



Quality at OMW

Facilities, Tools and Calibration



OMW maintains a large QA inspection facility that is centrally located to manufacturing operations. The room is temperature controlled to 70° F +/- 2° .

All inspection equipment at OMW (gages, surface plates, CMMs, comparators, etc.) are calibrated on a regular calendar schedule with standards traceable to the National Institute for Standards and Technology (NIST). Calibration records are routinely maintained.

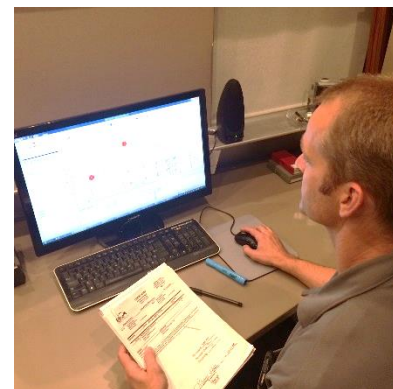
Several software tools are also used in the OMW Quality System including CMM Manager (Nikon Corporation) for programming automated inspection equipment, InspectionXpert (InspectionXpert Corporation) for coordinating First Article and Dimensional Inspection reports as well as ShopTech's E2 ERP System with Quality Module.

Quality System

OMW maintains Quality and Procedures manuals prepared to meet or exceed the requirements of both AS9100 and ISO 9001. The Quality Management System is verified by regular inspections, reviews and both internal and external audits, including an annual surveillance audit by an outside registrar. OMW is also ITAR (DDTC) registered.

Initial Quality Planning

We review part quality requirements starting at the part quoting stage, as per our ISO procedures. Customer drawings and requirements are carefully reviewed, and quality history is reviewed for repeat orders. After the order is placed, high tolerance features and other potential issues requiring attention are highlighted on the job traveler to make sure the setup machinists and operators are aware of potential challenges. Written inspection plans are generated at this time. Inspection



plans may involve applicable statistical sampling and AQLs (Acceptable Quality Levels), or 100% part inspection.

Incoming Material and Vendors Management

All vendors used by OMW appear on an Approved Vendor List, as per our Quality Manual. Vendors are carefully screened to ensure capability to produce the items purchased within time, quality and cost constraints.

All materials ordered by OMW for manufacturing are inspected upon receipt, placed in a defined location, and tagged with the correct job number and part image. As required, Material Certifications are collected from the vendor and correlated with the job in process.

Design Validation

As a contract manufacturer, design validation normally is limited to manufacturability, not fitness to a specific purpose. During the quote review stage, the Manufacturing Manager and staff review parts for manufacturability. Potential part manufacturing issues are brought to the attention of the client for resolution by their own design and engineering team.

Non-Conformances & Root Cause Analysis

All internal rejects (non-conformances) are logged into the E2 quality module, as are Customer or Vendor returns. Any part return will generate a NCR (Non Conformance Report) and associated investigative forms. Depending on the nature of the non-conformance, a CAPA (Corrective and Preventative Action) form may also be generated. The OMW Quality Manager monitors NCRs and CAPAs, and is responsible for following the issues through to verification and completion.

If a CAPA is generated, generally a root cause analysis is completed, following the “5 whys” discipline, an iterative problem solving technique.

Outgoing Inspection and FAIRs

All parts produced by OMW are subject to outgoing quality inspection. This inspection step includes visual confirmation of features and surface finishes, as well as confirmation of key dimensions through statistical part sampling or 100% inspection, depending on customer requirements and the inspection plan. The client is notified within 24 hours if problems are found at Outgoing Quality Control.

Some customers require FAIR (First Article Inspection Report) documentation as per the AS9102 or proprietary customer standard. FAIR documentation is created using Inspection Expert™ and other software. FAIR parts are generally tagged or marked to maintain traceability.

Final inspection data collection reports or gage acceptability reports may be also be generated depending on customer requirements.

Change Control

All customer part files received by OMW are labelled with a revision level (or a date if a revision level is not supplied). Upon receipt of notification by a customer of a revision or other engineering change, OMW immediately archives all existing part files. OMW's Manufacturing Manager and shop floor personnel are notified of the changes, and part production is halted if necessary.

Receipt of the change request is acknowledged to the customer. The changes are noted in the ERP system, and the new updated prints are linked through the software to existing orders. Shop floor hardcopy prints are re-issued if necessary.

Generally, both solid models and PDF drawings with the new changes will be overlaid against the prior releases, using our CAD and QA software. This helps us understand the impact of the changes on the manufacturing process. Order pricing impact, if applicable, is discussed with the client's purchasing personnel.

