of no quality issue during safe launch.
1K to 5K	3months	50K	
5K to 20K	3months	100K	
>20K	3months	1000K	

For components directly shipping to customer, safe launch should follow TE Safe Launch Procedure (102-86079).

In developing the SLP, the team shall consider:

(1) Customer identified risk areas and contact points, including product & package labeling.

(2) Past 8D activity where non-conforming material has been shipped.

(3) Historical problem features for the manufacturing facility.

(4) High risk areas not inspected as part of the normal process.

(5) Significant and Critical characteristics as identified on DFMEA and/or drawings/ specification.

Frequency of Inspection: Unless agreed otherwise accord with SLP frequency of inspection until the Exit Criteria is met.

The SLP plan shall be agreed between supplier and TE SQE and ASQ.

The supplier shall identify the material and packaging, as SLP and inspection results shall be provided with the shipment as agreed with TE.

The supplier shall continue SLP activity until the Exit Criteria is met, as established in the SLP. For safe launch, both the receiving plant and supplier Exit Criteria must be met to discontinue the SLP. **Safe launch exit shall be approved by TE SQE**.

Exit Criteria:

No defective found for TE side or Supplier Internal in SL phase. Once any defectives occurs, all OPL and issue found in supplier and TE side has already been closed before allowed to exit.

8.2 Document Safe Launch Plan (SLP):

The SLP should be documented using the TE standard template i.e. Product Characterization Matrix Form, Key Features Verification and Customer Touch-points, and QOS chart. SLP information will be documented by the supplier and shared with TE receiving plant.

8.3 Implement Safe Launch Plan (SLP):

SLP activity should include all sample parts, prototype, production trial runs, SOP, + 90 days and until the Exit Criteria is met. Records shall be maintained documenting SLP data and measurements.

Variable records are preferred, and all data (attribute or variable) should be tied to part specific serial numbers. For batch traceability, record the production lot number, quantity inspected, build date, inspection date, and pass rate. For attribute sampling, ‘p’ or ‘np’ charts are excellent tools for this method.

All SLP inspections/measurements should be conducted off-line, separate from the production process. Gages and other inspection equipment used in the SLP plan should be independent from the gages required by the Production Control Plan.

All SLP documentation should be maintained as historical process & product validation records.

In case of safe launch reporting format shall be agreed between supplier and TE supplier quality representative.

Suppliers shipping parts under Safe Launch Plan shall create a separate label, placed on each bag of PPQ and outer box, showing “SLP” to indicating the nature of the parts. Marking of parts shall be agreed

with the receiving TE plant.

Example:

8.4 Changes/Modifications to Plan:

Suppliers of TE shall obtain the TE Supplier Quality Representative approval for all changes and/or modifications to the SLP.

8.5 Corrective Action:

Discrepancies, non-conformances and concerns identified during the SLP process, shall be addressed using 8-D problem solving principles. Upon identifying the root cause and implementing the corrective action, the SLP process shall be restarted.