

## Test Intention:

In test 4003 we want to investigate the lifespan of CF113.02.05.02 on the short way.

## Client:

Name: M. Göllner Team: chainflex® Date: 23.08.2010

## Order-Info:

Customer / No.: igus® GmbH, Spicher Str.1a, 51147 Köln

Series / No: CF113.02.05.02 Installation type: horizontal, short way

Customer test: Yes  No  Development test: Yes  No

## Technical data

## Target & Examination

e-chain® type: 1500.125.048.0

Cable length [m]: 4,0

e-chain® radius [mm]: 048

Target [Strokes]: **Lifespan**

Stroke [m]: 0,8

Optical check:

Acceleration a [m/sec<sup>2</sup>]: 4,0

Function check:

Velocity v [m/s]: 1,5

Standard measuring:

Ambient temperature [°C]: approx. 25°C

AutΩMeS:

## 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
- radius was marked at the cables and the energy chain

## 1. Construction:

This test is built up on the „kleine Bahr“. The following pictures show the test structure:



## 2. Cable and hose packages:

No. 1: **1x CF113.02.05.02** with the cable marking  
*07566m igus CHAINFLEX CF113.02.05.02 (5x2x0,25)C 300/300V E310776 cURus AWM Style  
 20233 AWM I/II A/B 80°C 300V FT1 CE RoHS conform www.igus.de*

## 3. Description of the cable construction:

Standard igus chainflex® catalogue cable. Construction details see catalogue 11/2010 page 148 and follow.

## 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 [xd]
1.1	CF113.02.05.02	48	8,95	5,4	10,0

Cable no.	Cable type	Counter reading		Effectively tested Strokes	Cable okay after ... Strokes
		... mounting	... demounting		
1.1	CF113.02.05.02	25.731.514	91.099.066	65.367.552	65.367.552

**Test-order was checked by ... [Rainer Rössel or Martin Göllner and further employee]**

Date:	<b>19.01.2011</b>	Name:		Name:	Ch. Mittelstedt
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## Result

### Start report 07.02.2011:

At the 07.02.2011 we started the test 4003 at counter reading 25.731.514, we will measure the ohmic resistance regularly.

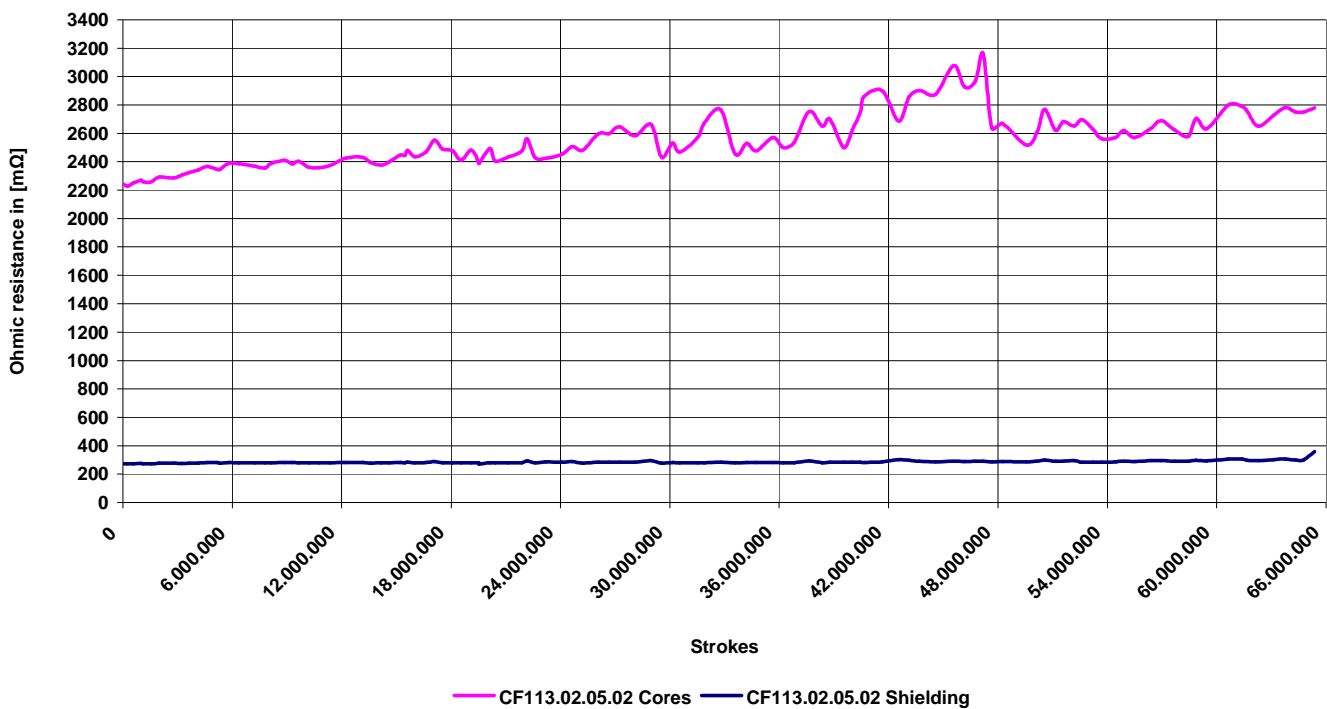
### Interim report 03.07.2012:

At the 03.07.2012 we demounted the cable after 65.367.552 strokes, to finalize the test

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



Trend of the ohmic resistances

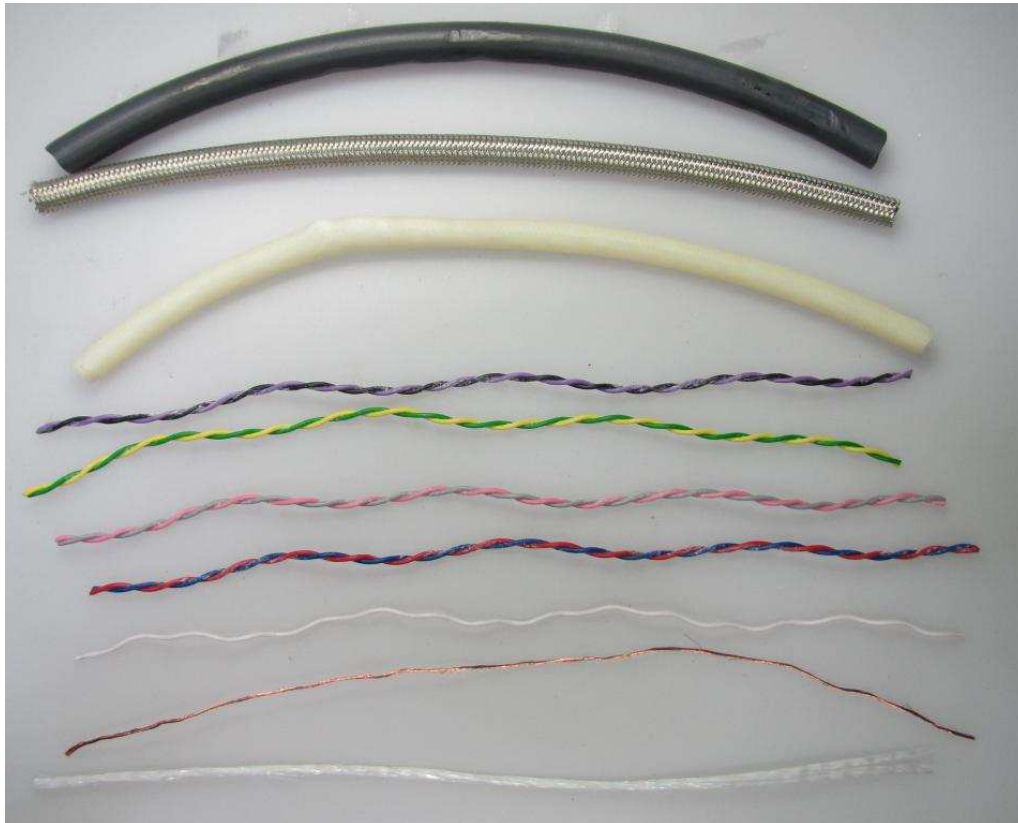


Cable no.	Cable type	Counter reading		Effectively tested Strokes	Cable okay after ... Strokes
		... mounting	... demounting		
1.1	CF113.02.05.02	25.731.514	91.099.066	65.367.552	65.367.552

## Evaluation

### Dissection report:

#### The condition of the cable no.1.1 (CF113.02.05.02 fleece) after 65.367.552 strokes



Double strokes [DS]	65.367.552
Condition outer jacket	Abrasion
Condition overall shielding	Ok
Condition inner jacket	Ok
Condition centre element	Ok
<b>Twisted Pair 0,25mm<sup>2</sup></b>	
Condition core insulation	Ok
Condition conductor	Ok

Name: **Ch. Mittelstedt**

Date: 03.07.2012