

## **Techshot, Inc.**

### **Position Description**

**Job Title:** Product Assurance Associate  
**Reports To:** Product Assurance Manager

#### **SUMMARY**

Develops, implements, and coordinates product assurance program to incorporate and maintain safety (product, facilities), quality, reliability, and maintainability attributes in new or existing products by performing the following duties.

#### **EDUCATION**

Bachelor's degree (B.S.) in a technology-related field from four-year college or university, and a minimum of three years related experience and/or training; or equivalent combination of education and experience.

**ESSENTIAL DUTIES AND RESPONSIBILITIES** include the following. Other duties may be assigned.

- Develop initial and subsequent modifications of product assurance program in accordance with industry standards (currently SAE AS9100C) to delineate areas of responsibility, personnel requirements, and operational procedures within program.
- Understand and apply ISO-9001 and AS9100C requirements across the organization.
- Perform system audits, as necessary, in accordance with ISO-9001 and AS9100C.
- Train Techshot staff and new employees on all Product Assurance procedures as necessary.
- Meet and confer with representatives of material and component vendors to obtain information related to supplier quality, capacity of vendor to meet orders, and vendor quality standards.
- Develop a thorough understanding of all associated regulatory documents necessary to meet the minimum requirements of each contract.
- Apply basic QA/QC methods of design improvement early in the design and development phase of all projects.
- At beginning of each project, work with Project Manager to initiate a project product assurance program tailored to that project, including decisions on responsibilities, inspections hold points, approval levels, etc.
- Interpret and understand all design input requirements, the impact of these requirements, and provide guidance in meeting these requirements.
- Assist with Design History Files (DHF), 510(k) submissions, Underwriters Laboratory, CE technical files, and other regulatory submissions.
- Maintain configuration management (in conformance with MIL-STD-973 when applicable) with regard to drawing reviews, system designs, change requests and change order processes.
- Interpret, review, edit, and approve the release of designs via the drawings and specs.
- Understand and interpret drawings in accordance with MIL-STD-100 with dimensioning and tolerancing as defined in ANSI Y14.5M.
- Maintain all QA system documentation, including policies, procedures, and instructions, approvals, revisions, etc. in on-line software system (currently QT9).
- Provide quality oversight in regards to 1<sup>st</sup> article assembly and operation, as warranted.
- Provide quality oversight for flight hardware builds.

- Facilitate and assist with Travelers/Followers for flight projects.
- Develop/oversee calibration program to insure all shop and laboratory test equipment affords accurate performance and/or measurements.
- Apply basic gage and caliper skills in regard to receiving, in-process, and final inspection requirements.
- Coordinate the development, implementation, monitoring and maintenance of the safety program for all Techshot products.
- Ensure Techshot commercial products conform to consumer safety requirements.
- Assist in the development of safety training and/or programs for Techshot employees, as well as operators of its products.
- Develop inherent knowledge of NASA flight safety requirements and the safety review processes.
- Remain knowledgeable and current in the NASA flight safety system, industrial, mission, integration, and test/operations safety programs as outlined by applicable NASA centers of operation.
- Where necessary to meet the requirements of the projects, oversee and/or develop:
  - Reliability and maintainability predictions in accordance with MIL-STD-217.
  - Reliability modeling and allocation processes as defined in MIL-STD-785.
  - Failure Mode and Effects Analysis (FMEA) as defined in MIL-STD-1629.
  - Fault Tree Analysis (FTA)
  - Mean Time Before Failure (MTBF) analysis.
- Review product assurance publications, articles, and abstracts to stay abreast of technical developments in industry.
- Maintain facilities safety program for all Techshot facilities.
- In addition to these responsibilities, assistance with additional tasks deemed suitable by the Chief Executive Officer will be requested from time to time. Detailed instructions will be given in accordance with each task when assigned.

## **SUPERVISORY RESPONSIBILITIES**

None at this time

## **QUALIFICATIONS**

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

## **LANGUAGE SKILLS**

Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community. Ability to write speeches and articles for publication that conforms to prescribed style and format. Ability to effectively present information to top management, public groups, and/or boards of directors.

## **MATHEMATICAL SKILLS**

Ability to apply advanced mathematical concepts such as exponents, logarithms, quadratic equations, and permutations. Ability to apply mathematical operations to such tasks as frequency distribution,

determination of test reliability and validity, analysis of variance, correlation techniques, sampling theory, and factor analysis.

## **REASONING ABILITY**

Ability to define problems, collect data, establish facts and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

## **CERTIFICATES, LICENSES, REGISTRATIONS**

None required at this time.

**PHYSICAL DEMANDS** The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Be able to stand and walk under 1/3 of work time

Be able to sit 1/3 to 2/3's of work time

Be able to use hands to finger, handle, or feel over 2/3's of work time

Be able to reach with hands and arms under 1/3 of work time

Be able to climb or balance under 1/3 of work time

Be able to stoop, kneel, crouch, or crawl under 1/3 of work time

Be able to talk or hear over 2/3's of work time

Be able to taste or smell under 1/3 of work time

Be able to lift up to 50 pounds under 1/3 of work time

Have close vision (clear vision at 20 inches or less)

Have color vision (ability to identify and distinguish colors)

Have peripheral vision (ability to observe an area that can be seen up and down or to the left and right while eye are fixed on a given point)

Have depth perception (three-dimensional vision, ability to judge distances and spatial relationships)

Have ability to adjust focus (ability to adjust the eye to bring an object into sharp focus)

**WORK ENVIRONMENT** The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Work in wet or humid conditions (non-weather) under 1/3 of the time

Work near moving mechanical parts under 1/3 of the time

Work in high, precarious places under 1/3 of the time

Work in fumes or airborne particles under 1/3 of the time

Work in toxic or caustic chemicals under 1/3 of the time

Work in outdoor weather conditions under 1/3 of the time

Work in extreme cold or heat (non-weather) conditions under 1/3 of the time

Work in risk of electrical shock under 1/3 of the time

Work with explosives under 1/3 of the time

Work with risk of radiation and vibration under 1/3 of the time

Work in moderate noise (examples: business office with computers and printers, light traffic)