

DISTRIBUTION

- | | | |
|---|-------------------------------------|--|
| <input type="checkbox"/> President | <input type="checkbox"/> Purchasing | <input type="checkbox"/> Human Resources |
| <input type="checkbox"/> Design Engineering | <input type="checkbox"/> Service | <input type="checkbox"/> Quality Assurance |
| <input type="checkbox"/> Production | <input type="checkbox"/> Marketing | <input type="checkbox"/> Quality Control |
| <input type="checkbox"/> Production Engineering | <input type="checkbox"/> Sales | <input type="checkbox"/> Production Areas |
| <input type="checkbox"/> Materials Control | <input type="checkbox"/> Contracts | <input type="checkbox"/> Office Areas |
-

I PURPOSE

The purpose of this procedure is to provide policies and a general system for product quality planning in design and prototype, pre-launch, and production phases. This procedure defines the general quality planning methodology for the following three operational procedures:

- QOP-02-02 Design and Prototype Quality Planning,
- QOP-02-03 Pre-Launch Quality Planning, and
- QOP-02-04 Production Quality Planning.

This procedure also defines the status and explains the use of the following reference manuals:

- Advanced Product Quality Planning (APQP),
- Potential Failure Mode and Effect Analysis (FMEA),
- Measurement System Analysis (MSA),
- Statistical Process Control (SPC), and
- Product Part Approval Process (PPAP).

II APPLICATION

This procedure applies to quality planning for new or significantly modified products and for new processes. This procedure concerns all departments and managers involved in product quality planning; and in particular Design Engineering, Production Engineering, Production, and Quality Assurance.

Written by:	Original Issue Date:
Approved by:	Date:
Approved by:	Date:

QUALITY PLANNING

Operational Procedure: QOP-02-01

Revision: A

Page 22 of 4

III PROCEDURE

1. General

- 1.1 Product quality planning is divided into three phases: Design and Prototype, Pre-Launch, and Production. Design and Prototype quality planning applies only when customer contract requirements include product design and/or prototype development and testing.
- 1.2 In the Design and Prototype phase, quality planning ensures that customer requirements, including “Voice of the Customer,” are well understood and are documented in the design input; that Special Product Characteristics are carefully selected and documented; that all failure risks and consequences are considered; and that appropriate prototype tests and studies are planned and conducted.
- 1.3 In the Pre-Launch phase, quality planning ensures that manufacturing process flow is planned and evaluated; that processes responsible for Special Product Characteristics are identified and the associated risks and consequences are considered; and that adequate and capable processes are developed.
- 1.4 In the Production phase, quality planning ensures that key manufacturing processes are stable and capable, that there are adequate process operator instructions and other process control measures, and that the manufactured product satisfies customer requirements.

2. Multidisciplinary Approach and Cross Functional PQP Team

- 2.1 COMPANY NAME Inc. uses multidisciplinary approach in quality planning. The Product Quality Planning (PQP) Team is responsible for developing quality plans and associated documents.
- 2.2 In the Design and Prototype phase the core members of the PQP Team are representatives from Design Engineering, Production Engineering, and Quality Assurance. In the Pre-Launch and Production phases the core members of the PQP Team are representatives from Production Engineering, Production, and Quality Assurance.
- 2.3 For some activities and reviews other functions may be added to the PQP Team. Those functions may be Materials Control, Service, Purchasing, Marketing, Sales, and Contract Administration. Subcontractors and customer representatives may be also added to the team.
- 2.4 Whenever any operational procedure dealing with quality planning refers to the PQP Team, it refers to its core members. When participation of other functions is required, these functions are explicitly named in the procedures.

QUALITY PLANNING

Operational Procedure: QOP-02-01

Revision: A

Page 32 of 4

IV REFERENCE MANUALS

1. Advanced Product Quality Planning (APQP) Reference Manual

- 1.1 The APQP Reference Manual is used in quality planning. The manual is available to all involved in the planning process. Those specific APQP methods and forms that are explicitly referenced in the quality planning procedures are considered to be a part of those procedures. Other sections of the manual are used as guidelines.

2. Potential Failure Mode and Effect Analysis (FMEA) Manual

- 2.1 The FMEA Reference Manual is used in preparing Design FMEAs and Process FMEAs. The manual is available to all core members of the PQP Team. The whole FMEA manual, including forms, is integrated into COMPANY NAME Inc. quality system, and is considered to be a part of those procedures that reference the manual.

3. Measurement System Analysis (MSA) Reference Manual

- 3.1 The MSA Reference Manual is used in evaluating measurement systems referenced in the Quality Plans. The manual is kept by Quality Assurance and is available to all core members of the PQP Team. Specific MSA procedures and forms to be used for evaluation of measurement systems are referenced in Procedure QOP-11-02 Measurement System Evaluation.

4. Statistical Process Control (SPC) Reference Manual

- 4.1 The SPC Reference Manual is used in process capability studies and in development of process control and monitoring procedures. The manual is kept in Quality Assurance and Production departments, and is available to all core members of the PQP Team. Specific SPC techniques and charts to be used in process capability studies and process control are referenced directly in Procedure QOP-09-03 Statistical Process Control.

5. Product Part Approval Process (PPAP) Reference Manual

- 5.1 Most of the activities and documents considered in the quality planning procedures are required for PPAP submittal and customer approval. The PPAP Reference Manual is used in developing quality planning documents to ensure that their scope and format satisfies customer requirements for part approval.

III ASSOCIATED DOCUMENTS

- Design and Prototype Quality Planning — Oper. Proc. QOP-02-02
- Pre-Launch Quality Planning — Oper. Proc. QOP-02-03
- Production Quality Planning — Oper. Proc. QOP-02-04

QUALITY PLANNING

Operational Procedure: QOP-02-01

Revision: A

Page 4 of 4

