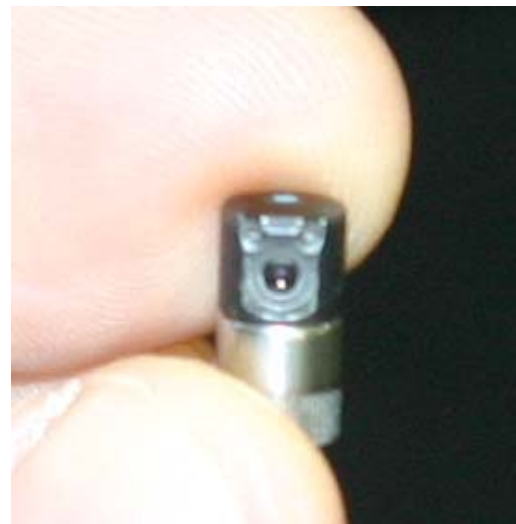


CASE HISTORY 19

Objective Lenses for Video Probes



Market

Industrial

Client Type

Market-leading manufacturer of non-destructive video inspection systems
([GE Inspection Technologies](#))

Unmet Need

A family of objective lenses for a new 6.2mm flexible video probe for the inspection of jet engine turbines

Approach

- Develop 4 lens types simultaneously to maximize intercompatibility and part commonality
- Develop custom assembly fixtures and test equipment
- Qualify prototypes to MIL standards
- Produce quantities of product

Product Features

Using components from top global suppliers of micro-lenses, micro-prisms, fiberoptic tapers, laser-cut and micro-machined metal parts, these forward- and side-viewing objectives provide intense white illumination and diffraction-limited imaging performance. Products were produced under our ISO-9001 compliant process. 39 separate in-process and final inspections ensured that the devices met requisite MIL standards.

Services Provided by OTI

- Optical design, engineering, and sourcing of micro-optical components, including the world's smallest fiberoptic tapers
- Mechanical engineering, including micro-machined parts toleranced in the 10's of microns
- Development of assembly & test methods
- Design & fabrication of assembly & test fixtures
- Complete ISO-compliant documentation set, including all drawings & procedures
- Prototyping
- Verification & validation testing
- Manufacturing

Client Comment

"We produce similar objective lenses ourselves, and Optimum's products achieved our extremely tight quality levels almost out of the gate. They are an excellent resource for product development and manufacturing capacity-leveling"

- Tom Karpan, Director of Engineering
Everest Imaging (now GE Inspection Technologies)

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