Optics and Electro-Optics
Standards Council

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To: ARDEC: Mark Lindenbaum, Terry Hill, Kirk Bristol, Amy Jones and James Waldradt

Cc: OEOSC TF2: Walter Czajkowski, Charles Gaugh, Frank Dombrowski, Hal Johnson, Marla Dowell, William Royall, Gordon Boultbee, Ray Williamson, Trey Turner, Dave Aikens, Lincoln Endelman, Allen Krisiloff, Andrei Brunfeld

Lady and Gentlemen:

The members of the Optics and Electro-Optics Standards Council (OEOSC) would like to thank you once again for hosting our visit to the Armament Research, Development and Engineering Center (ARDEC) at Picatinny earlier this year. We appreciate the discussion regarding the status and use of MIL-PRF-13830B, Performance Specification, Optical Components For Fire Control Instruments; General Specification Governing The Manufacture, Assemble, And Inspection (9 Jan 1997). In particular, OEOSC Task Force 2 (OP/TF2), the U.S. Standards Development Organization for Surface Imperfections, would like to continue this dialog by outlining some of the mutual opportunities for both industry and the military concerning the future use of MIL-PRF-13830B ("13830" in this memo).

A goal of OP/TF2 is to develop U.S. optics standards that can provide a common framework for both military and civilian applications as well as a common language between military customers and their private sector suppliers. Increasingly, U.S. manufacturers are required to conform to international drawing standards that do not adequately address U.S. military needs. As a result, OP/TF2 has issued a U.S. appearance imperfections standard, ANSI/OP 1.002 ("1.002" in this memo), that incorporates the scratch and dig notation of 13830, as well as scratch width evaluation, of uncoated and coated surfaces. In the long run, our goal of an international implementation of the U.S. standard will give U.S. manufacturers a competitive advantage as well as reduce operating costs. We believe that we will be successful in this endeavor through OEOSC's active participation in the International Organization for Standardization (ISO) committee that is charged with issuing international standards for optics. (ISO rules do not allow military standards to be used as the basis of ISO standards, but 1.002 can be the basis of an ISO standard since it is a national standard.) With 1.002 as an intermediary, the scratch visibility portion of 13830 could gain international endorsement.

To enable more close cooperation and synchronization between our efforts, we believe that the MIL-PRF-13830B should be amended to reference OP1.002.

MIL-PRF-13830B Sections 3.5 (quality), 3.6 (cement defects) and 4.2.2 (verification) could be removed and replaced with a simple statement that all surface quality specifications will be interpreted and validated in accordance with the American National Standard ANSI/OEOSC OP1.002-2009. This will leave intact all of the parts of the document not covered by OP1.002, but will set the stage for national and international adoption of the standard. OEOSC would be pleased to provide sample wording to this effect, if desired.

Updating 13830 has become more urgent with the signing of the Energy Independence and Security Act of 2007 (Pub.L. 110-140). This law requires the phase out of incandescent light bulbs for commercial use in the range of 40 to 150 watts by 2014, thus eventually eliminating the supply of the 40 watt lamp specific for inspection of uncoated surfaces in 13830. The logical replacement would be the 15 watt, dual fluorescent lamp specified in appendix C of 13830 for coated surfaces. However, that lamp is now available in several variations, therefore, no longer as specific a callout as it was when it was originally chosen. OEOSC believes that there are other standard development organizations working in the lighting and illumination fields that could advise on this matter; this is a critical area where 13830 needs clarification.

Another clarification that is needed in the use of 13830 is a reaffirmation that the scratches specified in 13830 are evaluated by scratch visibility, not by scratch width. A large portion of the 13830 user community (prime and sub-tier defense contractors) interprets statements on various editions of drawing C7641866 to mean that scratches can be accepted or rejected based on scratch width regardless of their visibility when 13830 is the invoked specification. Attempts by various non-military groups to clarify this have not been accepted as authoritative, and we feel that only the Army custodians of 13830 have the authority and prestige to issue a clarification that will be accepted. Based on discussions around this issue in April at Picatinny, it sounds like a clarifying inter-service memo from the Army to procurement agencies in the other services would provide sufficient documentation if that memo could be shared outside of the DoD. OEOSC would be pleased to submit some suggested wording for such a memo for your consideration.

We look forward to the opportunity to work together to make 13830 a more useful document, and to assist in the adoption of 1.002 as an alternative document. We would be happy to provide you with technical experts who can advise on 13830 revisions. We would also be happy to serve as host to a Department of Defense workshop to address military concerns regarding the adoption of 1.002.

Regards,

Gene Kohlenberg
OEOSC