

File : 2018 – Follow up

## CONFORMITY CONTROL AUDIT REPORT

**Date(s) of the audit :** March 06th , 2018

**Duration of the audit :** 1 day

**Company**

Company's reference (name and address):  
HELIMA GmbH  
Am Deckershäushen 62  
D-42111 WUPPERTAL


**Audit team**

Lead auditor : Michael ROCKUS  
Auditor : /  
Technical and regulatory expert : /  
Observer : /  
Supervisor : /

Plant(s) visited :  
Wuppertal (D)

Company's representative (Name and position) :  
Mr. Antwi-Kusi - Quality managers


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	<h2>AUDIT REPORT</h2> <p>OBJECT OF THE AUDIT</p>	<p>File n° : CKL_2018</p>	
<b>Type of audit</b>			
<b>Acceptance</b> (initial audit)	<input type="checkbox"/>	<b>Surveillance n° _2018</b>	<input checked="" type="checkbox"/>
<b>Additional</b>	<input type="checkbox"/>	<b>Extension</b>	<input type="checkbox"/>
<b>Pre-audit</b>	<input type="checkbox"/>		
<b>Reference document:</b>			
<p>Technical rules and version, standards : CEKAL PTG chapters 4 and 7 (www.cekal.com) and Cekal registration data sheet version of 15/02/2017</p>			
<p>Spacer Registration HELIMA alu brut, NIROTEC, NIROTEC I, with Technical data sheet: annexe 1</p>			
<b>GENERAL DESCRIPTION OF THE PRODUCTION PROCESS NO CHANGE IN 2017</b>			
<b>1) Receiving of raw materials:</b>			
<ul style="list-style-type: none"> <li>- Aluminium coils : thicknesses: 0.4 / 0.37 / 0.35 / 0.30 mm (for HELIMA alu)</li> <li>- Stainless steel coils : thicknesses: 0.20 / 0.17 / 0.15 mm (for NIROTEC, NIROTEC I, NIROTEC II bars)</li> </ul>			
<b>2) Decoiling / slitting / recoiling line (1 line)</b>			
<b>3) Coating line for lacquered spacers (1 line)</b>			
<ul style="list-style-type: none"> <li>- Mixing workshop: preparation of lacquer's color</li> <li>- Coating line: putting the solved lacquer on strips, warm up in furnace (1 or 2 ways)</li> <li>- Slitting line</li> </ul>			
<b>4) Production lines (10 lines)</b>			
<b>On-line steps:</b>			
<ul style="list-style-type: none"> <li>- decoiling</li> <li>- forming steps to the shape of the spacer (dry lubrication) including perforation tools (from inside to outside of the spacer)</li> <li>- weld sealing             <ul style="list-style-type: none"> <li>→ for aluminum bars: high frequency welding (7 lines)</li> <li>→ for stainless steel: laser beam welding (3 lines)</li> </ul> </li> <li>- final forming steps to the final shape of the product</li> <li>- sawing to the final length</li> <li>- automatic integration of connectors (if relevant)</li> <li>- packaging in cardboard and labelling</li> </ul>			

 <p>Le progrès, une passion à partager</p>	<h2>AUDIT REPORT</h2> <p>OBJECT OF THE AUDIT</p>	<p>File n° : CKL_2018</p>
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### GENERAL DESCRIPTION OF THE PRODUCT

	Spacer Registration (cf annex 1)	Remarks
<b>Complete and only name of the spacer</b>	-HELIMA alu brut - NIROTEC - NIROTEC I	NIROTEC EVO is out of the scope of this audit Nirotec II : Not under CEKAL Registration
<b>Composition</b>	- Aluminium (HELIMA alu brut) - Stainless steel (NIROTEC/I)	- 3 suppliers for aluminium - 4 suppliers for stainless steel
<b>Surface treatment (lacquering, anodization, etc ...)</b>	No treatment	Mill finish or partially lacquered
<b>Color(s)</b>	Mill finished or lacquering	All colours available Maximum height of lacquer is 1.5 mm → height up to 2 mm is tested in CSTB
<b>Heights</b>	- HELIMA alu brut: 6.6 mm - NIROTEC/I: 7.0 mm	NIROTEC II is out of the scope of this audit
<b>Thickness</b>	Helima : 0.3 / 0.35 / 0.37 mm Nirotec : 0.20 Nirotec 1 : 0.17	Helima : 0.40 Not under CEKAL Registration Nirotec II : Not under CEKAL Registration
<b>Widths</b>	- HELIMA alu brut: 3.8 → 31.5 mm - NIROTEC: 5.5 → 19.5 mm - NIROTEC I: 7.5 → 19.5 mm	NIROTEC II: 11.5 → 17.5 mm ( not under CEKAL registration)
<b>Manufacturing plant (s) (town – country)</b>	Wuppertal (Germany)	No other plant produces product covered by CEKAL registration.
<b>λ (W /m.K)</b>	/	/
<b>Dimensional characteristics</b>	Cf technical data sheets	/
<b>Location of weld</b>	- HELIMA alu brut: outside / height side - NIROTEC/I/II: height side	/
<b>Tensile characteristics of the metal strip according to EN10002-1 (metal spacer)</b>	/	/
<b>Adherence according to EN10002-1 appendix F (with silicone, polyurethane, polysulfide)</b>	/	/
<b>REACH documentation</b>	Cf product data sheets	/
<b>Technical data sheet</b>	/	Cf annexe 2
<b>Accessories</b>	/	Products can be delivered with connectors are integrated directly on the bars. Angles can be added to the delivery

	<b>AUDIT REPORT</b> <b>COMMENTS OF THE LEAD AUDITOR</b>	<b>File n° : CKL-2018</b>
<b>1. Information on the company and Main changes since the previous audit :</b>		
<p>The company was set in 1949 and inspected by the LNE since 2014, and it covers HELIMA Alu Brut spacer, painted HELIMA spacer bar, NIROTEC and NIROCTEC 1.</p> <p>The company is certified ISO9001 The last ISO 9001 audit was a renewal audit and took place in February 2018. No non conformities were raised.</p> <p>The last CEKAL Inspection audit took place on March 2018. Since then, the following changes have taken place :</p> <ul style="list-style-type: none"> <li>- Mr Antwi-Kusi replace Mr Tepper</li> <li>- New Warm Edge spacer bar will be released the company are waiting for tests results.</li> <li>- New spacer registration data sheet (no change since the last audit only)</li> <li>- 7 peoples were hired (in sales department, quality department,...)</li> </ul> <p>There is no change in the production, HELIMA GmbH still work on 1 or 2 shifts, (7 production lines for HELIMA and 3 production lines for NIROTEC1), The products quality is clearly considered as one of the main objective of the company.</p> <p>During the inspection the coil coating line was not running, tests were made with the auditor</p>		
<b>2. Production of recorded products since previous audit ( model or type, quantity) :</b>		
<p>Since the beginning of the year the production is about 3,2 MI meter for the french market.</p> <p>Production in 2017 concerning products not covered by CEKAL registration is about 64 millions linear meters.  Production in 2016 concerning products not covered by CEKAL registration is about 62 millions linear meters.  Production in 2015 concerning products covered by CEKAL registration is 5 millions linear meters.  Production in January 2014 concerning products covered by CEKAL registration is 3.1 million linear meters.</p> <p>The factory exports about 43 % of its production in Europe, 28 % out of Europe.</p>		
<b>3. Restraints specifics to the firm (according to its activity and organization) :</b>		
<p>No restriction</p>		
<b>4. Possible differences observed in comparison with products submitted for acceptance or accepted for the mark included new request made by the company during the audit and answer given by the audit team :</b>		
<p>/</p>		
<b>5. Justification of each exclusions, in case of requirement of Chapter 7 of ISO 9001:2008:</b>		
<p>No exclusion. All steps of the production (form coil to final products) are done and controled in the plant including coating.</p>		
<b>6. Difficulties met by the audit team during the audit which did not allow the audit as schedule in the audit plan :</b>		
<p>None. All employees were opened, and the audit was carried out with transparency.</p>		



# AUDIT REPORT

## COMMENTS OF THE LEAD AUDITOR

File n° : CKL-2018

### 7. Processing of complaints

All complains are recorded and managed with CAQ software.

#### For 2013 :

Customer complains: 104 (76 accepted)

Internal complains: 63 (31 accepted)

Supplier complains : 73

#### For 2014

Customer complains 96 (51 accepted) → under 0.4 % of the production

Internal complains 64

Supplier complains : 58

#### For 2015

Customer complains in 2015: 96 (56 accepted) → under 0.4 % of the production

Internal complains in 2015: 77 (32 accepted)

Supplier complains in 2015: 41

#### For 2016

Customer complains in 2016: closed 55 Open 1

Internal complains in 2016: closed 86 Open 4

Supplier complains in 2016 closed 9 Open 7

#### For 2017

Customer complains in 2017: closed 65 Open 0

Internal complains in 2017: closed 73 Open 2

Supplier complains in 2017 closed 33 Open 3



## AUDIT REPORT

### CEKAL SPECIFIC POINTS

File n° : CKL\_2018

#### 1. Validation system for raw material

##### Aluminum coils:

- there are 3 different thicknesses ( 0.37 – 0.35 – 0.30 mm) covered by the CEKAL record (**0.40 is not covered by CEKAL**)
- 3 different suppliers are qualified

##### Stainless steels:

- there are 2 different thicknesses (0.20 – 0.17) covered by the CEKAL record – (**0.15 mm is not covered by CEKAL**)
- 4 different suppliers are qualified

##### Validation system Helima Works under The European Standard :

- Coils are delivered with a certificate of analysis containing: batch number, test results for chemical analysis - mechanical properties (tensile, elongation)
- Control at reception: batch number, conformity of test results
- After controlling, a bar code label is put on the coil for traceability
- Tensile strength is tested on the first supplier of the month for the aluminum

#### 2. Description of controls done during production, recording of results

##### Coating line:

- Liquid lacquer: colour tests are performed on laboratory preparation (L, a, b) in accordance with ECCA
- Coated strips: colour, width, thickness of coating are tested on every strips

##### Forming lines automatic controls:

- weld is automatically controlled during production
- shape is calibrated after welding

##### Forming line operator controls:

- geometry is tested with a digital calliper linked to CAQ software / conformity is directly assessed
- height of perforations (to avoid integration troubles with connectors)
- shape checking by transparency comparison with a technical draw on transfer paper
- holes dimension by transparency comparison with a technical draw on a transfer paper (only possible with HELIMA alu brut)
- smashing spacer and checking of cracks
- folding of smashed spacer and checking of cracks
- length of the bar using a graduated table
- integration of bar samples on both sides of a connector
- Controls are done at every shift, on every new strip, on every order.
- test results are recorded directly by computer in CAQ software

Fat rate: no test because of dry process

##### Strong points:

- tests performed to simulated the behaviour of the products by the customer


#### 3. Description of controls on finished products, recording of results


Laboratory performs tensile strength to check cohesion between spacer bar and sealant (EN1279-6)

- tensile strength are done on every shift and on every order, recorded on CAQ software
- different sealants are used (PU and Sb)

#### 4. Checking and calibration of measurement devices, recording of results

The CAQ-software manages the follow-up of calibration of quality measurement devices.

	<b>AUDIT REPORT</b> <b>CEKAL SPECIFIC POINTS</b>	File n° : CKL_2018
<p><b>5. Packaging and labeling of finished products</b></p> <p><b>Content of the label: (no change in 2018)</b></p> <ul style="list-style-type: none"> <li>- trade mark HELIMA</li> <li>- codification (cf traceability)</li> <li>- name of the colour if relevant:</li> <li>- marking on spacer if relevant</li> <li>- batch number</li> <li>- raw material (strip) number</li> <li>- order number of the customer</li> <li>- production date and time</li> <li>- total quantity of the package</li> </ul> <p>→ label is printed by CAQ software if test results are completed and conform with specification</p>		
<p><b>6. Description of traceability system (identification, codification of batch n°)</b></p> <p><b>Codification on label :</b> for example AH 1156 035 LGVM 6 M KAMA</p> <ul style="list-style-type: none"> <li>- AH: aluminium bars</li> <li>- 1156: Width of 11.5 mm and Height of 6.6 mm</li> <li>- 035: thickness of 0.35 mm</li> <li>- LGVM: L is size of perforation holes, GVM is pre-fitted with connectors</li> <li>- 6 M is length of 6 m</li> <li>- KAMA: K is cardboard packaging, AMA means that spacer are banded inside the cardboard</li> </ul> <p>A traceability exercise (done on a random label of a product on the storage) shows that with the raw material number, it is possible to have:</p> <ul style="list-style-type: none"> <li>- The data sheet of quality controls done by the operator</li> <li>- The data sheet of quality controls done by the quality department on the same order</li> <li>- The batch number of the strip and coil used to do the spacer</li> </ul>		
<p><b>7. Statistics on manufacturer's log</b></p> <p><b>For 2013 :</b>  Customer complains: 104 (76 accepted)  Internal complains: 63 (31 accepted)  Supplier complains : 73</p> <p><b>For 2014 :</b>  Customer complains 96 (51 accepted) → under 0.4 % of the production  Internal complains 64  Supplier complains : 58</p> <p><b>For 2015</b>  Customer complains in 2015: 96 (56 accepted) → under 0.4 % of the production  Internal complains in 2015: 77 (32 accepted)  Supplier complains in 2015: 41</p> <p><b>For 2016</b>  Customer complains in 2016: closed 55 Open 1  Internal complains in 2016: closed 86 Open 4  Supplier complains in 2016 closed 9 Open 7</p> <p><b>For 2017</b>  Customer complains in 2017: closed 65 Open 0  Internal complains in 2017: closed 73 Open 2  Supplier complains in 2017 closed 33 Open 3</p>		

	<b>AUDIT REPORT</b> <b>CEKAL SPECIFIC POINTS</b>	File n° : CKL_2018
<b>8. Cleanliness of the plant</b>  The plant is clean.		

	<b>AUDIT REPORT</b> <b>RESULTS OF TESTS CARRIED OUT DURING THE AUDIT</b> <b>STATE REGISTRAR OF CONTROL OF PACKAGING STAMPS</b>	File n° : CKL_2018
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## Control on Raw Material

Tests	Frequency	Who	Records (Yes / No)	Tolerances
Control of the delivery	• Every delivery	Operator	Yes	Certificate of chemical analysis
Tensile test	• 1 <sup>st</sup> delivery of the month	Mr Feuerstein	Yes	Traction Test
Sample are keeping	• Every coil	Mr Plotetzki	Yes	Cohesive -test

## Control on Painted Material

Tests	Frequency	Who	Records (Yes / No)	Tolerances
Zone temperature	• Every Coil	Operator	Yes	Cf data Sheet receipt
T-bend	• Every Coil	Operator	Yes	Cf data Sheet receipt
MEK	• Every Coil	Operator	Yes	Cf data Sheet receipt
Colour Cutting	• Every Coil	Operator	Yes	Cf data Sheet receipt
Viscosity	• Every Coil	Operator	Yes	Cf data Sheet receipt
Thickness	• Every Coil	Operator	Yes	Cf data Sheet receipt
Brightness	• Every Coil	Operator	Yes	Cf data Sheet receipt

## Control during the production

Tests	Frequency	Who	Records (Yes / No)	Tolerances
Dimensions (A, B C,H)	• Once per coil	Operator	Yes	Data Sheet
Welding	• 100%	Eddy-check	Yes 3 month	No Hole
Bending stress	• Once per coil	Operator		Data Sheet
Straight / Length	• Once per coil	Operator		Data Sheet
Oil on line for the lubrication	Visible	Operator	No	No
hole dimension / technical draw on transfer paper	Once per coil	Operator	yes	Data Sheet – no hole control for the Nirotec spacer
Bending tests	Depends of the	Operator	yes	Data Sheet



	specification			
<b>Corner</b>	Once per coil	Operator	Yes	Data Sheet
<b>Cohesive</b>	Once per coil	Mrs Weineis	Yes	Data Sheet
<b>shape checking / technical draw on transfer paper</b>	Once per coil	Operator	Yes	Data Sheet

Measurement on running during line :

Product: HELIMA alu brut (H6.6, W12.5)

Production date: 06/03/2018

Test	Specification [mm]	Result [mm]	Conformity
Width	+ /- 0.13	12.50	Conform
Height	+ /- 0.13	6.58	Conform
shape checking / technical draw on transfer paper	Visual	Ok	Conform
hole dimension / technical draw on transfer paper	Visual	Ok	Conform
smashing spacer and check of cracks	No crack	No crack	Conform
folding of smashed spacer and checking of cracks	No crack	No crack	Conform
integration of bars samples on both sides of a connector	Visual	ok	Conform

Product: NIROTEC (H7.0, W11,56)

Production date: 06/03/2018

Test	Specification [mm]	Result [mm]	Conformity
Width	+ /- 0.13	12.52	Conform
Height	+ /- 0.13	6.95	Conform
shape checking by comparison with a transfer paper by transparency	Visual	Ok	Conform
smashing spacer and check of cracks	No crack	No crack	Conform
folding of smashed spacer and checking of cracks	No crack	No crack	Conform
integration of bars samples on both sides of a connector	Visual	ok	Conform

**Strong point :** The control during the lacquering process.

tests on Painted Material

Tests	Conform
<b>Zone temperature</b>	Yes
<b>T-bend</b>	Yes
<b>MEK</b>	Yes
<b>Colour Cutting</b>	Yes
<b>Viscosity</b>	Yes
<b>Thickness</b>	Yes
<b>Brightness</b>	Yes



## AUDIT REPORT

### STATEMENT OF CONCLUSIONS OF THE CLOSING MEETING

File n° : CKL\_2018

#### CONCLUSIONS OF THE LEAD AUDITOR

##### General information :

The company was set in 1949 and inspected by the LNE since 2014, and it covers HELIMA Alu Brut spacer, painted HELIMA spacer bar, NIROTEC and NIROCTEC 1.

The company is certified ISO9001 The last ISO 9001 audit was a renewal audit and took place in February 2018. No non conformities were raised.

The last CEKAL Inspection audit took place on March 2018. Since then, the following changes have taken place :

- Mr Antwi-Kusi replace Mr Tepper
- New Warm Edge spacer bar will be released the company are waiting for tests results.
- New spacer registration data sheet (no change since the last audit only)
- 7 peoples were hired (in sales department, quality department,...)

There is no change in the production, HELIMA GmbH still work on 1 or 2 shifts, (7 production lines for HELIMA and 3 production lines for NIROTEC1), The products quality is clearly considered as one of the main objective of the company.

During the inspection the coil coating line was not running, tests were made with the auditor.

##### Not covered by this audit, :

- The product NIROTEC EVO
- The Nirotec II is not under CEKAL Certification.
- The Helima Alu brut with the thickness of 0,4mm is not under CEKAL registration

##### The product can be sold with accessories:

Connectors can be directly integrated to the spacer bars, angles can be add to the delivery.

##### Point to survey / Observation

- Lots of procedures are in German translate on demand.
- There is only visual check on aluminium coils at receiving.
- The company will directly buy "ready to use for coil" coating paint. (no colour mixing in HELIMA, for the viscosity) The supplier and the paint will be the same. **The paint could be in polyurethane or polyester both are under CEKAL agreement**

##### Quality indicators:

Customer complains in 2017: closed 65 Open 0

Internal complains in 2017: closed 73 Open 2

Supplier complains in 2017 closed 33 Open 3

##### Strong points:

The traceability, tests made during the audit, the calibration of every device.

All employees were opened, and the audit was carried out with transparency

The red table showing the claims (customers/internal/suppliers) to the workers

Samples for oil tests have been taken.

Comments of the Company's Representative :

Date : 06/03/2018

Signature of the Lead Auditor : Michael ROCKUS

Signature of the Auditor :

Signature of the Company's Representative : Mr Antwi-Kusi





## SAMPLING FORM

File n° : CKL\_2018

### Company

Name ..... HELIMA GmbH

Production site ..... Wuppertal

### Audit

Date ..... 06/03/2018

Scope .....  Initial Follow-up Additional

### Hour

### Samples

	Sample description	Thickness [mm]	Quantity	Identification
	To 11:30 to 12:00	HELIMA alu brut Lacquered (H6.6)  Width : 11,56	0.35	3 bars  (length of each bar: 1 m)  Sampling during the audit
NIROTEC  (H7.0)  Width : 15,56		0.20	3 bars  (length of each bar: 1 m)  Sampling during the audit	
NIROTEC I  (H7.0)  Width : 13,56		0.17	3 bars  (length of each bar: 1 m)  Sampling during the audit	

### Comments: /

*Name and signature of the*

Mr Antwi-Kusi

**Name and signature of the LNE auditor**

**Michael ROCKUS**

### **Address of the delivery of the samples**

(Shipment is due within 8 days after sampling – A copy of this form is to be attached to the shipment)

Mrs Agnès DUCLERGET

**Laboratoire National de métrologie et d'Essais**

Z.A. de Trappes Elancourt  
29, avenue Roger Hennequin  
78197 TRAPPES cedex



# AUDIT REPORT

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File n° : CKL\_2018

### CONCLUSIONS OF THE LEAD AUDITOR

#### General information :

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#### Point to survey / Observation

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All employees were opened, and the audit was carried out with transparency  
The red table showing the claims (customers/internal/suppliers) to the workers

Samples for oil tests have been taken.

Comments of the Company's Representative :

Date : 06/03/2018

Signature of the Lead Auditor : Michael ROCKUS

Signature of the Auditor :

Signature of the Company's Representative : Mr Antwi-Kusi



## SAMPLING FORM

File n° : P161363/01

### Company

Name ..... HELMUT LINGERMANN

Production site ..... Wuppertal

### Audit

Date ..... 06/03/2018

Scope .....  Initial Follow-up Additional

### Hour

### Samples

	Sample description	Thickness [mm]	Quantity	Identification
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NIROTEC I  (H7.0)  Width : 13,56		0.17	3 bars  (length of each bar: 1 m)  Sampling during the audit	

### Comments: /

**Name and signature of the**

Mr Antwi-Kusi

**Name and signature of the LNE auditor**

Michael ROCKUS

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(Shipment is due within 8 days after sampling – A copy of this form is to be attached to the shipment)

Mrs Agnès DUCLERGET

**Laboratoire National de métrologie et d'Essais**

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