Beacon Manufacturers' Workshop

Beacon Type Approval
for Second Generation Beacons

Since 2016 BMW – Joint Committee (JC 30)

- Ten papers discussed Beacon Type Approval matters
- Splinter Group on ‘Updates to Documents C/S T.007 and C/S T.008’
  - Recommended draft documents for Council review:
    - C/S T.007, Issue 4 - Draft Revision 11 – submitted to CSC-57/OPN
    - C/S T.008, Issue 2 - Draft Revision 1 - submitted to CSC-57/OPN
  - Invited RTCM & USA to develop changes to test scripts (Tables D.3, D.4 and new Table D.5), and results tables (F.C.3 and F.C.4)
  - Invited technical experts to review, revise, and submit proposed additional changes for consideration by CSC-57/OPN

Since 2016 BMW - JC 30 (Cont.)

- Splinter Group on ‘Updates to Draft Document C/S T.021’
  - Further developed SGB Type Approval document
  - C/S T.021, Draft Document Dated September 2016
- Self-test indicator of insufficient battery energy to support beacon operation for the declared operating lifetime
  - Proposal to modify effective date from 1 JAN 2017 to 1 JAN 2018
- Invited Secretariat / RTCM to clarify C/S T.007 & C/S T.008
  - TAC assignment process
  - Process to request additional TAC numbers
  - Clear definitions of “beacon variant” and “significant change”

Since 2016 BMW – Council (CSC-57)

- Approved:
  - C/S T.007, Issue 4 – Revision 11
  - C/S T.008, Issue 2 – Revision 1
- Approved TC-NIIR as a Cospas-Sarsat accepted test facility
- Noted the MET Laboratories application status as of 30 NOV 2016
- Invited Secretariat to introduce procedures whereby type-approval certificates and letters of compatibility would explicitly authorize use of the Programme's trademarks for the specified product

Since 2016 BMW - Task Group (TG-1/2017)

- C/S T.021 – Cospas-Sarsat Second Generation 406 MHz Distress Beacon Type Approval Standard
  - C/S T.021 is in draft form, with a plan to complete for review at JC-31 in October
  - Supporting text in C/S T.021 is substantially complete
  - Main annex on Compliance Validation Methodology (test procedures) largely outstanding
  - Test procedures are based upon the T.018 to T.021 Compliance Matrix
- Invited investigating the preferred antenna test configurations for SGB EIRP measurements, including comparison of the two test configurations; and propose a C/S T.021 test configuration for consideration at JC-31.
  - additional testing of different antenna types (e.g., monopole and patch antennas) in the two proposed test configurations, along with a comparison of the test results between different facilities, would be beneficial.

Since 2016 BMW - TG-1/2017 (Cont.)

- Recommended CSC-58 approve the amendments to C/S T.007, Draft Issue 5 “Cospas-Sarsat 406 MHz Distress Beacon Type Approval Standard”
- Agreed on amendments to C/S T.008, “Cospas-Sarsat Acceptance of 406 MHz Beacon Type Approval Test Facilities”, for further review at JC-31
- Invited participants to consider requirements for approval of Cospas-Sarsat test facilities in testing SGBs and development of an appropriate draft policy for consideration at JC-31

Since 2016 BMW - RTCM

Special Committee (SC110) on 406 MHz Beacon

- SC110 adopted amendments to both its EPIRB and PLB standards in July 2016 to update the Internal Navigation Device GPS Test Scenarios

Type Approval Workshop (TAW)

- The TAW continues to work with the Cospas-Sarsat Secretariat, beacon manufacturers and other interested participants to improve the Type Approval process, which has resulted in improvements to C/S T.007, the way in which type approvals are managed, and hopefully lead to future improvements

SGB Beacon Type Approval

C/S T.021 – Cospas-Sarsat Second Generation 406 MHz Distress Beacon Type Approval Standard

- C/S T.021 - still in draft, with plan for completion at JC-31 (OCT 2017)
- Test procedures being based upon T.018 to T.021 Compliance Matrix
- Additional work needed to complete supporting text in the main body
- Annex on Compliance Validation Methodology (test procedures) largely outstanding
- U.S. SARSAT Program invited the U.S. Army Electronic Proving Ground and TÜV SÜD in Fareham, UK to participate in T.021 development

SGB Beacon Type Approval Test Facilities

C/S T.008 (or T.02X) - Cospas-Sarsat Acceptance of 406 MHz Beacon Type Approval Test Facilities

- Focused effort to remove ambiguities for Test Facilities
- Clarify test methodologies and reporting requirements
- Test procedure for first-burst delay measurements
- Proposal that requirements for test facilities be contained in single standard with:
  - generic requirements in the main body
  - specific requirements for C/S T.001 & C/S T.015 -compliant beacons and C/S T.018-compliant beacons placed in individual annexes

Beacon Type Approval Process

Interested parties are invited to:

- continue developing amendments to C/S T.008 for review at JC 31
- continue work on parameters listed in Table A-1 of Annex A and Table B-1 of Annex B on requirements of measurement accuracies
- establish clear definitions of “beacon variant” and “significant change”
- define requirements to certify or re-certify test facilities following significant changes to type approval standards
- define the process for acceptance of new test facilities or the re-certification of already accepted test facilities for C/S T.018-compliant beacons

Other Items of Interest

- Cospas-Sarsat is considering leveraging appropriate international standards to define and simplify the accreditation process
  - ISO/IEC 17025 – Standard Application Document for accreditation of testing and calibration facilities
  - JCGM 100 – Evaluation of measurement data — Guide to the expression of uncertainty in measurement
- Interested parties are invited to suggest appropriate international standards for consideration

Questions?

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Edwin Thiedeman, USCG