

Article

Shortcomings of International Standard ISO 9223 for the Classification, Determination, and Estimation of Atmosphere Corrosivities in Subtropical Archipelagic Conditions—The Case of the Canary Islands (Spain)

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Table S1. Location, characteristics, and corrosivity categories according to ISO 9223:2012 norm [4] of the 74 corrosion exposure sites considered in this study.

Test Site		Altitude (m)	Geographic Coordinate		Type of Atmospher e	Pollution and TOW Categories According to ISO 9223:2012			Corrosion Rates (µm/year) for the First year of Exposure and Corrosivity Categories according to ISO 9223:2012					
			Latitude (N)	Longitude (W)		S _d	P _d	τ	Carbon Steel		Zinc		Copper	
1	Puerto del Rosario	23	28°30'00"	13°51'06"	Marine	1	0	5	14.2	C2	34.2	>CX	6.15	CX
2	Corralejo	50	28°42'13"	13°54'02"	Marine	1	0	4	31.6	C3	66.8	>CX	6.63	CX
3	P.S. Fuerteventura	38	28°32'01"	13°50'22"	Industrial	2	0	5	97.1	C5	130.8	>CX	10.25	>CX
4	El Cotillo	35	28°40'54"	14°00'45"	Marine	2	0	3	79.0	C4	99.4	>CX	5.45	C5
5	Gran Tarajal	10	28°12'49"	14°01'13"	Marine	2	0	3	17.4	C2	18.6	CX	6.55	CX
6	Costa Calma	100	28°09'42"	14°13'55"	Marine	2	0	4	26.1	C2	102.7	>CX	4.34	C5
7	Arrecife	25	28°57'29"	13°33'47"	Marine	1	0	4	26.9	C3	22.3	CX	3.93	C5
8	P.S. Punta Grande	25	28°58'47"	13°31'93"	Marine	1	0	4	35.1	C3	141.2	>CX	6.13	CX
9	Lanzarote Airport	15	28°56'51"	13°35'58"	Marine	2	0	3	17.4	C2	50.8	>CX	6.38	CX

Table S1. (Continued).

Test Site	Altitude (m)	Geographic Coordinate		Type of Atmosphere	Pollution and TOW Categories According to ISO 9223:2012			Corrosion Rates (µm/year) for the First Year of Exposure and Corrosivity Categories according to ISO 9223:2012						
		Latitude (N)	Longitude (W)		S _a	P _a	τ	Carbon Steel			Zinc		Copper	
								C ₁	C ₂	C ₃	C ₄	C ₅		
10	Haría	278	29°08'51"	13°30'02"	Marine	1	0	4	31.4	C3	63.1	>CX	4.81	C5
11	Tegui	280	29°03'40"	13°33'21"	Marine	1	0	4	80.2	C4	65.2	>CX	6.07	CX
12	Yaiza	180	28°57'08"	13°45'55"	Marine	1	0	4	21.9	C2	18.2	CX	5.50	C5
13	P. S. Jinámar	30	28°02'30"	15°24'39"	Marine	2	1	4	64.7	C4	385.1	>CX	9.21	CX
14	Arucas	250	28°07'14"	15°30'36"	Rural	1	0	3	20.4	C2	29.0	CX	1.82	C3
15	P. S. Juan Grande	30	27°48'93"	15°26'63"	Marine	2	1	4	65.0	C4	583.4	>CX	7.88	CX
16	Santa Brígida	520	28°02'02"	15°29'13"	Marine	1	0	3	17.5	C2	6.8	C4	0.60	C2
17	Las Palmas de G.C.	40	28°06'27"	15°25'04"	Marine	1	0	3	19.1	C2	14.5	CX	3.22	C4
18	Sardina del Norte	50	28°09'10"	15°41'10"	Marine	1	0	3	26.0	C2	158.8	>CX	6.63	CX
19	San Nicolás	70	27°59'10"	15°46'40"	Marine	1	0	3	13.0	C2	47.3	>CX	4.56	C5
20	Moya	485	28°06'40"	15°34'17"	Marine	1	0	4	31.9	C3	20.3	CX	2.53	C4
21	Guía	185	28°08'27"	15°37'12"	Marine	1	0	3	21.5	C2	17.0	CX	5.69	CX
22	Taliarte	20	27°59'28"	15°22'66"	Marine	3	1	5	233.0	CX	2032.4	>CX	18.88	>CX
23	Telde	200	28°00'00"	15°24'20"	Marine	1	1	3	35.9	C3	37.7	>CX	3.98	C5
24	San Agustín	40	27°46'17"	15°33'12"	Marine	1	0	4	34.3	C3	28.8	>CX	3.54	C5
25	Gran Canaria Airport	50	27°56'20"	15°23'20"	Marine	1	1	4	31.0	C3	45.7	>CX	7.69	CX
26	San Mateo	850	28°00'48"	15°31'00"	Rural	1	0	4	20.3	C2	28.2	>CX	0.25	C2
27	Tejeda	1060	28°00'00"	15°36'25"	Rural	1	0	3	11.0	C2	10.3	CX	0.85	C3
28	Arguineguín	30	27°45'16"	15°40'15"	Marine	1	0	3	29.0	C3	32.1	>CX	10.01	>CX
29	Santa Lucía	100	27°51'00"	15°27'32"	Marine	1	0	3	25.1	C2	21.6	CX	4.34	C5
30	Mogán	280	27°53'10"	15°43'09"	Marine	1	0	3	17.0	C2	4.2	C4	2.94	C5
31	Agaete	50	28°06'24"	15°42'05"	Marine	1	0	3	15.9	C2	6.6	C5	4.38	C5
32	Valle de Agaete	255	28°05'19"	15°39'38"	Marine	1	0	3	12.7	C2	2.8	C4	2.15	C4
33	Agüimes	290	27°54'24"	15°26'01"	Marine	1	0	3	20.6	C2	3.3	C4	2.57	C4
34	Valleseco	150	28°07'30"	15°26'47"	Rural	1	0	3	31.5	C3	39.6	>CX	4.79	C5
35	Teror	600	28°03'40"	15°32'08"	Rural	1	0	3	14.7	C2	5.4	C4	0.51	C3
36	Jinámar	100	28°01'48"	15°24'46"	Marine	1	1	4	47.0	C3	25.7	>CX	2.91	C4
37	Tafira	350	28°04'29"	15°26'28"	Marine	1	0	3	28.8	C3	8.5	C4	3.27	C4
38	Muelle de la Luz	15	28°08'50"	15°25'10"	Marine	1	1	4	52.7	C3	32.0	>CX	8.76	CX
39	Las Torres	980	28°01'59"	15°34'44"	Marine	1	0	3	25.1	C2	10.3	CX	0.70	C3
40	Meteorológico	36	28°27'18"	16°14'56"	Rural	1	1	3	15.7	C2	1.02	C3	3.73	C5
41	Policía Local	30	28°27'32"	16°15'29"	Rural	1	1	3	19.5	C2	1.16	C3	3.15	C5
42	Oceanográfico	2	28°30'03"	16°11'49"	Marine	1	1	3	19.5	C2	6.29	C5	4.77	C5
43	Montaña Ofra	300	28°27'10"	16°18'13"	Marine	1	1	4	28.5	C3	3.29	C4	4.87	C5
44	Química	600	28°28'10"	16°19'04"	Marine	1	1	5	39.5	C3	1.59	C3	3.90	C5

Table S1. (Continued).

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		Latitude (N)	Longitude (W)		S _a	P _a	τ	Carbon Steel		Zinc		Copper	
45 Pajalillos	110	28°32'04"	16°21'33"	Marine	1	0	4	17.3	C2	1.55	C3	3.26	C5
46 El Boquerón	400	28°31'06"	16°23'42"	Marine	1	1	5	20.1	C2	2.18	C4	2.93	C5
47 Garimba	500	28°29'52"	16°23'05"	Marine	1	1	5	44.7	C3	2.25	C4	3.48	C5
48 Puerto Cruz	7	28°25'04"	16°32'54"	Marine	1	0	4	17.8	C2	4.75	C5	6.95	CX
49 Botánico	120	28°24'06"	16°32'30"	Marine	1	0	4	20.9	C2	0.99	C3	2.56	C4
50 Montañeta	650	28°20'21"	16°45'25"	Rural	1	0	5	19.2	C2	1.03	C3	1.68	C4
51 Buenavista	125	28°22'20"	16°51'04"	Marine	1	0	4	24.1	C2	2.89	C4	4.91	C5
52 El Palmar	525	28°20'44"	16°50'51"	Marine	1	0	5	22.7	C2	1.68	C3	3.61	C5
53 Las Raíces	965	28°25'54"	16°21'58"	Rural	1	0	5	22.9	C2	1.42	C3	1.92	C4
54 Izaña	2367	28°17'55"	16°29'25"	Rural	1	0	3	3.8	C2	0.77	C3	1.33	C4
55 Unelco Caletillas	220	28°22'54"	16°21'29"	Marine	1	1	4	35.9	C3	5.09	C5	6.03	CX
56 La Planta	120	28°18'43"	16°22'24"	Marine	1	0	4	24.2	C2	3.71	C4	5.73	CX
57 La Oficina	100	28°17'55"	16°29'25"	Marine	1	1	4	25.5	C3	5.32	C5	8.30	CX
58 El Bueno	830	28°12'16"	16°28'34"	Marine	1	0	4	25.6	C3	1.68	C3	3.24	C5
59 P. S. Granadilla	12	28°02'34"	16°34'14"	Marine	1	1	3	94.5	C5	50.48	>CX	14.28	>CX
60 Los Cristianos	150	28°03'79"	16°42'54"	Marine	1	0	3	17.7	C2	2.97	C4	13.28	>CX
61 Vilaflor	1414	28°09'23"	16°38'68"	Rural	1	0	4	-		0.49	C2	-	
62 Cueva del Polvo	80	28°13'36"	16°49'57"	Marine	1	0	5	17.5	C2	3.48	C4	10.76	>CX
63 Guía de Isora	715	28°14'10"	16°47'23"	Marine	1	1	4	17.3	C2	1.49	C3	3.93	C5
64 San Sebastián	15	28°05'18"	17°07'03"	Marine	1	0	4	25.1	C3	2.58	C4	3.93	C5
65 Valle Gran Rey	10	28°05'47"	17°20'42"	Marine	1	0	4	31.2	C3	6.48	C5	17.11	>CX
66 El Cedro	960	28°07'50"	17°13'05"	Rural	1	0	5	17.2	C2	0.67	C2	2.53	C4
67 Valverde	600	27°48'38"	17°54'53"	Marine	1	0	5	218	CX	7.31	C5	6.14	CX
68 El Hierro Airport	10	27°48'50"	17°53'10"	Marine	3	1	4	263.2	CX	223.9	>CX	21.34	>CX
69 La Palma Airport	30	28°37'14"	17°45'12"	marine	1	0	3	41.4	C3	11.78	CX	7.62	CX
70 El Paso	847	28°39'10"	17°51'05"	Marine	1	0	4	15.2	C2	5.07	C5	2.80	C4
71 Puerto Naos	30	28°34'57"	17°54'32"	Marine	1	0	4	16.6	C2	4.79	C5	7.84	CX
72 Los Llanos	350	28°39'37"	17°54'58"	Marine	1	0	4	12.5	C2	2.13	C4	3.48	C5
73 Fuencaliente	570	28°29'58"	17°49'30"	Marine	1	0	4	21.3	C2	4.40	C5	5.86	CX
74 San Andrés y Sauces	280	28°47'59"	17°46'19"	Marine	1	0	4	19.3	C2	1.80	C3	5.01	C5

