SPECIFICATION REVISIONS

REV.	ISSUE DATE	FILLED IN BY	VARIATION AND/OR MODIFICATION	APPROVED BY
1	25.07.2014	D. CANZIAN	Translation of the italian version, revision 1	M. DALLA CIA
2	17.10.2016	N. PONGILUPPI	Transl. – Mod. Title, par. 2, 3, 4, 5, 6, 7, 8, attachment	M. DALLA CIA

INDEX

1. SUBJECT

This specification defines the requirements for the approval of the series production, that is the Production Part Approval Process (PPAP).

2. *SCOPE*

The scope of the PPAP is to determine that:

- the requirements (in terms of compliance with the technical documentation, specifications and drawing) have been fully understood and fulfilled by the Supplier;
- the Supplier's production process has the potentials/capacities to create a product satisfying the requirements for the phases of the actual production series

3. APPLICABILITY

This specification applies to all supplies of products meant for the automotive sector or even other sectors if required specifically by the Customer *in the cases listed below*:

1) *new product;*
2) *correction of a discrepancy surveyed on the material previously subjected to a PPAP;*
3) *modification to an existing process (specifications, type of material, drawing);*
4) *modification to the supplier's production process (tools, machines, equipment);*
5) *change of supplier's production site;*
6) *new supplier;*
7) *manufacture relating to the product's item code not active for more than a year*

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4. REFERENCE DOCUMENTS

PPAP 4th edition Production Part Approval Process (AIAG)

5. GENERAL

The PPAP consists of a *file*/set of documents useful to demonstrate that the *supplier's* manufacturing process fulfills the customer's requests, including safety and regulatory requirements, with particular reference to a specific *code of product or material/component*.
The required documentation must refer to production parts which represent the actual manufacturing process, and which are realized with standard equipment.
The different submission levels are indicated in the table below:

PPAP submission levels	***Description***
Level 1	*PSW and for materials with aesthetical requirements, also the Appearance Approval Report (AAR)*
Level 2	*PSW with product samples and limited supporting documentation (see scheme)*
Level 3	*PSW with product samples and complete supporting documentation (see scheme)*
Level 4	*PSW and other requirements as defined by the customer*
Level 5	*PSW with product samples and complete supporting documentation reviewed at the supplier's*

LEGEND
PSW = Part Submission Warrant

The "submission level" to be presented shall be the one requested by the customer. If there are no explicit indications by the customer, *level 3 shall be the default level* *and the documents to be submitted are all the ones* listed in the following table.

PPAP ***Requirement***	***Documents***	***PPAP*** ***PPAP submission levels***				
		1	***2***	***3***	***4***	***5***
1	*Design records*	*R*	*S*	*S*	*	*R*
2	*Engineering Change Notice (if any)*	*R*	*S*	*S*	*	*R*
3	*Customer Engineering Approval, if required*	*R*	*R*	*S*	*	*R*
4	*Design FMEA (DFMEA)*	*R*	*R*	*S*	*	*R*
5	*Process Flow Chart*	*R*	*R*	*S*	*	*R*
6	*Process FMEA (PFMEA)*	*R*	*R*	*S*	*	*R*
7	*Control Plan*	*R*	*R*	*S*	*	*R*
8	*Measurement System Analysis (Gage R&R)*	*R*	*R*	*S*	*	*R*
9	*Dimensional results*	*R*	*S*	*S*	*	*R*
10	*Material, Performance Test Results*	*R*	*S*	*S*	*	*R*
11	*Initial Process Studies (Ppk, Cpk)*	*R*	*R*	*S*	*	*R*
12	*Qualified Laboratory Documentation*	*R*	*S*	*S*	*	*R*
13	*Appearance Approval Report, if required*	*S*	*S*	*S*	*	*R*
14	*Sample Product*	*R*	*S*	*S*	*	*R*
15	*Master samples*	*R*	*R*	*R*	*	*R*
16	*Checking aids*	*R*	*R*	*R*	*	*R*
17	*Records of compliance with Customer-Specific Requirements*	*R*	*R*	*S*	*	*R*
18	*Part Submission Warrant (PSW)*	*S*	*S*	*S*	*S*	*R*

LEGEND
S = the Supplier submits the documentation to the Customer and keeps a copy in appropriate places
R = the Supplier keeps a copy of the documentation in appropriate places and on request he makes it available to the Customer
* = The Supplier keeps a copy of the documentation in appropriate places and on request he submits it to the Customer

The documents must be submitted to the customer for approval when dispatching the first series production (*pre-production*).

After the analysis of the documents by the Customer, the PPAP may get the following statuses:

- **Approved or "Full Approval"**: it means that the product/part fulfills all Customer requirements;

- **Interim approval:** it allows the product/part's dispatch for a limited period of time, allowing to undertake the right corrective actions;
- **Rejected:** it means that what has been submitted does not fulfill what required by the customer. In this case it is necessary to correct any anomalies, and to undertake the right corrective actions in order to submit a new PPAP again.

The PPAP documentation shall be archived according to the procedure Q.DOC 910.

6. RESPONSIBILITY

The *Product Quality personnel* is responsible for *collecting* the documentation required by the customer.
Suppliers Development is responsible for collecting the documentation requested to the supplier.

The responsibilities for the filling in of the various PPAP documents are reported in the table below.

	PPAP documents	COM	UT	ING IND	VQP	VQU	LAB	VQE
1	Design records	C	R	*C*				C
2	Engineering Change Notice, if any	C	R	C				
3	*Customer* Engineering Approval	C	R					
4	*Design FMEA (DFMEA)*		R	C	C		C	
5	Process Flow Diagram		C	*R*	C	C		
6	*Process FMEA (PFMEA)*		C	R	C		C	
7	Control Plan		C	C	R	C		
8	*Measurement System Analysis, Gage R&R*				C		*R*	
9	Dimensional Results				C	R		
10	*Material, Performance Test Results* (DVP&R)		C				R	C
11	Process capability studies *(Ppk, Cpk)*/ Initial Process Studies		C	*C*	R			
12	Qualified Laboratory Documentation						R	
13	*Appearance Approval Report* (if *required*)					R		
14	Sample Product		R			C		
15	Master Sample		*C*		*R*			
16	Checking aids			C			R	
17	*Records of compliance* with Customer-Specific Requirements	C	*R*	C	R			
18	Part Submission Warrant *(PSW)*				R			

LEGEND
R = Responsibility; C = Cooperation
COM= Sales; UT = Technical Dept; VQE = Incoming Quality; VQP = Process Quality; LAB = Laboratory; ING IND = Industrial Engineering

7. PPAP DOCUMENTS

7.1 Design Records

The design of the product and of its components shall be made available to the Customer with indication of the reference designer.
All *materials/components* foreseen in the drawing and/or in the *worksheet* and/or in the basic list of materials shall be compliant with the customer requests.
If required by the Customer, it is necessary to provide evidence of the fact that what has been used fulfills all requirements.
Likewise, upon customer request, this information may be uploaded in the **International Material Data System (IMDS)**.
If applicable, *in case of polymeric components, these shall* be marked according to the following criteria:

-Plastic parts weighing at least 100 g according to ISO 11469/1043-1;
-Elastomeric parts weighing at least 200 g according to ISO 11469/1629.

7.2 Engineering Change Notice

Eventual modifications brought to the design (drawing, *worksheet*) shall be recorded by the designer both in the drawing and in the engineering software/technical system according to the usual procedures.
Each design modification shall be authorized by the customer and implemented in the design records.
If the modification has not been recorded in the design record but incorporated in the product, a document authorizing this modification is necessary in any case.

7.3 Customer Engineering Approval

It is necessary to have evidence of the Customer's engineering approval.

7.4 Design FMEA (DFMEA)

The Design FMEA shall be developed *also* in accordance with the *customer* requirements. If possible, the DFMEA shall consider also the problems at the end of the product's life cycle. If the design has been made by the customer, it is his duty to forward the component's critical characteristics to the Design, so that they can be considered *in the DFMEA and* subsequently in the PFMEA (Process FMEA) and in the Control Plan.

7.5 Process Flow Diagrams

All of the process phases shall be represented according to the flow diagram logic.

7.6 Process FMEA (PFMEA)

The Process FMEA shall be developed according to the customer requirements and any other information defined by *Design dept./Industrial Engineering*.

7.7 Control Plan

The Control Plan shall be developed according to what required by and agreed with the Customer and according to the PFMEA results.

7.8 Measurement System Analysis

The supplier shall apply the Measurement System Analysis (e.g. Gage R&R) both for the measurement instruments used (new or modified ones) as well as for the testing instruments.

7.9 Dimensional Results

The dimensional results required by the drawing *and control plan* shall be recorded in order to provide evidence of the compliance with what required.
The record must clearly indicate: organization name, part number, reference drawing with revision and date, any other documents. Moreover for each part verified it is necessary to indicate: dimension/characteristic, design rated values, test date, surveyed values, results of the control.

7.10 Records of Material / Performance Tests (DVP&R)

Test surveys of product performance and/or materials shall be recorded (e.g. chemical analyses, physical analysis, metallographic analysis, life tests, etc.) in a test report in order to demonstrate the product's conformity. Unless otherwise required, this record shall report the organization name, the part number, the reference drawing with revision and date and the following information:

- Test type
- Reference specification
- Acceptance criteria
- Test responsible
- Test start and estimated duration
- Sample quantity and type
- Test results OK / KO

7.11 Initial Process Studies (Ppk, Cpk)

In order to demonstrate that the critical characteristics agreed with the customer are stable, suitable process capability studies shall be performed through the Ppk e Cpk indexes.
The applicable acceptance criteria are reported below:

CHARACTERISTIC	CAPABILITY (PRE-PRODUCTION)	CAPABILITY (SERIES PRODUCTION)
Important	Ppk ≥ 1,67	*Cpk ≥ 1,33*
Critical	Ppk ≥ 2	*Cpk ≥ 1,67*

If the process is not stable (process capability indexes below the limits reported *above*), it is necessary to undertake suitable corrective actions in order to eliminate the root causes. The corrective actions shall be defined upon agreement with the customer and shall be communicated to him.
If the process is still unstable before any declaration, the Corrective Actions Plan and the modified Control Plan shall be submitted to the customer for approval, foreseeing a 100% check.
Any deviation request can be forwarded to the customer according to the procedure Q.MANUF 580.
Unless otherwise requested by the customer, attribute studies are not valid for the PPAP.

7.12 Qualified Laboratory Documentation

If the tests *are carried out externally, they shall be carried out by a Laboratory qualified according to ISO/IEC 17025: the test reports shall report the relevant Laboratory's name*, test dates, and reference standards used. In any case, the Laboratory (internal or external) where the tests are carried out shall have all documentation necessary to demonstrate that the Laboratory *can carry out the required test types.*

7.13 Appearance Approval Report, if required

The aesthetic aspect shall be considered *only if the customer deems it as a critical feature for the product/material.*

7.14 Sample Production Parts

In agreement with what defined by the customer, product samples shall be provided *in the quantity required.*

7.15 Master Sample

A master sample *approved by the customer* shall be kept according to the PPAP documentation, that means up to the production of an eventual new sample for customer approval.
The date of customer approval reported in the PSW shall be indicated on the sample itself. This sample may be used as a reference for the training of the production operators.

7.16 Checking aids

If tools such as templates, gauges, etc. are used for the product control due to customer requests or due to internal needs, these shall be *calibrated*.
Upon customer request, the calibration report shall be attached to the PPAP documents.

7.17 Customer Specific Requirements

If the customers has *specific* requirements, the compliance to these shall be documented.

With regards to environmental protection, the requirements may be:

- Creation of product/component MDS *(Material Data Sheet)* in the International Material Data System (IMDS) in order to guarantee a correct disposal of end-of life vehicles *by observing the limits of the hazardous substance which may be contained in the product/component in compliance with standards, laws and regulations applicable at national and international levels (e.g. GADSL list);*
- Declaration of conformity in accordance with *ELV*/RoHS *directive,* REACH regulation, etc.;
- *Declaration regarding hazardous substances contained in the product/component in accordance with the customer's Restriction Material List (RML)*

Other requirements may be for example the filling in of the form Q.254 regarding the feasibility commitment.

7.18 Part Submission Warrant

Upon completion of all PPAP documents, the Part Submission Warrant (PSW) shall be filled in.
The PSW is a document containing:

- information necessary to identify the product/part;
- information regarding the manufacturing plant;
- customer references;
- indication of materials;
- reason of submission;
- submission level required;
- result of submission;
- signature of organization representative

8. ATTACHMENTS

See form Q.167

PPAP

Production Part Approval Process

Part Description	NAME
Part Number	NUMBER
Customer's Part Number	NUMBER
Drawing Number	NUMBER
Engineering Change Level	ECL
Engineering Change Level Date	ECL DATE
Organization Name	SUPPLIER
Organization Code	CODE
Street Address	ADDRESS
City	CITY
Zip-Code	ZIP
Country	COUNTRY
Contact Phone Number	555-555-5555
Customer's name	CUSTOMER
Application	APPLICATION
Date	DATE
Contact person	_____

Note: *All tabs in green are PPAP documents, that may be part of the PPAP documentation (depending on the sampling reason sampling level and type of part)*

All tabs in blue are supporting pages, and are ***not*** *part of the PPAP (eg. info about the revision changes)*

All tabs in orange are PPAP documents, that may be filled in by the customer or the organisation.

Q167-01 PPAP.xls_INTRO

PPAP LIST OF DOCUMENTS

Zoppas Industries
Heating Element Technologies

This list is used for the creation of PPAP documents.
Please ensure that all documents are available to the contact person according to the required submission level.
Unless otherwise agreed, PPAP documents have to be sent according to PPAP submission level 3.
Documents identified in bold are available in excel format.

PPAP-Requirement	Documents	PPAP Submission Level					Customer	
		1	2	3	4	5	Approv.	Reject.
1	Design Records, Drawings	R	S	S	*	R		
2	Engineering change documents, if any	R	S	S	*	R		
3	Customer engineering approval, if required	R	R	S	*	R		
4	**Design-FMEA**	R	R	S	*	R		
5	**Process flow chart**	R	R	S	*	R		
6	**Process-FMEA**	R	R	S	*	R		
7	**Control plan**	R	R	S	*	R		
8	**Measurement system analysis studies (Gage R&R)**	R	R	S	*	R		
9	**Dimensional data sheet**	R	S	S	*	R		
10	Material, performance test results	R	S	S	*	R		
11	**Initial process studies (Ppk, Cpk)**	R	R	S	*	R		
12	Qualified laboratory documentation	R	S	S	*	R		
13	Appearance Approval report, if required	S	S	S	*	R		
14	Sample parts	R	S	S	*	R		
15	Master sample	R	R	R	*	R		
16	Checking aids	R	R	R	*	R		
17	Records of compliance with customer specific requirements as agreed upon with	R	R	S	*	R		
18	**Part submission warrant (PSW)**	S	S	S	S	R		
19	Material data sheet, if required	S	S	S	*	R		
20	**PSW Deviation sheet, if required**	S	S	S	S	R		

LEGEND

Level 1	**Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to the customer.**
Level 2	**Warrant with product samples and limited supporting data submitted to the customer.**
Level 3	**Warrant with product samples and complete supporting data submitted to customer. Default Submission Level**
Level 4	**Warrant and other requirements as defined by the customer.**
Level 5	**Warrant with product samples and complete supporting data reviewed at organization's manufacturing location.**

S	Submit to the customer and retain a copy at appropriate locations
R	Not submit but retain at appropriate locations and make available to the customer upon request
*	Retain at appropriate locations and submit to the customer upon request

Q167-01 PPAP.xls_LIST OF DOCUMENTS

REVISIONS SHEET

Zoppas Industries
Heating Element Technologies

Rev. No.	Description	Date
1		
2		
3		
4		
5		
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Zoppas Industries
Heating Element Technologies

DFMEA
(DESIGN FAILURE MODE AND EFFECT ANALYSIS)

Rif. Documento	Q078_dasammgg	(0)	Compilato da	(4)	Data ultima revisione	(8)
Team		(1)	Revisione	(5)	Data revisione 0	(9)
Codice articolo		(2)	Settore	(6)	Applicazione	(10)
Cliente		(3)	Nr. Progetto *	(7)	Nome Progetto *	(11)

Prodotto/ Componente	Funzione	Modo di guasto	Effetto potenziale del guasto	Grav.	Class. carat.	Causa potenziale del guasto	Prob.	Controlli correnti	Rilev.	Rischio	ID e Misure programmate		Responsabile	Scadenza	Risultati dopo azioni adottate					
															Misure adottate	Grav.	Prob.	Rilev.	Rischio	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	
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										0									0	

* da compilarsi solo in caso di apertura progetto secondo metodo APQP

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Q.078 rev. 2

Zoppas Industries *Heating Element Technologies*	**PROCESS FLOW CHART**

☐ Prototype ☐ Pre-production ☐ Series

Flow Chart No.		Current release level	
Original release date		Current release date	
Organization name		Organization plant	
Part Number		Part description	
Eng. Release date		Eng. latest change level	
Contact person			

Process Flow Chart Diagram

Legenda					
operation	control (decision)	raw materials/compon.	storage	delivery	handling/transport

Zoppas Industries
Heating Element Technologies

PFMEA
(PROCESS FAILURE MODE AND EFFECT ANALYSIS)

Rif. Documento	Q076_aaaammgg	(0)	Compilato da	(4)	Data ultima revisione	(8)
Team		(1)	Revisione	(5)	Data revisione 0	(9)
Codice articolo		(2)	Settore	(6)	Applicazione	(10)
Cliente		(3)	Nr. Progetto *	(7)	Nome Progetto *	(11)

Prodotto/ Processo	Fase	Modo di guasto	Effetto potenziale del guasto	Grav.	Class. carat.	Causa potenziale del guasto	Prob.	Controlli correnti	Rilev.	Rischio	ID e Misure programmate	Responsabile	Scadenza	Risultati dopo azioni adottate				
														Misure adottate	Grav.	Prob.	Rilev.	Rischio
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23) (24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
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* da compilarsi solo in caso di apertura progetto secondo metodo APQP

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Q.076 rev. 2

Zoppas Industries
Heating Element Technologies

CONTROL PLAN

☐ Prototype ☐ Pre-production ☐ Production

Control Plan No.		Original release date		Current release date		Current release level	
Part Number		Latest change level		Part description			
Organization name		Organization approval date		Organization plant		Organization resp. for approval	
Customer name		Cust. Quality approval date		Cust. Eng. approval date (if req'd)		Other approval date (if req'd)	
File							

Incoming quality check	Process/ Operation description	Flow chart	Machine, Equipment	Product	Process	Class.	Main controls/ characteristics	Control method	Dim.	Control frequency	Reference document	Rec. YES/NO	Resp.	Reaction plan

Q167-01 PPAP xls_7) CONTROL PLAN 1/2

Zoppas Industries
Heating Element Technologies

Variables Gage R&R Study

Part Number:		Organization Name:		Date	
Drawing Number:		Organization Address:			
Drawing Rev.:				Contact person	
Rev. Date:					
Other information:		Phone number:		GR&R Contact	

Calibration Date:		Gage Type:		Gage ID:		Unit of Measure:	

Operator 1 Name	Operator 2 Name	Operator 3 Name

USL		LSL		Number of Trials:	3	Number of Operators:	3

	Operator 1				Operator 2				Operator 3			
Part #	1st Trial	2nd Trial	3rd Trial	Range	1st Trial	2nd Trial	3rd Trial	Range	1st Trial	2nd Trial	3rd Trial	Range
1				0,000				0,000				0,000
2				0,000				0,000				0,000
3				0,000				0,000				0,000
4				0,000				0,000				0,000
5				0,000				0,000				0,000
6				0,000				0,000				0,000
7				0,000				0,000				0,000
8				0,000				0,000				0,000
9				0,000				0,000				0,000
10				0,000				0,000				0,000

** A minimum of six samples for each trial is required for these results to be valid*

Gage R&R Summary

Measurement Unit Analysis

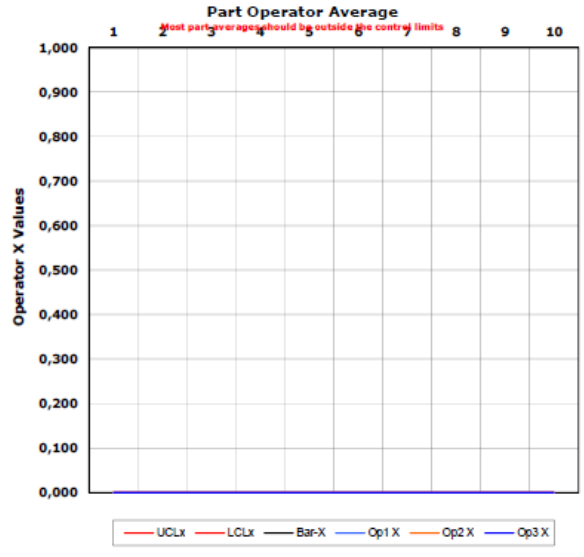
Repeatability: EV=	#DIV/0!
Reproducability: AV=	#DIV/0!
R&R=	#DIV/0!
Part Variation: PV =	#N/D
Total Variation: TV=	#DIV/0!

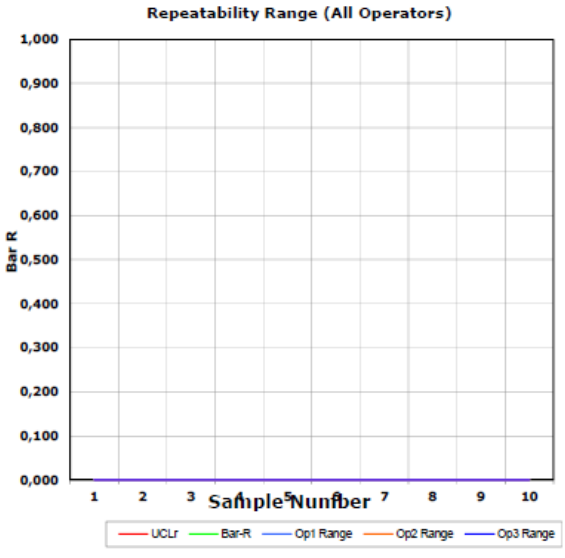
% Process Variation (TV) / % Tolerance Variation (TOL)

% Equipment Variation (EV_{TV})	#DIV/0!	$\%EV_{TOL}$	#DIV/0!
% Appraiser Variation (AV_{TV})	#DIV/0!	$\%AV_{TOL}$	#DIV/0!
%GR&R ($GR\&R_{TV}$)	#DIV/0!	$\%GR\&R_{TOL}$	#DIV/0!
%Part Variation (PV_{TV})	#N/D		

Gage R&R Disposition

Disposition	#DIV/0!
$GR\&R_{TOL}\% < 10$	Pass - Gage System is Useable
$10 \le GR\&R_{TOL}\% \le 30$	Gage System is useable but marginal
$GR\&R_{TOL}\% > 30$	Fail - Gage System is Unstable





Zoppas Industries

Attribute Gage R&R Study

Date: _____

Drawing no.: _____

Characteristic: _____

Instrument: _____

Instrument code: _____

Legend	
OK	Good
NOK	No Good

	Name	Date
Operator A		dd/mm/yyyy
Operator B		
Operator C		

Attribute		Operator A		Operator B		Operator C		
Sample no.	Attribute	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2	Accuracy
1								
2								
3								
4								
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34								
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36								
37								
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39								
40								
Each Operator vs. Standard								
Individual repeatability of Operator								

FINAL RESULT	
% REPEATABILITY	#DIV/0!
% REPRODUCIBILITY	#DIV/0!
%TOTAL ACCURACY	

Individual effectiveness ("Each Operator vs. Standard")

Reproducibility of the measurement system ("Between Operator Variation").

Overall effectiveness of the measurement system ("All Operator vs. Standard").

Q167-01 PPAP.xls_8) R&R ATTRIBUTES Q.143 rev.0

PRODUCTION PART APPROVAL - DIMENSIONAL DATA SHEET

Zoppas Industries — Heating Elements Technologies

Organization: _____ Organization contacts
Part Name: _____ Name:
Part Number: _____ Title:
Dwr. Number: _____ E-mail:
Revision Level: _____ Phone No.:
Revision Date: _____

Customer: _____
Part Name: _____
Part Number: _____
Dwr. Number: _____
Revision Level: _____
Revision Date: _____

Date of measurements: _____
Resp. for measurements: _____

JUDGEMENT LEGEND

OK	Meets Requirements
OK-D	Accepted with deviation
KO	Does Not Meet Requirements

Pl.	Drw. Reference	Item/ Characteristic	Measurement Method	Nominal Value	Tolerance		Measurements Results for Sample Number										Average	Range	Judgment		Comments/Action Plan
					Min	Max	1	2	3	4	5	6	7	8	9	10			Organ.	Cust.	

Q.155 rev. 0

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Q167-01 PPAP.xls_9) DIM. DATA SHEET

Zoppas Industries
Heating Element Technologies

Cp and Cpk (Pp and Ppk)
PROCESS CAPABILITY STUDY

Characteristic: _____

Instruments: _____

Machine: _____

Date: _____
Filled in by: _____

Upper tolerance: _____
Rated value: _____
Lower tolerance: _____

NR. OF SURVEYS: 0

Max Value	Min Value	Average
0,000	0,000	#DIV/0!

St. Deviation #DIV/0!

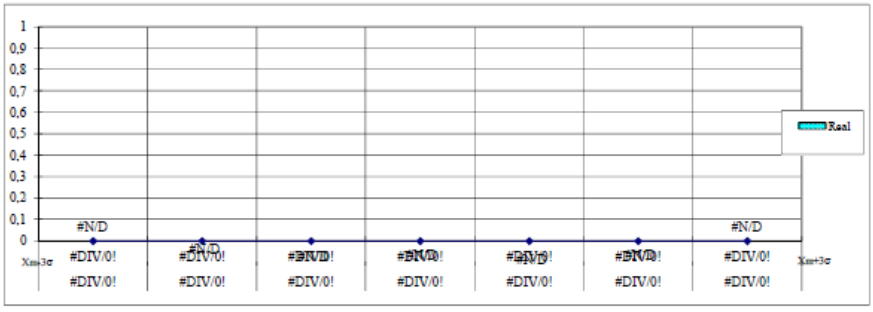
3s	Average - 3s	Average + 3s
#DIV/0!	#DIV/0!	#DIV/0!

#DIV/0!

ppm < LSL N.A.

ppm > USL N.A.

Cp	Cpk
N.A.	



Zoppas Industries
Heating Element Technologies

Part Submission Warrant

Part Name _____ Cust. Part Number _____

Shown on Drawing Number _____ Org. Part Number _____

Cust. Eng. Change Level _____ Org. Eng. Change Level _____ Dated _____

Additional Engineering Changes _____ Dated _____

Safety and/or Government Regulation ☐ Yes ☐ No Purchase Order No. _____ Weight (kg) _____

Checking Aid Number _____ Checking Aid Eng. Change Level _____ Dated _____

ORGANIZATION MANUFACTURING INFORMATION

Organization Name & Supplier/Vendor Code

Street Address

City Region Postal Code Country

CUSTOMER SUBMITTAL INFORMATION

Customer Name/Division

Buyer/Buyer Code

Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ☐ Yes ☐ No ☐ n/a

Submitted by IMDS or other customer format: _____

Are polymeric parts identified with appropriate ISO marking codes? ☐ Yes ☐ No ☐ n/a

REASON FOR SUBMISSION (Check at least one)

- ☐ Initial submission
- ☐ Engineering Change(s)
- ☐ Tooling: Transfer, Replacement, Refurbishment, or additional
- ☐ Correction of Discrepancy
- ☐ Tooling Inactive > than 1 year
- ☐ Change to Optional Construction or Material
- ☐ Sub-Supplier or Material Source Change
- ☐ Change in Part Processing
- ☐ Parts produced at Additional Location
- ☐ Other - please specify _____

REQUESTED SUBMISSION LEVEL (Check one)

- ☐ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
- ☐ Level 2 - Warrant with product samples and limited supporting data submitted to customer.
- ☐ Level 3 - Warrant with product samples and complete supporting data submitted to customer.
- ☐ Level 4 - Warrant and other requirements as defined by customer.
- ☐ Level 5 - Warrant with product samples and complete supporting data reviewed at organization's manufacturing location.

SUBMISSION RESULTS

The results for ☐ dimensional measurements ☐ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all design record requirements: ☐ Yes ☐ No (If "No" - Explanation Required)

Mold / Cavity / Production Process _____

DECLARATION

I affirm that the samples represented by this warrant are representative of our parts and have been made to the applicable customer drawings and specifications and are made from specified materials on regular production tooling. I also certify that documented evidence of such compliance is on file and available for your review. I have noted any deviation from this declaration below.

EXPLANATION/COMMENTS: _____

Is each Customer Tool properly tagged and numbered? ☐ Yes ☐ No ☐ n/a

Organization Authorized Signature _____ Date _____

Print Name _____ Phone No. _____ Fax No. _____

Title _____ E-mail _____

FOR CUSTOMER USE ONLY (IF APPLICABLE)

PPAP Warrant Disposition: ☐ Approved ☐ Rejected ☐ Other _____

Customer Signature _____ Date _____

Print Name _____ Customer Tracking Number (optional) _____

Q167-01 PPAP.xls_18) PSW Q.057 rev. 2

Zoppas Industries
Heating Element Technologies

PRODUCTION PART APPROVAL - MATERIAL DATA SHEET

Organization:		Organization contacts		Customer:	
Part Name:		Name:		Part Name:	
Part Number:		Title:		Part Number:	
Drw. Number:		E-mail:		Drw. Number:	
Revision Level:		Phone No.:		Revision Level:	
Revision Date:				Revision Date:	

Material Part Number	Draw. Ref.	Material Type	Batch/Lot used for the production order	Supplier	Certificate

Q167-01 PPAP.xls_19) MATERIAL DATA SHEET 1/1

Zoppas Industries Heating Element Technologies	Part Submission Warrant DEVIATION SHEET

Part Number:	Part Name:

Ref. No.	Reason of deviation/ Correction request

Q167-01 PPAP.xls_20) DEVIATION SHEET

PPAP Documents				
From:				
To:				
Part Number:				
Customer's Part Number:				
Revision Level:				
Samples with PPAP	Yes		No	
Samples Separate	Yes		No	
Shipping Carrier:				
Tracking Number:				

PPAP Samples				
From:				
To:				
Part Number:				
Customer's Part Number:				
Revision Level:				
PPAP PSW Dated:				
Multiple boxes	Yes		No	
Number of samples:				

Zoppas Industries Heating Element Technologies	**Feasibility Commitment**	**Date:** **Revision:**

Customer:		**Irca drawing:**	
Customer drawing :		**Irca code:**	
Customer part numb.:		**Irca part description:**	
Cust. part description:			

Considerations

The drawing, 3D model and/or specifications provided by the customer have been used as a basis for analyzing the organization's ability to meet all specified requirements. All "no" answers are supported with attached comments identifying concerns and/or product changes to enable the organization to meet the specified requirements.

#	YES	NO	N/A	Description
1				Does the product conform with the IRCA technical documentation (drawings, technical specifications), documentation made according with customer's requirements ?
2				Are all the development documents available (PFMEA, control plan, work instructions, etc.)?
3				IRCA technologies and knowhow guarantee necessary experience for the production of the product?
4				Can the product be manufactured according to the local safety standard rules for workers and environment?
5				Are all the special step process approved, evaluated and monitorized? Special characteristics included?
6				Can the product be manufactured with process capability that meet the requirements?
7				Is there adequate manufacturing capacity to produce the product?
8				Does the design allow the use of efficient material handling techniques?
				Can the product be manufactured within normal cost parameters?
10				- Costs for manufacturing?
11				- Costs for tooling?
12				- Alternative manufacturing methods?
13				Is all the measuring equipment capable for the product realization?
14				All the processes necessary for the production of product run in IRCA/ZIR plant?
15				External processes can guarantee the necessary capability?
16				Logistic organization guarantee the correct management of the finished products(transport, stock, etc)?

Conclusion

	Feasible	Product can be produced as specified with no revisions.
	Feasible	Changes recommended (see attached or comments).
	Not Feasible	Design revision required to produce product within the specified requirements.

Comments

Quality MGT

Q.254 rev. 0