

Test Intention:

In test 4932 we want to investigate the lifespan of our new CF298.05.04 in an e-chain with a 18mm radius.

Client:

Name: Christian Mittelstedt Team: chainflex® Date: 27.05.2014

Order-Info:

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

Series / No: CF298 Installation type: horizontal, short way

Customer test: Yes No Development test: Yes No

Technical data

Target & Examination

e-chain® type: 045.10.018.0

Target [strokes]: **Lifespan**

e-chain® radius [mm]: 18

Optical check:

Stroke [m]: 0,6

Function check:

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

Standard measuring:

Cable length [m]: 2,5

AutΩMeS:

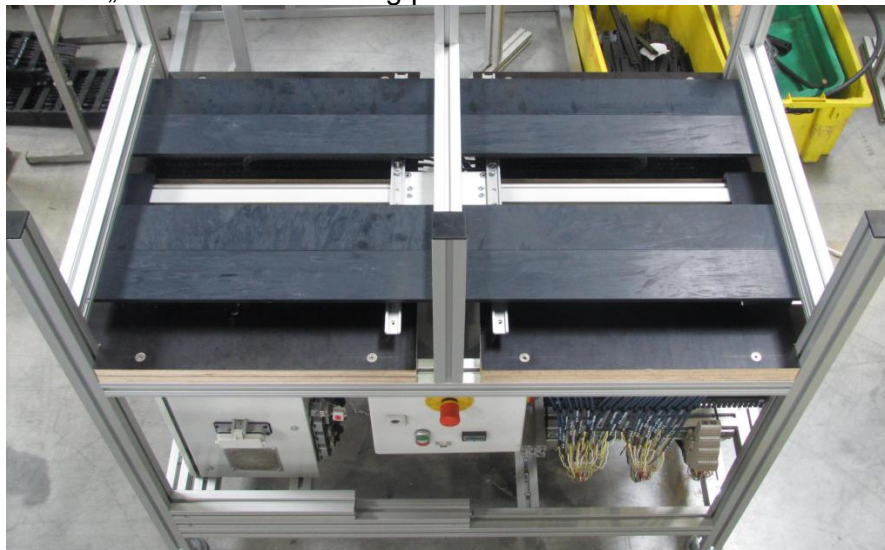
Experimental setup

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 „MinLin“. The following picture shows the test structure:



2. Cable and hose packages:

No. 1: **1x CF298.05.04** with the cable marking
00563m igus chainflex CF298.05.04 4x0,5 300/300V CE F P/EC RoHS-II 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 with AutΩMeS.



The following chart gives an overview regarding the test parameters:

Cable no.	Cable type	e-chain radius [mm]	External diameter [mm]	Bending factor [xd]	Bending factor catalogue [xd]
1.X	CF298.05.04	18	5,8	3,1	4,0

Cable no.	Cable type	Counter reading		Effectively tested strokes	Cable okay after ... strokes
		... mounting	... demounting		
1.1	CF298.05.04	0	53.874.106	53.874.106	53.874.106

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

Date:	27.05.2014	Name:		Name:	Christian Mittelstedt
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Result

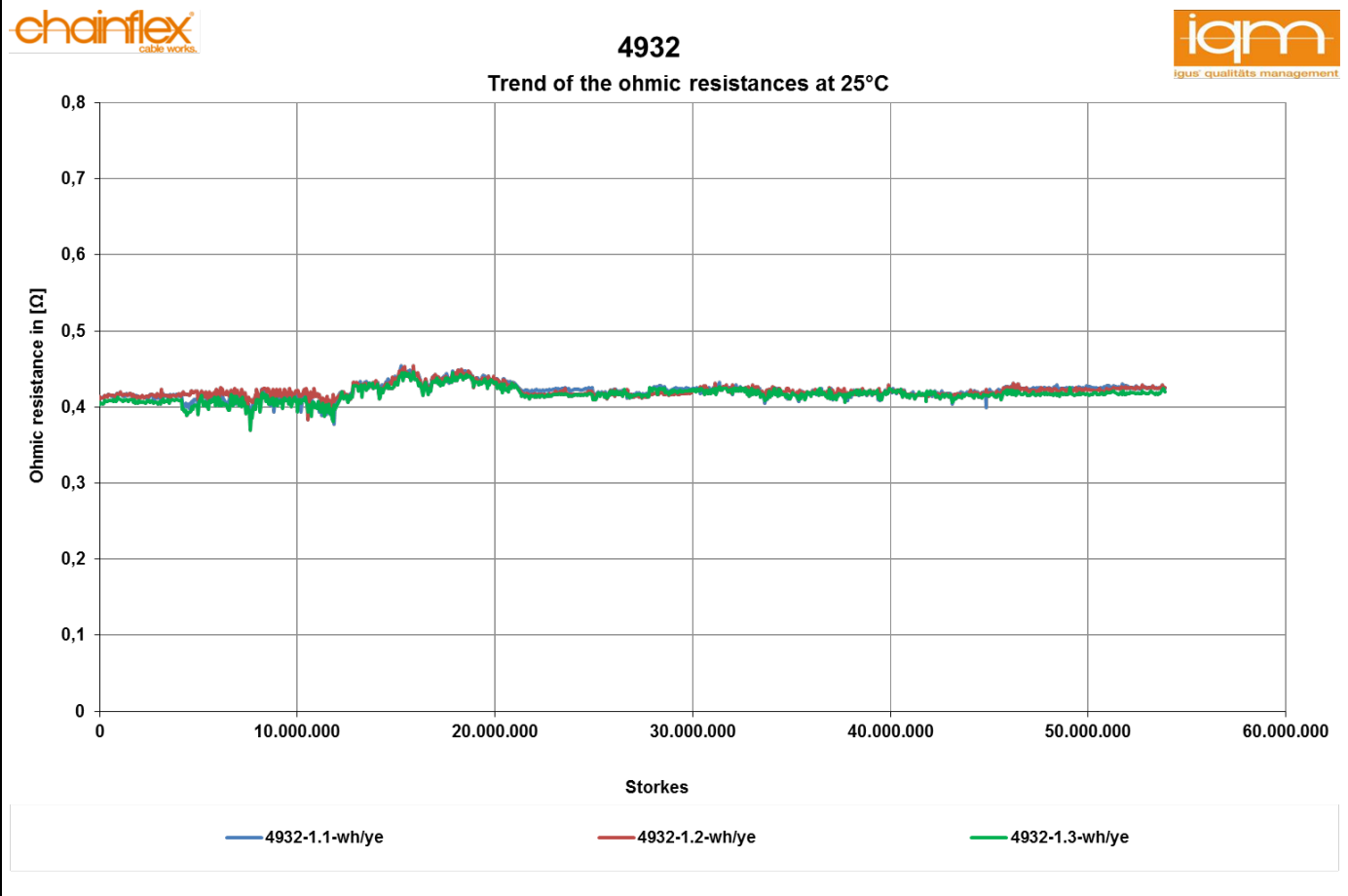
Start report 24.06.2014:

At the 24.06.2014 we started the test 4932 at counter reading of 0, we will measure the ohmic resistance with AutΩMeS.

Interim report 07.02.2016:

At the 07.02.2016 we demounted cables no. 1.1 after 53.874.106 strokes, because we want to check the condition of the cable elements

The following diagram shows the trend of the ohmic resistance after approx. 53.874.106 strokes:

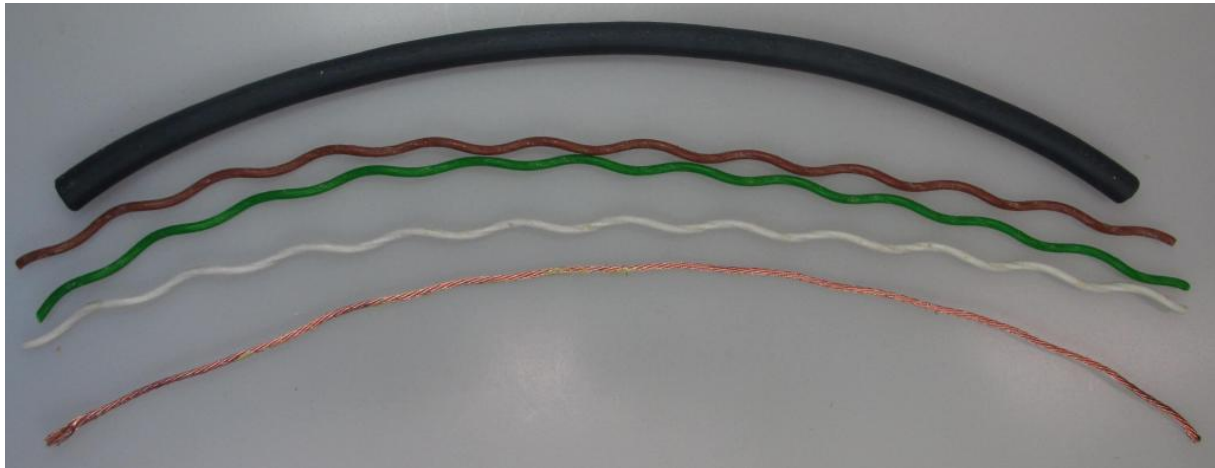


Evaluation

Dissection report:

The following pictures show the dissected elements of the cable

The condition of the cable no. 1.1 (CF298.05.04) after 53.874.106 strokes



Strokes	53.874.106
Condition outer jacket	O.K.
Condition total stranding	O.K.
Condition core insulation	O.K.
Condition conductor	O.K.
Condition centre element	O.K.

Name: **Christian Mittelstedt** Date: **10.02.2017**