

Spring

Volume 28

2018

IN THIS ISSUE

- PAGE 1 -

DLS Quality Award Winner

Medical Update

Solar Radiation Testing

- PAGE 2 -

Recent Updates on RED Harmonized Standards

Free MIL-STD Webinar

DLS Expands Again:
16th EMC Chamber
in Wheeling

Airbus Debuts...

Roger Swanberg Retires

Win a \$50
Starbucks Gift Card
for your thoughts

www.dlsemc.com/feedback



DLS News & Views

To help keep you better informed

ACIL again names DLS Quality Award winner

What does this mean to you?

When compared to other test labs, D.L.S. placed higher on key customer quality related issues including the integrity of data, meeting customer's service needs, technical expertise, timeliness, value, and overall satisfaction. This is the second year in a row that D.L.S. has been cited by The American Council of Independent Laboratories for this quality award which is based on a comprehensive client survey.



The award is based on reviews of D.L.S. compliance services, including EMC, Wireless, Environmental and Product Safety testing, as well as the knowledge and expertise of the technical engineering and support staff. D.L.S. consistently scored at the higher levels in the survey, specific to testing organizations. This program confirms the long term D.L.S. commitment to quality and continuous improvement with independent confirmation of progress and success. Additional details about the award can be found at www.dlsemc.com/press-releases.

Medical Update New EMC standards for Medical Compliance CE Mark



This year will mark the withdrawal of the current 3rd Edition EN/IEC 60601-1-2 Medical Device EMC requirements. The new 4th edition standard has been published and can be used for any formal compliance testing program for the US, the EU for CE Mark compliance, and Canada.

This new standard has several changes and includes additional test requirements, including more stringent testing criteria, a greater emphasis on risk management requirements, higher immunity levels and multiple locations for intended use with different testing criteria to name a few.

There is no grandfather clause for past testing and performance. D.L.S. offers a comprehensive transitional analysis to help determine the specific requirements needed to maintain CE compliance, and to confirm new products meet the new standard requirements. Contact us today at www.dlsemc.com/medicalcompliance.

Solar Radiation Testing

D.L.S. has expanded its environmental testing capabilities with a new solar radiation and water spray chamber. Solar radiation testing, such as detailed in MIL-STD 810G Method 505.5, is conducted to determine the effects of solar radiation on equipment/materials that may be exposed to sunlight during operation or unsheltered storage on the Earth's surface (or in the lower atmosphere). These solar radiation effects can be broken into 2 main components: heating and photo degradation.

The heating effects are different from those related solely to high air temperature because solar radiation creates directional heating and thermal gradients. The amount of heat absorbed or reflected during solar radiation testing depends mostly on the absorptive or reflective properties of the surface being tested.

In addition to the differential expansion between dissimilar materials, changes in the solar radiation intensity may also cause these materials to expand or contract at accelerated rates that can lead to more severe stresses and loss of



Continued on next page

D.L.S. expands again

With 16th EMC Chamber at Wheeling facility

D.L.S. has added a 16th testing chamber to the main campus testing facility in Wheeling, IL. This chamber will provide additional support to the growing avionics and aerospace industry, and increases the flexibility with respect to scheduling for Military, Medical, Automotive, Multimedia, and Industrial projects. You can request a quote at www.dlsemc.com/requestquote.



Radio Equipment Directive EN 301 489-xx standards publication in the OJEU delayed

ETSI has delayed the expected publication in the OJEU for the EN 301 489-xx series of standards until late 2018. While many of these standards are available in published or draft form, there are concerns that must be addressed before they can be Harmonized.

One concern is how performance criteria is represented in the standards as "to be specified by the manufacturer." In the interim period until these are published in the OJEU, a manufacturer may use the published ETSI EN 301 489-xx standards to indicate conformance with Article 3.1b of the RED providing the standards represent the state-of-the-art at the time of use, and providing they address all the Essential Requirements of the Directive as applicable to the product. Where performance levels are not detailed in a selected standard(s), manufacturers should provide rationale for their selection of performance levels to be met. The list of RED OJEU standards is kept up to date on our website at www.dlsemc.com/eu.

Roger Swanberg Retires

Roger Swanberg announced his retirement after 19 years as Senior EMC Consulting Engineer for D.L.S. We will miss Roger and thank him for all his work in design reviews, mitigation projects, development of equipment and processes, facilities layouts, educational programs, training for the development team, and as the technical liaison to the laboratory staff. Enjoy your retirement, Roger! You have certainly earned it.



D.L.S. Electronic Systems, Inc.
1250 Peterson Drive, Wheeling, IL 60090

Free Webinar from DLS & iNARTE MIL-STD 461F & G Testing & Design Tips



D.L.S. and iNARTE teamed up recently to provide a free 30 minute webinar presented by D.L.S. President Donald L. Sweeney. It addresses the history behind EMI testing, EMC events on well-known military programs, the various parts that make up MIL-STD 461, some helpful solutions to meet the Military Standard for EMI requirements and problems commonly seen during MIL-STD testing.

The webinar was sponsored in part by iNARTE, International Association for Radio, Telecommunications and Electromagnetics, a global certification body for qualified engineers and organizations in the fields of telecommunications, electromagnetic compatibility/interference (EMC/EMI), product safety (PS), electrostatic discharge control (ESD), and wireless systems installation. This webinar can be viewed and downloaded at www.dlsemc.com/emclive2017.

AIRBUS debuts A350

Airbus recently showed off at the Singapore Airshow the newly certified A350-1000, the biggest twinjet ever developed by the European manufacturer. D.L.S. is proud to have a supporting supplier status for equipment used on the Airbus 350 platform.



Solar Testing - continued

structural integrity. Some of the heating related issues that can be caused by solar exposure are jamming or loosening of moving parts, softening of potting compounds, sweating of composite materials, loss of seal integrity, weakening of solder joints and glued parts, and changes in strength, appearance and elasticity of materials.

In addition to the heating effects mentioned above, some photo degradation (actinic) effects from solar energy can be caused by other portions of the spectrum, especially shorter wavelengths such as ultraviolet light. The rate at which this degradation occurs generally increases as the temperature rises. Some examples of deterioration that can be caused by actinic effects of solar radiation are:

- Checking (cracking), chalking and fading of paints
- Fading of fabric and plastic color
- Deterioration of natural and synthetic elastomers and polymers through photochemical reactions.

Please contact D.L.S. to discuss applicable requirements and determine how we can help you meet your solar radiation testing needs.