

MARQUAGE CE MARINE DES AQUARIUS xx

Conformité aux Directives Maritimes Européennes

IEC1108–1 Ed. June 96 Compliance Matrix

§	Label	C	C/R	NC	Justification Documents Remarks
C: Compliant C/R: Compliant with remarks NC: Not Compliant NA: Not applicable					
1	Scope				
2	Normative references				CEI 721-3-6:1987 CEI 945: 1994 CEI 1162 CEI 1162-1: 1995 OMI A.529(13): 1983 OMI A.694(17):1991 OMI A.815(19): 1995 OMI A.819(19): 1995 UIT-R M.823-1: 1995 USA DoD – GPS/SPS Signal Spéc.: Déc. 1993 RCTM NAVSTAR/GPS – vs 2.1 Janv. 1994
3	Definitions and abbreviations				
4	Minimum performance standard				
4.1	Object				
4.2	GPS receiver equipment				
4.2.1	Minimum facilities :				
	a) GPS antenna	C			
	b) GPS receiver and processor	C			
	c) Means of accessing the computed latitude / longitude position	C			
	d) Data control and interface	C			
	e) position display and other form of output	C			
4.2.2	Equipment Configuration	C			
4.3	Performance standards for GPS receiver equipment				
4.3.1	General	C			
4.3.2	Equipment output	C			
4.3.3	Accuracy				
4.3.3.1	Static accuracy: 100 m , 95 % du temps HDOP ≤ 4, PDOP ≤ 6	C			
4.3.3.2	Dynamic accuracy: 100 m , 95 % du temps HDOP ≤ 4, PDOP ≤ 6	C			
4.3.4	Acquisition: - Automatic selection of appropriate satellite - Acquisition without valid almanach data ≤ 30 min. - Acquisition with valid almanach data ≤ 5 min. - Re-acquisition when GPS signals are interrupted for at least 24 h (no power loss) ≤ 5 min. - Re-acquisition after power loss of 60 s ≤ 2 min Acquisition with required accuracy in conditions a-b-c-d	C C C C C C			Test report to formalize
4.3.5	Protection				
4.3.5.1	Antenna and input/output connections	C			
4.3.5.2	Electromagnetic compatibility	C			c.f. CEI 945 compliance matrix
4.3.6	Antenna design	C			
4.3.7	Sensitivity and dynamic range	C			Test report to formalize
4.3.8	Effects of specific interfering signals a) INMARSAT-A b) Naval radar Band S				Tests to be conducted Tests to be conducted

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4.3.9	Position update	C			
4.3.10	Failure warning and status indications	C			
4.3.11	Differential GPS input	C			
5	Methods of testing and required test results				
5.1	Test sites				NA
5.2	Test sequence	C			
5.3	Standard test signals	C			
5.4	Determination of accuracy	C			
5.5	Organization of test conditions				
5.5.1	Testing under ambient conditions 10°C < T < 35°C, hygrometry 20 à 70 %	C			
5.5.2	Static test site Antenna position known within 5m (x,y,z) in WGS 84 Actual GPS signals	C C			
5.6	Performance tests				
5.6.1	GPS receiver equipment	C			
5.6.2	Position output	C			
5.6.3	Equipment output Compliance to norm IEC 1162-1		C/R		
5.6.4	Accuracy				
5.6.4.1	Static				
5.6.4.1.1	GPS	C			
5.6.4.1.2	Differential GPS	C			
5.6.4.2	Angular movement of the antenna +/- 22.5° in 8s as per CEI 721-3-6		C/R		Test to be conducted
5.6.4.3	Dynamic				
5.6.4.3.1	GPS Test as per IEC 721-3-6 tab. V, sect. e Surge : 5 m/s ² Sway : 6 m/s ²				Test to be conducted
5.6.4.3.2	Differential GPS Surge : 5 m/s ² Sway : 6 m/s ²				Test to be conducted
5.6.5	Acquisition				
5.6.5.1	Condition a): Initialization Wrong position (1000 to 10000 km from actual position) No power supply or no GPS signal for more than 7 days Performance check as per Table 1	C C C			
5.6.5.2	Condition b): Power outage	C			
5.6.5.3	Condition c): Interruption of GPS signals	C			
5.6.5.4	Condition d): Brief interruption of GPS signals	C			
5.6.6	Protection				
5.6.6.1	Antenna and input/output connectors	C			
5.6.6.2	Electromagnetic compatibility C.f. IEC 945	C			c.f. CEI 945 compliance matrix
5.6.7	Antenna design	C			
5.6.8	Sensitivity and dynamic range				
5.6.8.1	Acquisition				

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	Signals attenuated at – 125 dBm +/- 5 dBm				Tests to be conducted
5.6.8.2	Tracking Signals attenuated at –133 dBm				Tests to be conducted
5.6.9	Effects of specific interfering signals				
5.6.9.1	L Band interference				Tests to be conducted
5.6.9.2	S Band interference				Tests to be conducted
5.6.10	Position update				
5.6.10.1	Resolution	C			
5.6.10.2	Update rate	C			
5.6.10.3	Minimum resolution of position	C			
5.6.11	Failure warnings and status indications	C			
5.6.12	Differential GPS input a) RTCM and ITU messages b) DGPS signal reception	C C			
5.7	Performance check under IEC 945 conditions				
5.7.1	Dry-heat cycle c.f. IEC 945 § 4.4.2	C			c.f. IEC945 compliance matrix
5.7.2	Damp-heat cycle c.f. IEC 945 § 4.4.3				c.f. IEC945 compliance matrix
5.7.3	Low temperature cycle c.f. IEC 945 § 4.4.4				c.f. IEC945 compliance matrix
5.7.4	Vibrations c.f. IEC 945 § 4.4.7				c.f. IEC945 compliance matrix
5.7.5	Rain test c.f. IEC 945 § 4.4.8				c.f. IEC945 compliance matrix
5.7.6	General c.f. IEC 945 sauf § 4.4.5,4.4.6 et 4.4.9				c.f. IEC945 compliance matrix