

# ALMA International

## Component Standards Sub-Committee Meeting Minutes

### 2007 Winter Symposium

**Mission Statement: To establish standard nomenclature, dimensions and tolerances, and methods of measurement, inspection, and qualification for loudspeaker components.**

#### General

- Sub-committee members and email addresses – **updated 2007 member/email list.**
- Website comments – direct link on homepage to standards documents?  
The sub-committee agreed that a direct link on the ALMA website homepage to the standards documents is a good idea. **Brian Sterling will request this again.**
- There was request to document the general component standards process. Following is current information regarding the component standards process:

There are currently four classes of document:

- 1) **Nomenclature Prints (NP's)** – establish standard nomenclature for loudspeaker component features and correlate the nomenclature to the feature.
- 2) **Dimensioning/Tolerancing Guidelines (DG's)** – establish guidelines for the dimensioning and tolerancing of loudspeaker components, including defining the special characteristics and the tolerance to be applied to each feature. DG's will primarily be used by design (in conjunction with NP's) to help create more standardized prints with reasonable tolerances. A DG is created for each corresponding NP.
- 3) **Measurement Guidelines** – establish guidelines for the measurement of loudspeaker components, including defining the most practical and effective equipment for and methods of measurement. MG's will primarily be used by quality/inspection (in conjunction with existing measurement standards and ALMA International Test Methods) to help make more consistent and repeatable measurements. A MG is created for each corresponding DG.
- 4) **Test Methods (TM's)** – establish detailed instructions for component feature measurement. Some of these documents have already been produced by other organizations, so our first effort will be to locate all existing and relevant test methods. However, if none exist for a particular feature measurement, we will create an ALMA International Test Method.

Documents are numbered with their 2-letter abbreviations followed by a sequential 3-digit number. For example Dimensioning/Tolerancing Guidelines for Spiders is document number DG-004.

Revisions are indicated by date (consistent with other standards) on approved documents and by "DRAFT" on unapproved documents.

DRAFT documents can be released with the approval of the author(s) and the sub-committee chair only, while non-DRAFT documents must have sub-committee approval (e.g. at yearly meetings) for release.

The goal is to update DRAFT documents on the website every quarter.

Gage Repeatability and Reproducibility (GRR) information, if known, should be listed at the end of each TM.

### **Nomenclature Prints (NP's) updates**

- NP-005 Padrings – Greg Seidel – post on the website for review
- NP-006 Screens – Greg Seidel – post on the website for review
- NP-007 Whizzers – Neal Baitcher – confirm assignment/reassign

### **Dimensioning/Tolerancing Guidelines (DG's) updates**

- DG-005 Padrings – Greg Seidel – post on the website for review
- DG-006 Screens – Greg Seidel – post on the website for review
- DG-007 Whizzers – Neal Baitcher – confirm assignment/reassign

### **Measurement Guidelines (MG's) updates**

- MG-000 General – Brian Sterling – add storage, preconditioning, conditioning, and testing atmosphere requirements (as posted on the website for the last year)
- MG-005 Padrings – Greg Seidel – post on the website for review
- MG-006 Screens – Greg Seidel – post on the website for review
- MG-007 Whizzers – Neal Baitcher – confirm assignment/reassign

### **Test Methods (TM's) updates**

Due to the large number of TM's required, we must first focus on completing the TM's for the critical characteristics of the currently DRAFT released MG's. There are currently 4 DRAFT released component MG's with a total of 17 critical characteristics, so 17 TM's are priority. 1 of these TM's (TM-100) is already released. There are currently proposals for release of 2 more and DRAFT release of 5 more. There are still 9 priority TM's that need to be drafted and proposed.

- TM-100 SERIES Diaphragms
  - TM-100 Test Method for Measurement of the Lowest Resonance Frequency of Loudspeaker Cones is released and has been placed on the ALMA website. There has been a call for comment for the last few years to improve TM-100. These improvements will be realized by superceding TM-100 with IEC 100/999/NP.
  - TM-104 Neck I.D. – George Wise – DRAFT release
  - TM-114 Body Mass – George Wise – DRAFT release
  - TM-138 Assembly Mass – George Wise – DRAFT release
  - TM-123 Shoulder Height – John Stewart – confirm assignment/reassign; Brian Sterling can provide draft if desired
- TM-200 SEIRES Dust Caps
  - TM-203 Neck O.D. Bottom – Greg Seidel – confirm assignment/reassign
  - TM-204 Neck I.D. Top – Greg Seidel – confirm assignment/reassign
  - TM-213 Mass – George Wise – DRAFT release
- TM-300 SERIES Voice Coils
  - TM-301 I.D. – Jeff Guelzow – confirm assignment/reassign; Brian Sterling can provide draft if desired
  - TM-315 Top of Winding – Jeff Guelzow – confirm assignment/reassign
  - TM-316 Bottom of Winding – Jeff Guelzow – confirm assignment/reassign
  - TM-319 Winding O.D. – Jeff Guelzow – confirm assignment/reassign; Brian Sterling can provide draft if desired
  - TM-320 DC Resistance (DCR) – Jeff Guelzow – confirm assignment/reassign; Brian Sterling can provide draft if desired
  - TM-324 Test Method for Voice Coil Maximum Operating Temperature (T<sub>MO</sub>) – John Busenitz – release (as posted on the website for the last year)
- TM-400 SERIES Spiders
  - TM-406 Neck I.D. – George Wise – DRAFT release
  - TM-413 Corrugation Height – George Wise – confirm assignment/reassign
  - TM-438 Test Method for Stiffness of Loudspeaker Driver Suspension Components – Brian Sterling/Bob True – release (as posted on the website for the last year)

Work on generalizing Method B to include the full hysteresis stiffness and/or supercede with IEC 100/999/NP?

- TM-500 SERIES Padrings – Greg Seidel – post on the website for review
- TM-600 SERIES Screens – Greg Seidel – post on the website for review
- TM-700 SERIES Whizzers – Neal Baitcher – confirm assignment/reassign

### **New Business**