



page 1 of 7 Test No.: 4404

Test Intention:		
1 001 1111011110111		

In test 4404 we will investigate the lifespan of CF270.UL.D in an E6.52.075.125.0 echain.

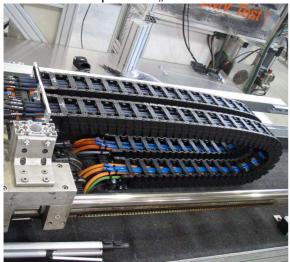
Client:			
Name: Christian Mittelstedt	Team: chainflex®	Date: 06.03.2012	Result:
Order-Info:			
Customer/ No.: igus GmbH			
Series / No: CF270.UL.D		Installation type: horizont	al, short way
Customer test:	Yes ⊠ No □	Development test:	∕es ☐ No ☐
Technical data		Target & Examination	
E-Chain type:	E6.52.075.125.0	Cable length [m]:	6,0
E-Chain Radius [mm]:	125	Target [strokes]:	Lifespan
Stroke [m]:	1,6	Optical check:	
a acceleration [m/sec ²]:	-/-	Abrasion jacket:	
v velocity [m/s]:	-/-	Resistance:	
Ambient temperature [°C]:	approx. 25°C	Function check:	
Experimental setup (Sketch,	Photo)		
		·	· · · · · · · · · · · · · · · · · · ·

Checklist for the experimental preparations

- □ additional inscription/label at all wires
- strain reliefs at both ends of the chain
- □ correct electrical connection of all wires
- In radius was marked at the cables and the energy chain

1. Construction:

This test is built up on the "Zollern". The following pictures show the test structure:





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The managing data show the results of the accomplished examinations. With all data it still acts neither around one or more warranties of certain characteristics around one or more warranties regarding the suitability of a product for a certain targeted application, since the examinations on laboratory conditions took place. The warranty of certain characteristics of the products and/or their suitability for a certain application requires writing in the confirmation of order. Finally we recommend user-specific measurements under genuine operating conditions.

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page 2 of 7 Test No.: 4404

2. Cable and hose packages:

- No. 1 **2x CF270.UL.10.07.02.02.D** with the cable marking 01111 igus CHAINFLEX CF270.UL.10.07.02.02.D (4G1,0+2x(2x0,75)C)C 600/1000V E310776 CFUus AWM Style 21223 VW1 AWM I/II A/B 80°C 1000V FT1 CE T O/AE DESINA RoHS conform www.igus.de
- No. 2 **1x CF270.UL.15.15.02.01.D** with the cable marking 03469 igus CHAINFLEX CF270.UL.15.15.02.01.D (4G1,5+(2x1,5)C)C 600/1000V E310776 CFJUs AWM Style 21223 VW1 AWM I/II A/B 80°C 1000V FT1 CE T O/AE DESINA RoHS conform www.igus.de

3. Description of the cable construction:

Standard igus chainflex® catalogue cable

4. Remarks:

To detect broken conductor or shielding wires we will measure the ohmic resistance of these cable elements. The cores of the samples are connected in series and one core is connected with the shielding to measure the ohmic resistances.

The following chart gives an overview regarding the test parameters:

Cable no.	Cable type	E-chain radius [mm]	Outer diameter [mm]	Bending factor [xd]	Bending factor catalogue
1.1	CF270.UL.10.07.02.02.D	125	13,5	9,3	10,0
1.2	CF270.UL.10.07.02.02.D	125	13,5	9,3	10,0
2.1	CF270.UL.15.15.02.01.D	125	12,0	10,4	10,0

Cable no.		Cable type	Counter	reading	Effectively tested strokes	Cable okay after strokes
		Cable type	mounting	demounting		
	1.1	CF270.UL.10.07.02.02.D	78.874.692	5.402.880	26.528.188	26.528.188
	1.2	CF270.UL.10.07.02.02.D	78.874.692	5.402.880	26.528.188	26.528.188
	2.1	CF270.UL.15.15.02.01.D	78.874.692	5.402.880	26.528.188	26.528.188

Test-order was checked by [Rainer Rössel or Martin Göllner and further employee]					
Date:	06.03.2012	Name:		Name:	Ch. Mittelstedt

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page 3 of 7 Test No.: 4404

Result

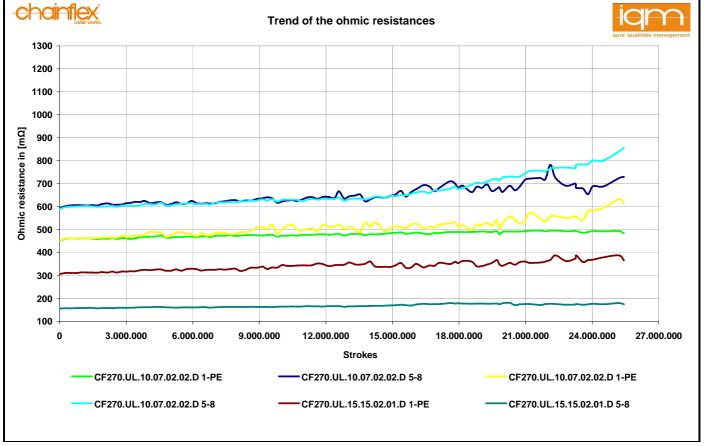
Start Report 19.03.2012:

At the 19.03.2012 we started the test 4404 with a counter reading 78.874.692; we will measure the ohmic resistance regularly.

Interim Report 05.08.2014:

At the 01.08.2014 we stopped the test after 26.528.188 strokes, because we want to finalize the test.

The following diagrams show the trend of the ohmic resistances during the test:







Test No.: page 4 of 7 4404

Evaluation

Dissection Report:

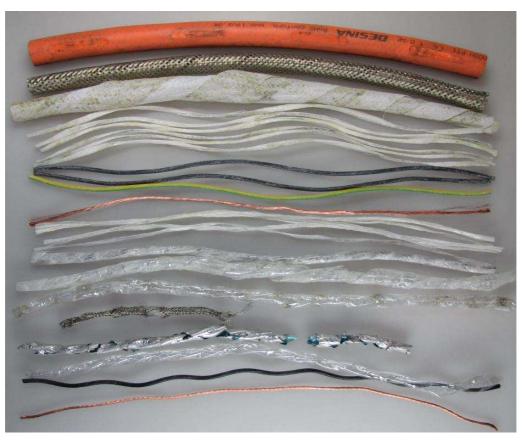
The following pictures show the dissected pieces of the cables

The condition of the cable no.1.1 & 1.2 (CF27.15.07.02.02.D) after 26.528.188 strokes

Cable no.1.1







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Test No.: page 5 of 7 4404

Cable no.1.2





Cable no.	1.1	1.2	
Strokes	26.528.188		
Condition outer jacket	o.k.	o.k.	
Condition overall shielding	ruptured	o.k.	
Condition fleece tape	o.k. (discoloured)	o.k. (discoloured)	
Condition core insulation	o.k.	o.k.	
Condition conductor	o.k.	Broken single wires	
Condition centre element	o.k.	o.k.	
Element cores			
Condition core insulation	o.k.	o.k.	
Condition conductor	o.k.	Broken single wires	

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Test No.: page 6 of 7 4404

The condition of the cable no.2.1 (CF27.15.10.02.01.D) after 26.528.188 double strokes









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page 7 of 7 Test No.: 4404



Strokes	26.528.188	
Condition outer jacket	o.k.	
Condition overall shielding	ruptured	
Condition fleece tape	o.k. (discoloured)	
Condition core insulation	o.k.	
Condition conductor	o.k.	
Condition centre element	o.k.	
Element cores		
Condition core insulation	o.k.	
Condition conductor	o.k.	

Name:	2. Thos	Date:	11.08.2014