SLOVENSKI STANDARD

PSIST ETS 300 019-2-6:1999

01-september-1999

Inženiring opreme (EE) - Pogoji okolja in preskusi vplivov okolja za telekomunikacijsko opremo – Del 2-6: Specifikacija preskusov vplivov okolja - Ladijsko okolje

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-6: Specification of environmental tests; Ship environments

Ta slovenski standard je istoveten z: **ETS 300 019-2-6 E1:1994-05**

ICS:

19.040	Preskušanje v zvezi z okoljem	Environmental testing
33.020	Telekomunikacije na splošno	Telecommunications in general

PSIST ETS 300 019-2-6:1999 **en**

EUROPEAN TELECOMMUNICATION STANDARD

ETS 300 019-2-6

May 1994

Source: ETSI TC-EE

Reference: DE/EE-1019-2-6

ICS: 33.080

Key words: Environment, specification, equipment

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment

Part 2-6: Specification of environmental tests Ship environments

ETSI

European Telecommunications Standards Institute

ETSI Secretariat

Postal address: F-06921 Sophia Antipolis CEDEX - FRANCE
Office address: 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE
X.400: c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

Tel.: +33 92 94 42 00 - Fax: +33 93 65 47 16

Contents

Foreword 5

1 Scope 7

2 Normative references 7

3 Environmental test specifications 7
3.1 Specification T 6.1: Totally weatherprotected locations 8
3.2 Specification T 6.2: Partly weatherprotected locations 10
3.3 Specification T 6.3: Non-weatherprotected locations 12
3.4 Notes to tables 1 to 5 16

Annex A (informative): Bibliography 17

History 18

Blank page

Foreword

This multi-part European Telecommunication Standard (ETS) has been produced by the Equipment Engineering (EE) Technical Committee of the European Telecommunications Standards Institute (ETSI).

ETS 300 019 is concerned with environmental conditions and environmental tests for telecommunications equipment and comprises two main parts, each with subdivisions:

- ETS 300 019-1: "Classification of environmental conditions".

  Part 1 specifies different standardised environmental classes covering climatic and biological conditions, chemically and mechanically active substances and mechanical conditions during storage, transportation and in use.

- ETS 300 019-2: "Specification of environmental tests".

  Part 2 specifies the recommended test severities and test methods for the different environmental classes.

Part 2-0 forms a general overview of Part 2. This part, (Part 2-6), deals with ship environments.

Blank page

1 Scope

This European Telecommunication Standard (ETS) specifies test severities and methods for the verification of the required resistibility of equipment according to the relevant environmental class.

The tests defined in Part 2-6 of this multi-part standard apply to the use of equipment installed permanently or temporarily in ships and cover the environments and the vessels stated in ETS 300 019-1-6 [1].

2 Normative references

This ETS incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1] ETS 300 019-1-6: "Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment Part 1-6: Classification of environmental conditions; Ship environments".

[2] IEC 68-2: "Basic environmental testing procedures. Part 2: Tests".

[3] ETS 300 019-2-0: "Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment Part 2-0: Specification of environmental tests; Introduction".

3 Environmental test specifications

The detailed descriptions of the environmental conditions are given in Clauses 4 and 5 of ETS 300 019-1-6 [1].

ETS 300 019-2-0 [3] forms a general overview of Part 2 of this ETS.

The equipment under test is assumed to be in its operational state throughout the test conditions described in this Part unless otherwise stated. The required performance before, during and after the test needs to be specified in the product specification. Input and load conditions of the equipment shall be chosen to obtain full utilisation of the equipment under test. The heat dissipation shall be maximised, except for the steady state, low temperature test, where it shall be minimised.

3.1 Specification T 6.1: Totally weatherprotected locations

This specification applies to a totally weatherprotected use in ships excluding Warm Damp and Warm Damp Equable climates, see tables 1 and 4.

Table 1: Test specification T 6.1: Totally weatherprotected locations - climatic tests

Environmental parameter			Environmental Class 6.1	Environmental test specification T 6.1: Ship, totally weatherprotected locations			
Type	Parameter	Detail parameter	Characteristic severity	Test severity	Duration	Reference	Method
Air temperature	low	(°C)	+5	+5 (4)	16 h	IEC 68-2-1	Ab/Ad: Cold (3)
	high	(°C)	+40	+40	16 h	IEC 68-2-2	Bb/Bd: Dry heat
	change	air/water (°C)	no				
	surface	high (°C)	no				
Humidity	relative	low (%)	10	(5)			
		high; slow (%) temperature change (°C)	95 +30	93 +30	4 days	IEC 68-2-56	Cb: Damp heat steady state
		high; rapid (%) temperature change (°C)	no				
	absolute	high; rapid (g/m^3) temperature change	no				
Air	speed	(m/s)	no				
Water	temperature	high (°C)	30	none			
		low (°C)	no				
	rain	intensity (mm/min) volume (m^3/min) pressure (kPa)	no				
	other sources	velocity (m/s)	no				
	wetness		no				
Radiation	solar	(W/m^2)	no				
	heat	(W/m^2)	no				

(continued)

Table 1 (concluded): Test specification T 6.1: Totally weatherprotected locations - climatic tests

Environmental parameter			Environmental Class 6.1	Environmental test specification T 6.1: Ship, totally weatherprotected locations			
Type	Parameter-	Detail parameter-	Characteristic severity	Test severity	Duration	Reference	Method
Chemically active substances	sulphur	SO_2 (mg/m^3)	0,1 (1)	none (2)			
		H_2S (mg/m^3)	0,01 (1)	none (2)			
	chlorine	sea salts	negligible				
		HCl (mg/m^3)	0,1 (1)	none (2)			
	nitrogen	NO_x (mg/m^3)	0,1 (1)	none (2)			
		NH_3 (mg/m^3)	0,3 (1)	none (2)			
	hydrogen fluoride HF	(mg/m^3)	0,003 (1)	none (2)			
	ozone O_3	(mg/m^3)	0,01 (1)	none (2)			
Mechanically active substances	dust	sedimentation	negligible				
	sand in air		no				
	soot deposit		no				
Flora and Fauna	micro organisms		negligible				
	rodents, insects		negligible				

no = this condition does not occur in this class.
none = verification is required only in special cases.
(n) = NOTE (n = number of note), see subclause 3.4.