Technical Information

Coating procedure
FLXA202 2-Wire Analyzer
FLXA402 4-Wire Converter

TI 12A01A03-70EN

Contents

2nd Edition Jun. 2020

1. Purpose

This document describes the production procedure for the execution of the standard coating for FLXA202 and FLXA402.

2. Target model

2-Wire Analyzer (FLXA202)

4-Wire Converter (FLXA402)

3. Coating specifications

3.1 Coating area

Applicable coating area are case and cover of FLXA202 / FLXA402.

3.2 Specifications

		(1) Polyurethane resin coating	(2) Epoxy resin coating *	(3) High anti-corrosion coating (Note)	Reference standard JIS (ISO)	Reference standard ASTM
Coating		Solvent spraying coating, Heating/Drying				
Color		Silver gray (RAL 260 80 05)				
Material		Polyurethane resin	Epoxy resin	1st first coating: Epoxy resin 2nd final Coating: Polyurethane resin		
Layer Thickness		Total: 40 to 60 µm		Under + 1st coating: 70 to 90 µm 2nd final coating: 30 to 90 µm Total: 100 to 180 µm		
Gloss		Gs90				
Evaluation test	Heat Resistance	125 ±2 degC, 24 h			K5600-6-3 (ISO 1513)	---
	Adhesion Test	In case of 0 to 60 µm (coating thickness) -> Peel Test for Grid: 1 mm width (Sampling QTY: 100) In case of 61 to 120 µm (coating thickness) -> Peel Test for Grid: 2 mm width (Sampling QTY: 25) Result: No "Comes Off"			K5600-5-6 (ISO 2409)	D3359
	Sun Test	Sunshine Weather Meter 500 h Result: Change in Gloss: 20% or smaller			K5600-7-7 (ISO 11341)	---
	Chemical Resistance	5% H_2SO_4 Solution immersion 200 h Result: No Blister			---	---
		5% NaOH Solution immersion 200 h Result: No Blister			---	---
	Salt Spray Test	Spraying of 5% NaCl Solution (35 degC, 1000 h) Result: No Blister Comes Off at Cut Point: 2 mm or smaller		Spraying of 5% NaCl Solution (35 degC, 2000 h) Result: No Blister Comes Off at Cut Point: 2 mm or smaller	K5600-7-1 (ISO 7253)	B117

*: Epoxy resin coating does not apply FLXA402.
Note: This is double coating in order to enhance performance: salt/alkali/corrosion atmosphere/acid resistance.

4. Procedure

4.1 Preprocessing (rinse and chemical conversion coating)

Before coating, alkaline degreasing, water rinse and chromate coating are performed.

4.2 Coating

(1) Polyurethane resin coating

Process No.	Process	Treatment / Paint material	Condition
1	Under coating	Epoxy resin type primer	Thickness: 10 to 20 µm
2	Natural drying	---	Drying Time: 30 min
3	Final coating	Polyurethane resin paint	Thickness: 40 to 60 µm (total thickness)
4	Forced drying	---	Drying Temp. & Time: 120±10°C, 25 min

(2) Epoxy resin coating

Process No.	Process	Treatment / Paint material	Condition
1	Under coating	Epoxy resin type primer	Thickness: 10 to 20 µm
2	Natural drying	---	Drying Time: 30 min
3	Final coating	Epoxy resin paint	Thickness: 40 to 60 µm (total thickness)
4	Forced drying	---	Drying Temp. & Time: 120±10°C, 25 min

(3) High anti-corrosion coating

Process No.	Process	Treatment / Paint material	Condition
1	Under coating	Epoxy resin type primer	Thickness: 10 to 20 µm
2	Natural drying	---	Drying Time: 30 min
3	1st coating	Epoxy resin paint	Thickness: 70 to 90 µm (under + 1st coating)
4	Forced drying	---	Drying Temp. & Time: 120±10°C, 25 min
5	Surface roughening	---	Sand paper #800
6	2nd final coating	Polyurethane resin paint	Thickness: 100 to 180 µm (total thickness)
7	Forced drying	---	Drying Temp. & Time: 120±10°C, 25 min

4.3 Inspection

No.	Inspection/test name	Test frequency	Test method	Details	Judgment
1	Visual inspection	All products	Visual test	Check for scratch, peeling, stain etc	Limit sample
2	Masking inspection	All products	Visual test	Confirm masking condition	No residual coating, no deposited coating
3	Coating thickness test	One test piece/day or All products (high anti-corrosion coating)	Film thickness gauges	Measure thickness using film thickness gauge	Within tolerance which is defined in standard. (refer to section 4.2)
4	Color difference test	One test piece/day	Visual test	Color sample	No color difference
5	Glossiness test	One test piece/day	Glossiness checker	Measure glossiness using glossiness checker	Within Standard value ±5%
6	Coating film bending test	One test piece/day	Coating film bending test JIS K 5600-5-1 (ISO 1519)	Bend test piece (diameter: 10 mm)	No crack, no peeling etc
7	Adhesion test	One test piece/day	Adhesion test JIS K 5600-5-6 (ISO 2409)	(Note)	All grid is not peeled
8	Hardness test	One test piece/day	Pencil hardness test JIS K 5600-5-4 (ISO 2409)	Pencil method	Hardness: more than level H After scratch with nail, There is no damage.

Note: 1-a. Make 100 pcs of grid (1x1 mm) using utility knife. (In case of polyurethane resin coating, epoxy resin coating)
1-b. Make 25 pcs of grid (2x2 mm) using utility knife. (In case of high anti-corrosion coating)
2. Stick adhesive tape on the grids by finger press.
3. Peel off the tape

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