STANAG 4370
Edition 2
NAVY/ARMY/AIR
Final draft (31/12/1999)

STANAG 4370

Edition 2

ENVIRONMENTAL TESTING

STANAG 4370
Edition 2
NAVY/ARMY/AIR
Final draft (31/12/1999)

NATO STANDARDIZATION AGREEMENT (STANAG)

ENVIRONMENTAL TESTING

Related documents: Appropriate related documents are referenced in the individual Allied Environmental Conditions and Test Publications (AECTPs) covered by this STANAG.

AIM

1. The aim of this agreement is to give guidelines on the management of environmental testing of defence materiel, to characterise environments and to standardize environmental testing processes.

AGREEMENT

2. Ratifying nations agree that the associated AECTPs provide a comprehensive set of environmental test procedures and environmental program guidance that should be used to develop materiel for use by NATO forces.

3. Revisions to the AECTPs will be released following formal approval by AC/301 "Group on Standardization of Materiel and Engineering Practices".

LIMITATIONS

4. The methods in STANAG 4370 have not been developed specifically to cover the following applications, but in some cases they may be applied:

a. Weapon effects, other than electromagnetic pulse (EMP);
b. Munition safety tests;
c. Packaging testing;
d. Suitability of clothing or fabric items intended for military use;
e. Environmental Stress Screening (ESS) methods and procedures.

TERMS AND DEFINITIONS

5. For the purpose of this agreement the following terms are defined as follows:

a. Environmental Testing: That part of a materiel trials programme concerning the simulation of expected climatic, mechanical and electrical environmental conditions or their effects which influence materiel performance.

b. Tailoring: The process of choosing design characteristics/tolerances and test environments, methods, procedures, sequences and conditions, and altering critical design and test values, conditions of failure, etc., to account for the effects of the particular forcing functions to which materiel normally would be subjected during its life cycle. The tailoring process also includes preparing or reviewing engineering task,

planning, test and evaluation documents to help ensure realistic weather, climatic and other physical environmental conditions are given proper consideration throughout the acquisition cycle.

Further terms and definitions are listed in AECTP 100, Annex F and/or other AECTPs.

ALLIED ENVIRONMENTAL CONDITIONS AND TEST PUBLICATIONS

6. The series of AECTPs covered by this STANAG is as follows:

- AECTP 100 "Environmental Guidelines for Defence Materiel";
- AECTP 200 "Environmental Conditions";
- AECTP 300 "Climatic Environmental Tests";
- AECTP 400 "Mechanical Environmental Tests";
- AECTP 500 "Electrical/Electromagnetic Environmental Tests".

7. Management. Internationally agreed test and evaluation methodology and procedures facilitate interoperability and the reciprocal procurement of defence materiel by NATO nations. AECTP 100 provides general guidelines for the management of environmental test and evaluation methodology and procedures and associated programmes for materiel procurement.

8. Environmental Conditions. Internationally agreed environmental conditions which defence materiel are likely to encounter provide baseline data for project managers and test engineers when developing environmental test requirements and programmes. AECTP 200 provides the characteristics of environments and references to such conditions, together with information on potential damaging effects, and guidance on the selection of tests.

9. Test Methods. Standard environmental test methods, as agreed by the participating nations, are described in:

- AECTP 300 "Climatic Environmental Tests";
- AECTP 400 "Mechanical Environmental Tests";
- AECTP 500 "Electrical/Electromagnetic Environmental Tests".

Any test method may be subject to tailoring, as necessary, to meet particular test programmes requirements.

~~GENERAL~~

10. Point of contact. Proposals for amendments and updating of the STANAG, AECTPs and/or Methods may be submitted through the appropriate channels to:

NATO/Headquarters
Defence Support Division
Coordination and Support Section
(attn. Secretary AC/301)
Room J.351
B-1110 BRUSSELS
BELGIUM

~~IMPLEMENTATION OF THE AGREEMENT~~

11. This STANAG is implemented by a nation when it has issued instructions to its forces that defence materiel should be developed, tested, assessed and qualified in accordance with the Allied Environmental Conditions and Test Publications as covered by this agreement.