

Environmental Standards Revisited

Although we have mentioned ISO standards for environmental tests for optical instruments before in this column, it is a good time to bring them up again. Some optical instrument manufacturers have looked at the draft standards and realized what the impact will be on their field if the standard is adopted in its present form.

To review the situation briefly, there are two standards being drafted by ISO/TC172/SC1/WG3: Environmental standards, ISO 9022—*Environmental test methods*, and ISO 10109—*Environmental requirements*. ISO 9022 describes nearly 20 basic types of tests that can be used to determine how well optical instruments withstand simulated adverse operating conditions. Most of the 20 parts of this standard have been adopted internationally.

ISO 10109 is an optical instrument standard and is designed to indicate which environmental test, outlined in ISO 9022, particular instrument should be subjected to in order to prove the instrument will function in a particular operating environment. For example, an ordinary microscope will probably never be used outside of a laboratory or classroom. On the other hand, some binoculars may be used on board ships or, perhaps, in the tropics. Depending on the intended use of a specific instrument, ISO 10109 tells what tests in ISO 9022 must be performed and to what degree of severity.

You might wonder why this is such a big deal, but realize that ISO 10109 applies to virtually every type of optical instrument, from eyeglasses to microscopes to electro-optical systems. Furthermore, by implication, these environmental testing standards are a part of the ISO 9000 quality assurance program standards.

Now that a few of the optical instrument manufacturers have taken the time to read what is proposed in these drafts, there is a fair degree of consternation. SC4's riflescope working group returned a revised set of criteria to SC1/WG3 for consideration. The Japanese delegates to ISO/TC42—*Photography* have suggested that the whole section

on photographic optics (cameras) be tossed out and the drafting process started anew.

Luckily, there are some checks and balances built into the standards writing process. Since SC1/WG3 writes standards that apply to all types of optical instruments, they initiate proposed standards. However, the instrument specific subcommittees have the last word since they are deemed experts on those specific instruments. On the other hand, if no one in the instrument specific groups carefully reads and understands the implication of ISO 10109, that

group may have a nasty surprise in the near future.

I suggest that all optical instrument manufacturers get copies of the drafts of ISO 9022 and ISO 10109 and study the impact of what is proposed for the instruments they make. With this understanding, they may want to come to meetings of their subcommittee and suggest changes that are appropriate.

Draft copies of these standards are available for a nominal copying charge from Angella Dair at NAPM, 914/698-7603.

—Robert Parks

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