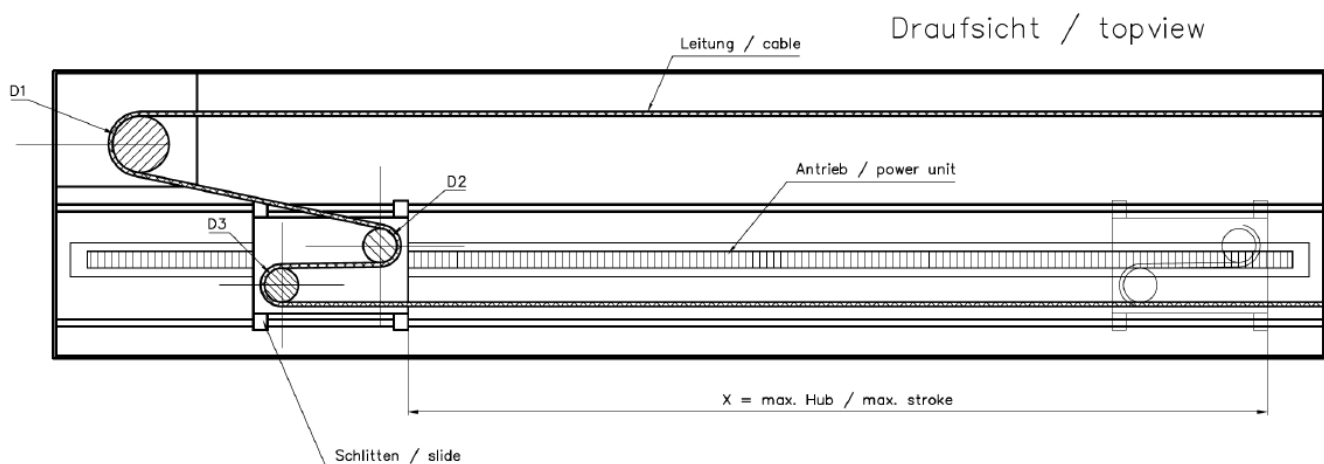


Client:	
Name: Rainer Rössel	Date: 30.01.2012
Order-info	
Customer no.: igus GmbH, Spicher Str. 1a, 51147 Cologne	
Remarks: The CF98.05.04 was mounted in a cable reel application in horizontal direction.	
Plants: <input type="checkbox"/> No, <input type="checkbox"/> Visit report, <input checked="" type="checkbox"/> Fax/letter, <input type="checkbox"/> Photo, <input type="checkbox"/> Video, <input checked="" type="checkbox"/> Others sample of cables	
Technical Data	
Article no.:	CF98.05.04
Bending radius / reel diameter:	D2 = D3 = 40mm
Cable diameter:	approx. 6,0 mm
Number of double strokes:	> 2.000.000
Cable length:	approx. 6,25 m
Stroke:	approx. 1,5m

Evaluation:			
Photo	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No	Interior structure in order	<input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No

The schematic diagram of the reel application:



Measurements:

The ohmic resistance of specimen no. 1:

Core colour ...	white	brown	green	yellow
Ohmic resistance in [Ω]	0,313	0,307	0,311	0,308

The ohmic resistance of specimen no. 2:

Core colour ...	white	brown	green	yellow
Ohmic resistance in [Ω]	0,312	0,294	0,304	0,301

The outer diameter of the cables has been reduced in the bended area. The following chart shows the diameters at different positions:

Cable no.	Diameter [mm]				
	Position 1	Position 2	Position 3	Position 4	Position 5
Specimen no. 1	5,50	5,55	5,55	5,60	5,60
Specimen no. 2	5,60	5,60	5,50	5,60	5,50

Dissection:

The dissected pieces of the cables are taken out of the position from 65cm to 105cm, measured from the end of the loop (moving side // weight)!

Dissection of the specimen no. 1, CF98.05.04:

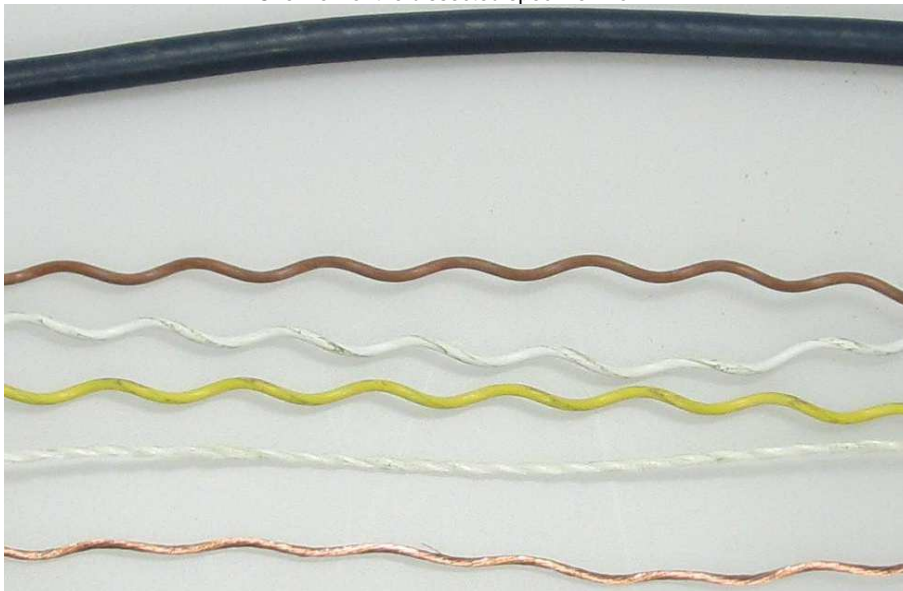
Condition outer jacket	OK
Condition core insulation	OK
Condition core stranding	OK
Condition centre element	OK



The core insulation.



Overview of the dissected specimen no. 1.



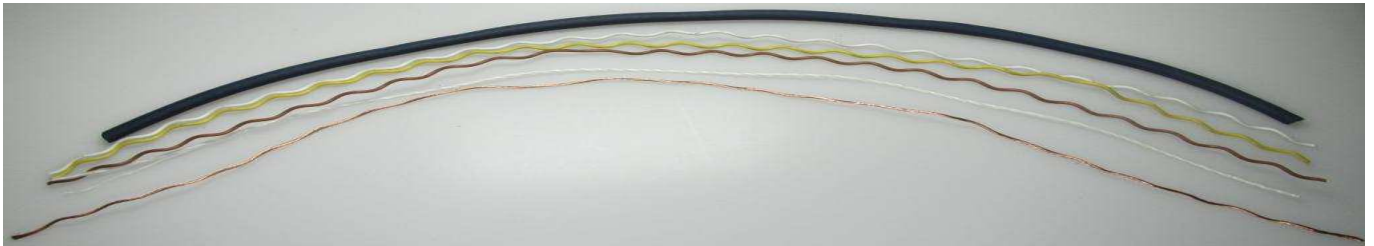
Close-up view of the dissected elements of specimen no. 1.

Dissection of the specimen no. 2, CF98.05.04:

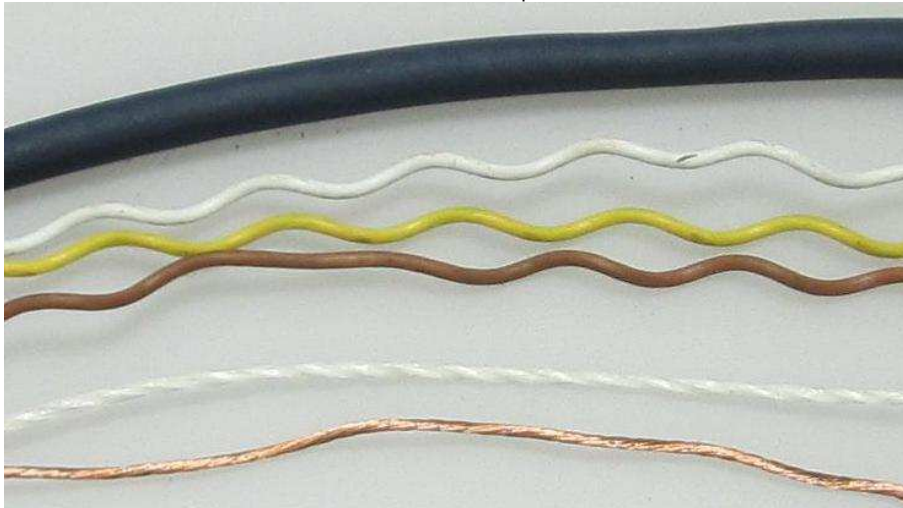
Condition outer jacket	OK
Condition core insulation	OK
Condition core stranding	OK
Condition centre element	OK



The core insulation.



Overview of the dissected specimen no. 2



Close-up view of the dissected elements of specimen no. 2.

Final assessment:

In this evaluation we have analyzed two pieces of the CF98.05.04, which were tested in the described reel application. The outer diameter of both cables got little smaller in the bended area. We noticed some damages at the core insulation of one sample but not at the conductors.

Cologne, 30th of January 2012
research & development chainflex® cables