

ISO 11950:2016-03 (E)

Cold-reduced tinmill products - Electrolytic chromium/chromium oxide-coated steel

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	General technical delivery condition	4
5	Classification	4
6	Information to be supplied by the purchaser	4
6.1	Designation	4
6.2	Mandatory information	5
6.3	Options	5
7	Manufacturing features	6
7.1	Manufacture	6
7.2	Annealing	6
7.3	Finish	6
7.4	Oiling	6
7.5	Imperfections	7
7.5.1	Coils	7
7.5.2	Sheets	7
8	Chromium/chromium in oxide coating mass	7
9	Mechanical properties	7
9.1	General	7
9.2	Hardness requirement	8
9.3	Tensile property requirement	8
10	Tolerances on dimensions and shape	8
10.1	General	8
10.2	Thickness and feather edge	8
10.2.1	Thickness	8
10.2.2	Feather edge	8
10.3	Width	8
10.4	Length	9
10.4.1	Length of coil	9
10.4.2	Length of sheet	9
10.5	Edge camber	9
10.6	Out-of-squareness of sheet	10
10.7	Flatness	11
10.7.1	Edge wave	11
10.7.2	Longitudinal and transverse bow	11
10.7.3	Centre fullness	11
11	Joint within a coil	11

11.1	General	11
11.2	Number of joint	11
11.3	Location of joint	11
11.4	Dimension of joint	11
11.4.1	Thickness	11
11.4.2	Overlap	12
12	Sampling	12
13	Test method	12
13.1	Chromium/chromium in oxide coating mass	12
13.1.1	Test piece	12
13.1.2	Method of determination	13
13.2	Hardness test	13
13.2.1	Test piece	13
13.2.2	Test method	13
13.3	Tensile test	14
13.3.1	Test piece	14
13.3.2	Test method	14
13.4	Flatness test	14
13.4.1	General	14
13.4.2	Edge wave	14
13.4.3	Longitudinal or transverse bow	15
13.4.4	Centre fullness	15
14	Retests	17
15	Inspection document	17
16	Dispatch and packaging	17
16.1	Coils	17
16.2	Sheets	18
16.3	Labelling	18
Annex A (normative) Hardness requirements for ECCS		19
Annex B (normative) Tensile property requirements for ECCS		20
Annex C (informative) Steel types		22
Annex D (informative) Springback test for routine determination of proof strength for ECCS		23
Annex E (normative) Methods for the determination of metallic chromium and chromium in the oxides on the surface of electrolytic chromium/chromium oxide-coated steel		24
Annex F (normative) Rockwell HR15Tm values and their HR30Tm equivalents		30
Bibliography		31