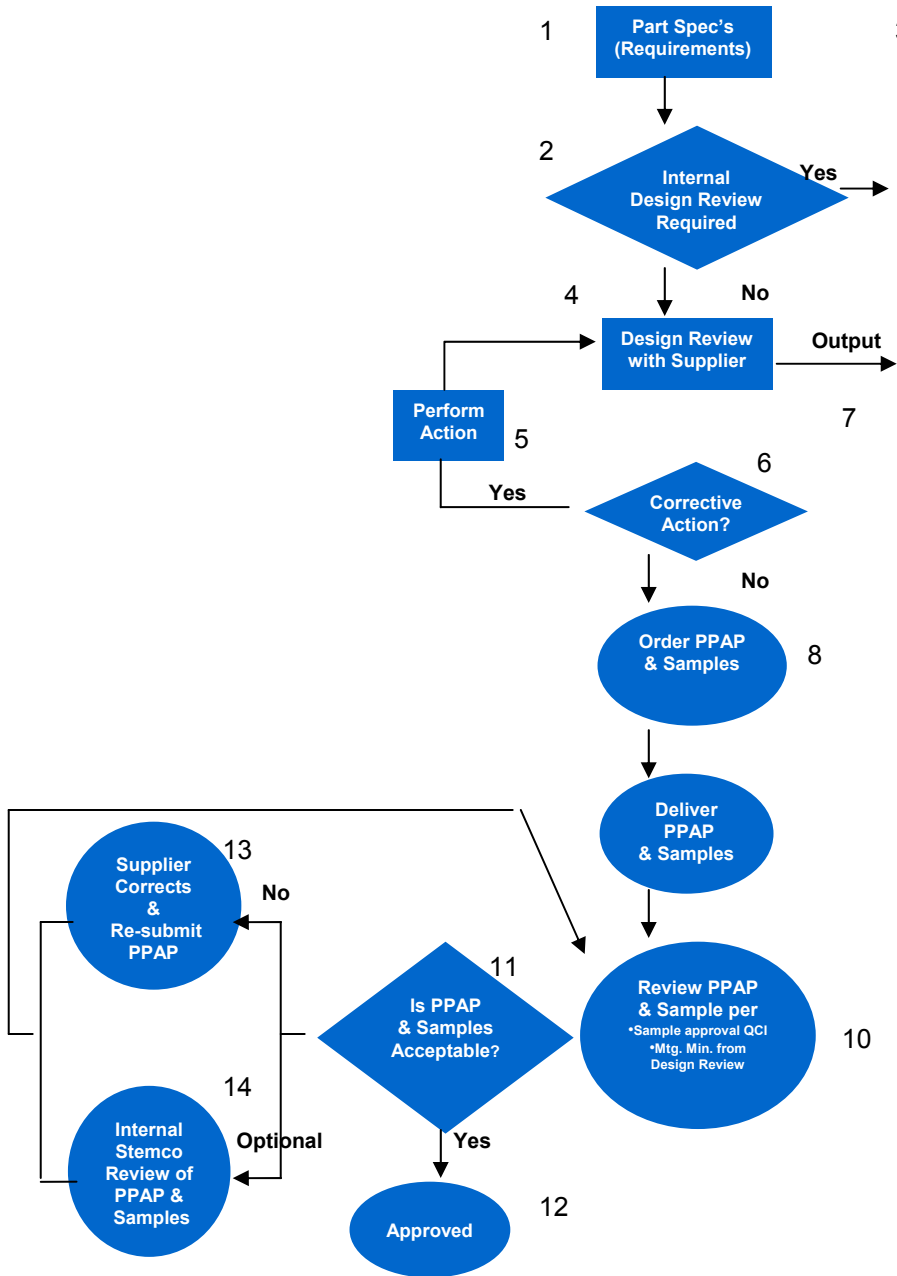


PRODUCTION PART APPROVAL PROCESS (PPAP)

- **Sample submission and approval shall be exercised per the following conditions:**
 - **When a new Stemco part or product requires manufacture.**
 - **When a part needs to be modified because of a Stemco engineering change.**
 - **When a different material is used to make the part than was previously approved.**
 - **When new, repaired or modified tools, dies, molds, etc., are used in production.**
 - **When the supplier makes any change to the production process.**
 - **When tooling and equipment is transferred to a different manufacturing location.**
 - **When tooling is transferred from a previous supplier.**
- **When special tooling is required for the manufacture of Stemco components, the supplier shall furnish a quote for the cost of said tooling prior to taking any further action. If appropriate, the Supply Chain Coordinator will initiate an approval process for tooling expenditure and, upon approval, issue a purchase order to the supplier for the tool. Upon completion of the repairs, a new part approval is required.**
- **The supplier is responsible for performing their own sample inspection prior to submitting samples to Stemco. The samples should be numbered and submitted along with the inspection results to the Supply Chain Coordinator.**
 - **Stemco's standard PPAP requirement from suppliers is a Level 3 Warrant.**

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- For each major characteristic [denoted as M on the print] the measurement results of thirty (30) samples are required, preferably with the use of form no. QA-0191 (available on our web-site).
 - For all other characteristics, the measurement results of three (3) samples are required, preferably with the use of form no. QA-0192 (available on our web-site).
 - Parts from multi-cavity molds or dies shall be approved individually.
- **Quality Assurance may inspect the samples and initiate the approval process, if required. In such cases, reviews by Product Engineering, Process Engineering, Supplier Quality Assurance, Quality Assurance, and Marketing personnel may be performed. If the provided samples are not approved, the Supply Chain Coordinator will involve other departments, as needed, to assist the supplier to meet Stemco's expectations and requirements.**
 - **Stemco PPAP process is depicted below:**



3

Design Review

- Develop Redlines
- Identify key dimension & measurements methods
- Develop PPAP Requirements
- Develop Volumes
- Develop Kan Ban
- Develop QCI (sample approval)
- Develop QCI Receiving Insp.
- Etc.

QCI Approval
Prod. Eng.
Proc. Eng.
SQA
Quality

Supplier Design Review

- Redlines
- Measurements
- PPAP Requirements
- Volumes
- Kan Ban
- QCI (sample approval)
- QCI Receiving Inspection
- Etc.

-What is supplier's tooling approval process?
-What are you going to verify, specifics.

-Stemco communicates to the supplier that all characteristics must be met. If not met, defects must be reviewed with Stemco prior to submission.

-Suppliers MSA
Agree on measurement and analysis method.