

Test Intention:

In test 4009 we want to investigate the lifespan of a CF THERMO.K.001 on the short way.

Client:

Name: Nils Jäger

Team: chainflex®

Date: 31.01.2011

Order-Info:

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

Series / No: CF THERMO.K.001

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]: 3,0

e-chain® radius [mm]: 48

Target [strokes]: **Lifespan**

Stroke [m]: 0,8

Optical check:

Acceleration a [m/sec²]: 0,5

Function check:

Velocity v [m/s]: 1,0

Standard measuring:

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

AutΩMeS:

Experimental setup

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 picture shows the test structure:



2. Cable and hose packages:

No. 1: **1x CF THERMO.K.001** with the cable marking
01013m igus CHAINFLEX CF THERMO.K.001 (2xAWG24)C Thermoelement Typ K CE RoHS
conform www.igus.de

3. Description of the cable construction:

Standard igus chainflex® catalogue cable. Construction details see catalogue 11/2012 page 262 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	CF THERMO.K.001	48	5,2	9,2	12,5

Cable no.	Cable type	Counter reading		Effectively tested strokes	Cable okay after ... strokes
		... mounting	... demounting		
1.1	CF THERMO.K.001	25.731.514			

Test-order was checked by ... [Martin Göllner or Christian Mittelstedt]and further employee]

Date:	31.01.2011	Name:		Name:	Ch. Mittelstedt
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Result

Start Report 07.02.2011:

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

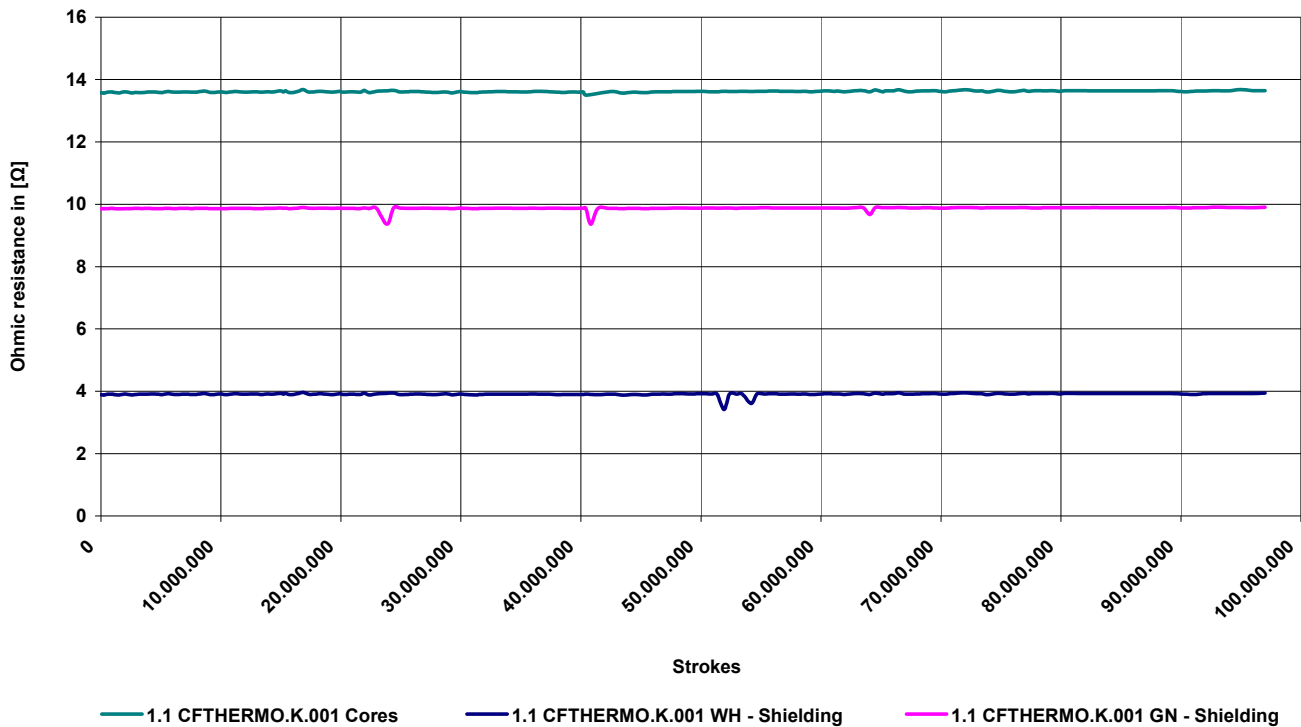
Interim Report 26.02.2013:

At the 26.02.2013 we made visual check and measured the ohmic resistance after 97.006.936 strokes. All parameters were still in a good condition. The test is still running and we will demount the cable when the ohmic resistance is too high.

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	CF THERMO.K.001	25.731.514			