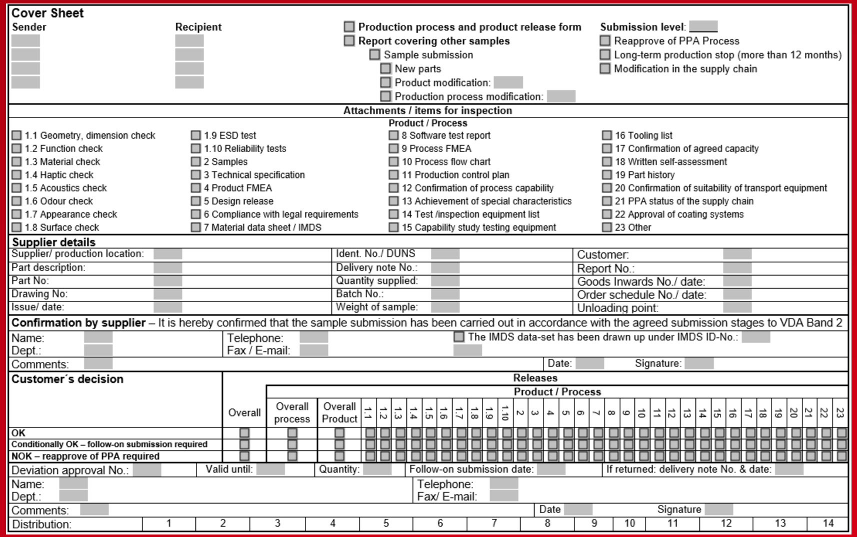
DEUTZ Sample Documentation

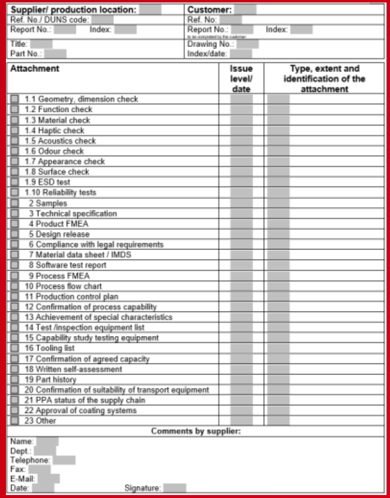
Samples and checklists (help and addition to H0758-2)

QM in Purchasing
Cologne, 2024

DEUTZ Sample Documentation - Samples and checklists

Table of content


Cover Sheet
Sender
Recipient
Production process and product release form
Report covering other samples
Sample submission
New parts
Product modification:
Production process modification:
Submission level:
Reapprove of PPA Process
Long-term production stop (more than 12 months)
Modification in the supply chain
Attachments / items for inspection
Product / Process
1.1 Geometry, dimension check
1.2 Function check
1.3 Material check
1.4 Haptic check
1.5 Acoustics check
1.6 Odour check
1.7 Appearance check
1.8 Surface check
1.9 ESD test
1.10 Reliability tests
2 Samples
3 Technical specification
4 Product FMEA
5 Design release
6 Compliance with legal requirements
7 Material data sheet / IMDS
8 Software test report
9 Process FMEA
10 Process flow chart
11 Production control plan
12 Confirmation of process capability
13 Achievement of special characteristics
14 Test /inspection equipment list
15 Capability study testing equipment
16 Tooling list
17 Confirmation of agreed capacity
18 Written self-assessment
19 Part history
20 Confirmation of suitability of transport equipment
21 PPA status of the supply chain
22 Approval of coating systems
23 Other
Supplier details
Supplier/ production location:
Part description:
Part No:
Drawing No:
Issue/ date:
Ident. No./ DUNS
Delivery note No.:
Quantity supplied:
Batch No.:
Weight of sample:
Customer:
Report No.:
Goods Inwards No./ date:
Order schedule No./ date:
Unloading point:
Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2
Name:
Dept.:
Telephone:
Fax / E-mail:
The IMDS data-set has been drawn up under IMDS ID-No.:
Comments:
Date:
Signature:
Customer´s decision
Releases
Product / Process
Overall
Overall process
Overall Product
OK
Conditionally OK – follow-on submission required
NOK – reapprove of PPA required
Deviation approval No.:
Valid until:
Quantity:
Follow-on submission date:
If returned: delivery note No. & date:
Name:
Dept.:
Telephone:
Fax/ E-mail:
Comments:
Date
Signature
Distribution: 1 2 3 4 5 6 7 8 9 10 11 12 13 14


Supplier/ production location:
Ref. No./ DUNS code:
Report No.:
Index:
Title:
Part No.:
Customer:
Ref. No.:
Report No.:
Index:
Drawing No.:
Index/date:
Attachment
Issue level/ date
Type, extent and identification of the attachment
1.1 Geometry, dimension check
1.2 Function check
1.3 Material check
1.4 Haptic check
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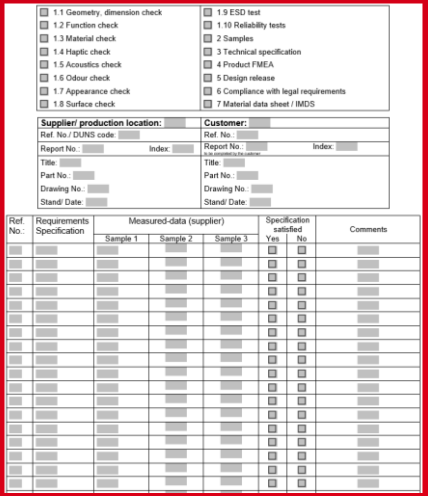
21 PPA status of the supply chain
22 Approval of coating systems
23 Other
Comments by supplier:
Name:
Dept.:
Telephone:
Fax:
E-Mail:
Date:
Signature:


1.1 Geometry, dimension check
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3 Technical specification
4 Product FMEA
5 Design release
6 Compliance with legal requirements
7 Material data sheet / IMDS
Supplier/ production location:
Ref. No./ DUNS code:
Report No.:
Index:
Title:
Part No.:
Drawing No.:
Stand/ Date:
Customer:
Ref. No.:
Report No.:
Index:
Title:
Part No.:
Drawing No.:
Stand/ Date:
Ref. No.
Requirements Specification
Measured-data (supplier)
Sample 1
Sample 2
Sample 3
Specification satisfied
Yes
No
Comments

DEUTZ Sample Documentation - Samples and checklists

General requirements

- This document **shall help** the supplier **to understand and fulfill the DEUTZ requirements** for samples according H0758-2

- The leading document for DEUTZ sampling procedure is **DEUTZ standard H0758-2**
  - DEUTZ standards can be found in the **DEUTZ Standards Database** under the following link:
  - DEUTZ Standards Database

- DEUTZ accepts **documentation according VDA* (PPF) and PPAP**
  - The following examples are according to VDA*

- Initial sample inspection report (ISIR) documentation
  - must be **in English or German** language
  - must be **readable** (e.g. resolution of scans)
  - must be sent preferred **by e-mail** as requested in H0758-2

* VDA: German Association of the Automotive Industry

DEUTZ Sample Documentation - Samples and checklists

Contact information

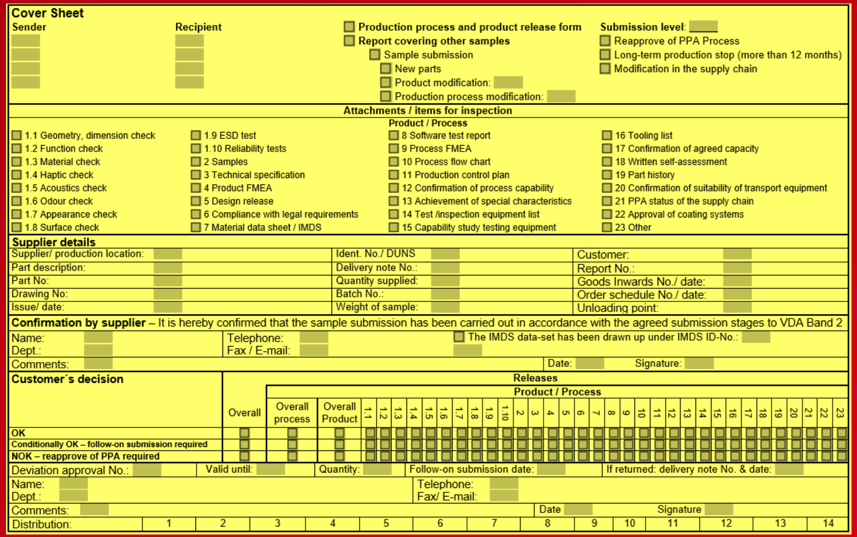
Contact information for documentation and questions:

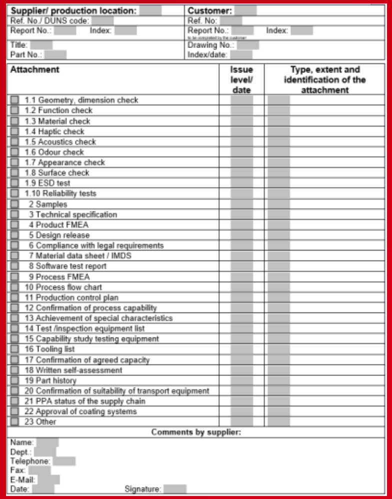
- **DEUTZ Cologne**:
  - supplier.quality.de@deutz.com
- **DEUTZ Herschbach**
  - supplier.quality_herschbach.de@deutz.com
- **DEUTZ Ulm**:
  - supplier.quality_ulm.de@deutz.com
- **DEUTZ Service**:
  - supplier.quality_service.de@deutz.com
- **DEUTZ Corporation Atlanta**:
  - supplier.quality.USA@deutz.com
- **DEUTZ Spain Zafra**
  - supplier.quality_zaf.es@deutz.com
- **DEUTZ China Tianjin**
  - supplier.quality_tianjin@deutz.com
- **DEUTZ China Shanghai**
  - supplier.quality.dsh.cn@deutz.com

- Further support:
  - Supplier Quality Engineer (SQE)

DEUTZ Sample Documentation - Samples and checklists

Table of content


Cover Sheet
Sender | Recipient | Production process and product release form | Submission level:
Report covering other samples | Reapprove of PPA Process
Sample submission | Long-term production stop (more than 12 months)
New parts | Modification in the supply chain
Product modification:
Production process modification:
Attachments / items for inspection
Product / Process
1.1 Geometry, dimension check | 1.9 ESD test | 8 Software test report | 16 Tooling list
1.2 Function check | 1.10 Reliability tests | 9 Process FMEA | 17 Confirmation of agreed capacity
1.3 Material check | 2 Samples | 10 Process flow chart | 18 Written self-assessment
1.4 Haptic check | 3 Technical specification | 11 Production control plan | 19 Part history
1.5 Acoustics check | 4 Product FMEA | 12 Confirmation of process capability | 20 Confirmation of suitability of transport equipment
1.6 Odour check | 5 Design release | 13 Achievement of special characteristics | 21 PPA status of the supply chain
1.7 Appearance check | 6 Compliance with legal requirements | 14 Test /inspection equipment list | 22 Approval of coating systems
1.8 Surface check | 7 Material data sheet / IMDS | 15 Capability study testing equipment | 23 Other
Supplier details
Supplier/ production location: | Ident. No./ DUNS | Customer:
Part description: | Delivery note No.: | Report No.:
Part No: | Quantity supplied: | Goods Inwards No./ date:
Drawing No: | Batch No.: | Order schedule No./ date:
Issue/ date: | Weight of sample: | Unloading point:
Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2
Name: | Telephone: | The IMDS data-set has been drawn up under IMDS ID-No.:
Dept.: | Fax / E-mail:
Comments: | Date: | Signature:
Customer´s decision | Releases
Product / Process
Overall | Overall process | Overall Product | 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
OK
Conditionally OK – follow-on submission required
NOK – reapprove of PPA required
Deviation approval No.: | Valid until: | Quantity: | Follow-on submission date: | If returned: delivery note No. & date:
Name: | Telephone:
Dept.: | Fax/ E-mail:
Comments: | Date | Signature
Distribution: 1 2 3 4 5 6 7 8 9 10 11 12 13 14


Supplier/ production location: | Customer:
Ref. No./ DUNS code: | Ref. No.:
Report No.: Index: | Report No.: Index:
Title: | Drawing No.:
Part No.: | Index/date:
Attachment | Issue level/ date | Type, extent and identification of the attachment
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22 Approval of coating systems
23 Other
Comments by supplier:
Name:
Dept.:
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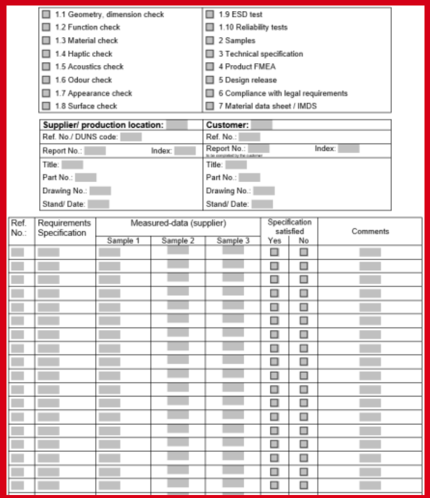
E-Mail:
Date: | Signature: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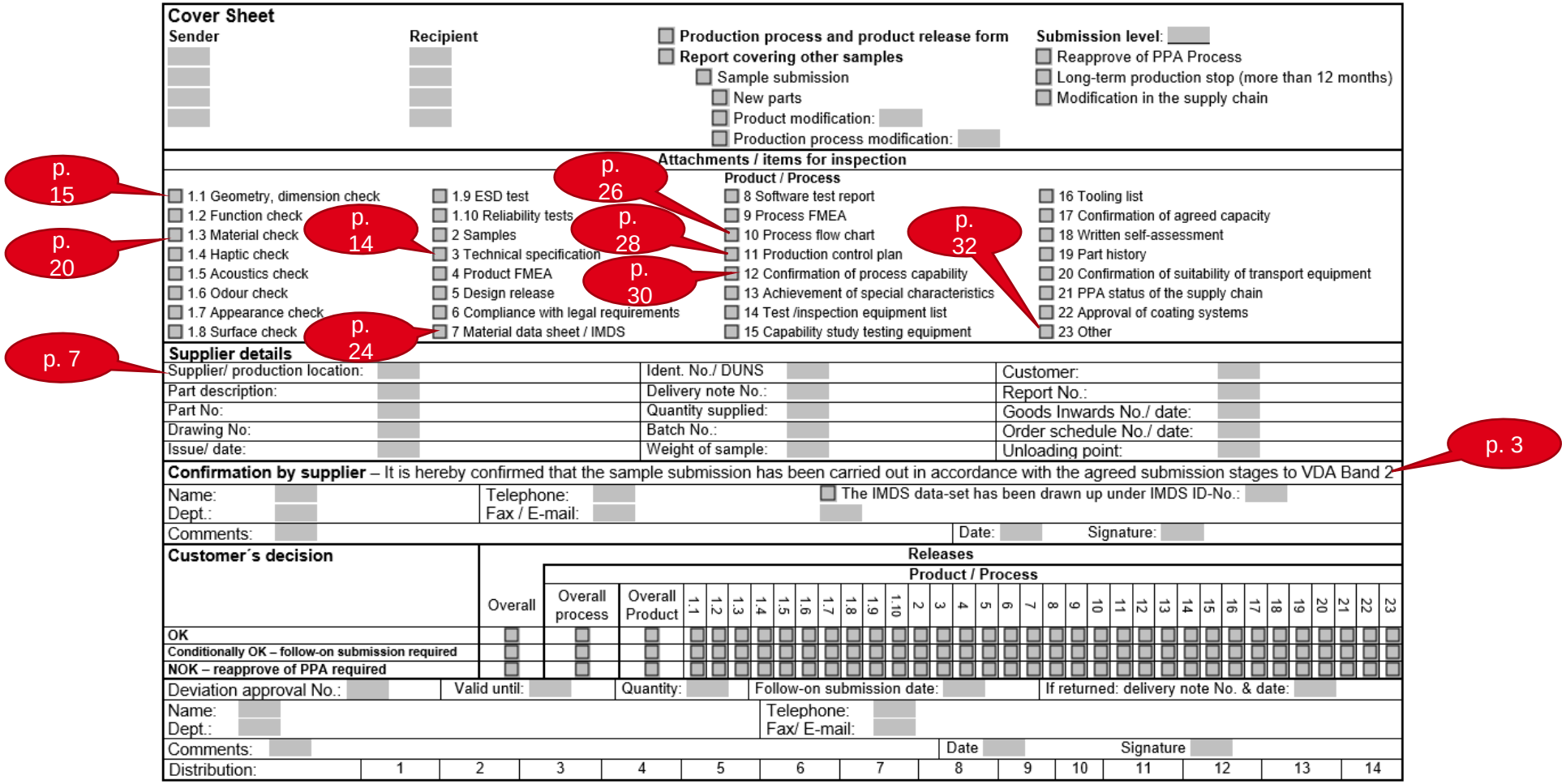
1.5 Acoustics check | 4 Product FMEA
1.6 Odour check | 5 Design release
1.7 Appearance check | 6 Compliance with legal requirements
1.8 Surface check | 7 Material data sheet / IMDS
Supplier/ production location: | Customer:
Ref. No./ DUNS code: | Ref. No.:
Report No.: Index: | Report No.: Index:
Title: | Title:
Part No.: | Part No.:
Drawing No.: | Drawing No.:
Stand/ Date: | Stand/ Date:
Ref. No.: | Requirements Specification | Measured-data (supplier): Sample 1, Sample 2, Sample 3 | Specification satisfied: Yes, No | Comments

DEUTZ Sample Documentation - Samples and checklists

Cover sheet (VDA)



Cover Sheet

Sender | **Recipient**

☐ Production process and product release form
☐ Report covering other samples
☐ Sample submission
☐ New parts
☐ Product modification:
☐ Production process modification:

Submission level:
☐ Reapprove of PPA Process
☐ Long-term production stop (more than 12 months)
☐ Modification in the supply chain

Attachments / items for inspection

Product / Process

☐ 1.1 Geometry, dimension check	☐ 1.9 ESD test	☐ 8 Software test report	☐ 16 Tooling list
☐ 1.2 Function check	☐ 1.10 Reliability tests	☐ 9 Process FMEA	☐ 17 Confirmation of agreed capacity
☐ 1.3 Material check	☐ 2 Samples	☐ 10 Process flow chart	☐ 18 Written self-assessment
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☐ 1.6 Odour check	☐ 5 Design release	☐ 13 Achievement of special characteristics	☐ 21 PPA status of the supply chain
☐ 1.7 Appearance check	☐ 6 Compliance with legal requirements	☐ 14 Test /inspection equipment list	☐ 22 Approval of coating systems
☐ 1.8 Surface check	☐ 7 Material data sheet / IMDS	☐ 15 Capability study testing equipment	☐ 23 Other

Supplier details

Supplier/ production location:	Ident. No./ DUNS	Customer:
Part description:	Delivery note No.:	Report No.:
Part No:	Quantity supplied:	Goods Inwards No./ date:
Drawing No:	Batch No.:	Order schedule No./ date:
Issue/ date:	Weight of sample:	Unloading point:

Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2

Name: | Telephone: | ☐ The IMDS data-set has been drawn up under IMDS ID-No.:
Dept.: | Fax / E-mail:
Comments: | Date: | Signature:

Customer´s decision

	Releases																																		
		Product / Process																																		
	Overall	Overall process	Overall Product	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
OK	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Conditionally OK – follow-on submission required	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
NOK – reapprove of PPA required	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Deviation approval No.: | Valid until: | Quantity: | Follow-on submission date: | If returned: delivery note No. & date:
Name: | Telephone:
Dept.: | Fax/ E-mail:
Comments: | Date | Signature

Distribution:	1	2	3	4	5	6	7	8	9	10	11	12	13	14

p. 15
p. 20
p. 14
p. 26
p. 28
p. 30
p. 32
p. 24
p. 7
p. 3

DEUTZ Sample Documentation - Samples and checklists

Cover sheet (VDA)

- **Cover sheet:**
  - All mandatory fields must be filled in, e.g.

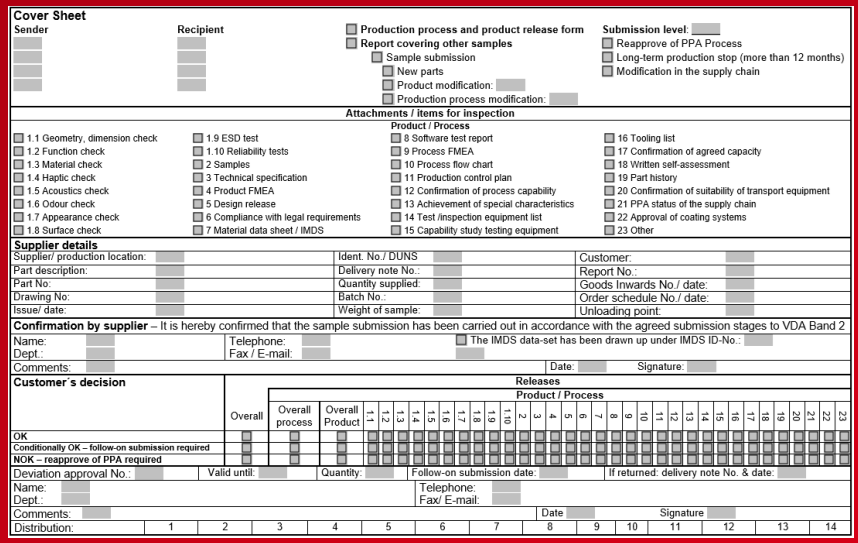
Supplier / production location: **123 Pipes**		**Customer:** **DEUTZ AG**	
Ref. No. DUNS code: 13579		Purchase order. No.: 87654321 (important)	
Report No.: 24680	Index:	Report No.: 08642	Index:
Title: charge air pipe Part No.: 0123456		Drawing No.: D1234 Index/date: 2	

  - References / links to the input must be mentioned
    - e.g. reference of order number to DEUTZ order, delivery address and unloading point

☐ 1.8 Surface check		☐ 7 Material data sheet / IMDS		☐ 15 Capability study testing equipment	☐ 23 Other
Supplier details					
Supplier/ production location:		Ident. No./ DUNS		Customer:	
Part description:		Delivery note No.:		Report No.:	
Part No:		Quantity supplied:		Goods Inwards No./ date:	
Drawing No:		Batch No.:		Order schedule No./ date:	
Issue/ date:		Weight of sample:		Unloading point:	
Confirmation by supplier	It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2				

DEUTZ Sample Documentation - Samples and checklists

Table of content



Cover Sheet

Sender | **Recipient** | **Production process and product release form** | **Report covering other samples** | Sample submission | New parts | Product modification: | Production process modification: | **Submission level:** | Reapprove of PPA Process | Long-term production stop (more than 12 months) | Modification in the supply chain

Attachments / items for inspection

Product / Process

1.1 Geometry, dimension check	1.9 ESD test	8 Software test report	16 Tooling list
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1.7 Appearance check	6 Compliance with legal requirements	14 Test /inspection equipment list	22 Approval of coating systems
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Supplier details

Supplier/ production location:	Ident. No./ DUNS	Customer:
Part description:	Delivery note No.:	Report No.:
Part No:	Quantity supplied:	Goods Inwards No./ date:
Drawing No:	Batch No.:	Order schedule No./ date:
Issue/ date:	Weight of sample:	Unloading point:

Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2

Name: | Telephone: | The IMDS data-set has been drawn up under IMDS ID-No.:
Dept.: | Fax / E-mail:
Comments: | Date: | Signature:

Customer´s decision — **Releases** — **Product / Process**

	Overall	Overall process	Overall Product	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
OK																																	
Conditionally OK – follow-on submission required																																	
NOK – reapprove of PPA required																																	

Deviation approval No.: | Valid until: | Quantity: | Follow-on submission date: | If returned. delivery note No. & date:
Name: | Telephone:
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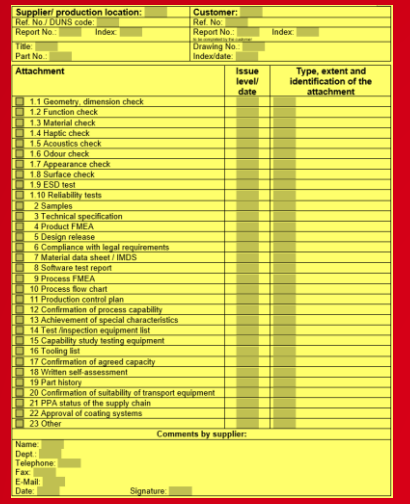
Distribution: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14



Supplier/ production location: | **Customer:**
Ref. No./ DUNS code: | Ref. No.:
Report No.: Index: | Report No.: Index:
Title: | Drawing No.:
Part No.: | Index/date

Attachment	Issue level/ date	Type, extent and identification of the attachment
1.1 Geometry, dimension check		
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1.3 Material check		
1.4 Haptic check		
1.5 Acoustics check		
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20 Confirmation of suitability of transport equipment		
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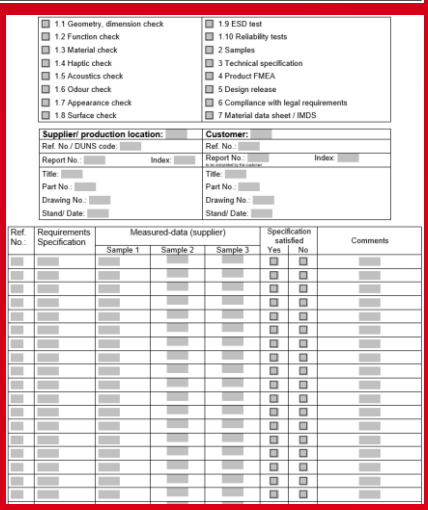
22 Approval of coating systems		
23 Other		

Comments by supplier:

Name:
Dept.:
Telephone:
Fax:
E-Mail:
Date: Signature:



1.1 Geometry, dimension check | 1.9 ESD test
1.2 Function check | 1.10 Reliability tests
1.3 Material check | 2 Samples
1.4 Haptic check | 3 Technical specification
1.5 Acoustics check | 4 Product FMEA
1.6 Odour check | 5 Design release
1.7 Appearance check | 6 Compliance with legal requirements
1.8 Surface check | 7 Material data sheet / IMDS

Supplier/ production location: | **Customer:**
Ref. No./ DUNS code: | Ref. No.:
Report No.: Index: | Report No.: Index:
Title: | Title:
Part No.: | Part No.:
Drawing No.: | Drawing No.:
Stand/ Date: | Stand/ Date:

Ref. No.:	Requirements Specification	Measured-data (supplier) Sample 1	Sample 2	Sample 3	Specification satisfied Yes	No	Comments

DEUTZ Sample Documentation - Samples and checklists

Table of content

- DEUTZ submission level according H0758-2

		C-samples	D-samples		
VDA	**DEUTZ submission level:**	**---**	**0**	**1**	**2/3**
	Cover sheet of ISIR	X	X	X	X
1.1	Dimensional testing	X		X	X
1.2	Functional testing (if specified)	X		X	X
1.3	Material testing	X		X	X
02	SAMPLES (3 parts, if not agreed differently)	X	X	X	X
03	Released, stamped DEUTZ drawing	X		X	X
07	Bill of Substances (via IMDS / CDX)*	X	X	X	X
10	Process flow chart				X
11	Control Plan				X
12	Proof of process capability				X
23	Others: List of sub suppliers				X
	Others: Confirmation compliance handling instructions (if available)			X	X

- Reference to content must be mentioned for all appended / marked documents

Example documentation

Appendix	Issue level/ date	Type, extent and identification of the appendix
☒ 1.1 Geometry, dimensional check	yyyy.mm.dd	See appendix „A“
☐1.2 Function check		Not specified
☒1.3 Material check	yyyy.mm.dd	See appendix „B“
☐ 1.4 Haptic check		
☐ 1.5 Acoustics check		
☐ 1.6 Odour check		
☐ 1.7 Appearance check		
☐ 1.8 Surface check		
☐ 1.9 ESD test		
☐ 1.10 Reliability tests		
☒ 2 Samples	yyyy.mm.dd	
☒ 3 Technical specifications	yyyy.mm.dd	See DEUTZ drawing at appendix “A”
☐ 4 Product FMEA		
☐ 5 Design release		
☐ 6 Compliance with legal requirements		
☒ 7 Material data sheet /REACH	yyyy.mm.dd	See appendix „C“
☐ 8 Software test report		
☐ 9 Process FMEA		
☒ 10 Process flow diagram	yyyy.mm.dd	See appendix „D“
☒ 11 Control plan	yyyy.mm.dd	See appendix „E“
☒ 12 Confirmation of process capability	yyyy.mm.dd	See appendix „F“
☐ 13 Achievement of special characteristics		
☐ 14 Test/ Inspection equipment list		
☐ 15 Capability study testing equipment		
☐ 16 Tooling list		
☐ 17 Confirmation of agreed capacity		
☐ 18 Written self-assessment		
☐ 19 Part history		
☐ 20 Confirmation of suitability of transport equipment		
☐ 21 PPA status of the supply chain		
☐ 22 Approval of coating systems		
☒ 23 Others(Cleanliness test)	yyyy.mm.dd	See appendix „G“

DEUTZ Sample Documentation - Samples and checklists

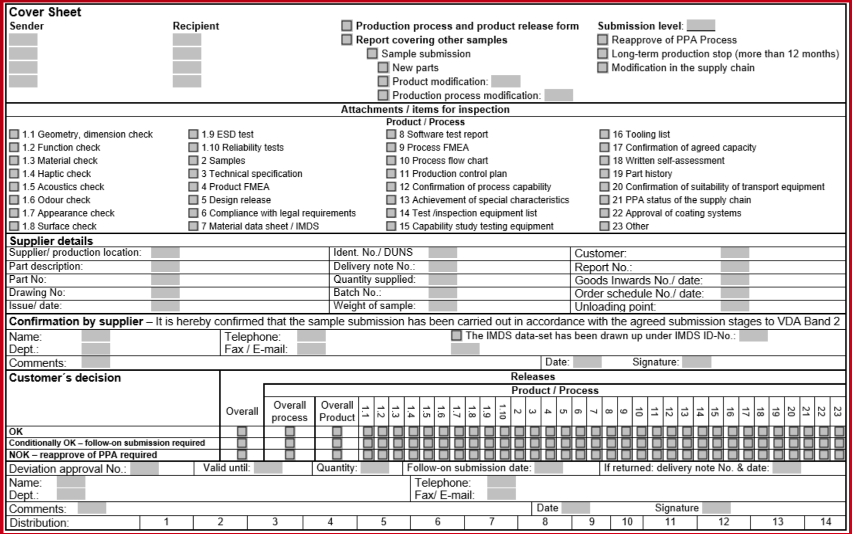
Structural requirements – table of content

- all components (from bill of material) must be mentioned on individual component level with page number, e.g.:

1.1-Dimensional testing	appendix „A“	
Dimensional testing „part 1“	appendix „A01“ or p. xx	Examples see slide 15-17
Dimensional testing „part 2“	appendix „A02“ or p. xx	
Dimensional testing „part x“	appendix „Axx“ or p. xx	
1.3-Material testing	appendix „B“	
Material testing “part 1”	appendix “B01” or p. xx	Examples see slide 20-21
Material testing “part 2”	appendix “B02” or p. xx	
…	…	
7-Bill of substances	appendix „C“	
Stamped DEUTZ drawing “part 1”	appendix “C01” or p. xx	Examples see slide 24
Stamped DEUTZ drawing “part 2”	appendix “C02” or p.xx	
…	…	

DEUTZ Sample Documentation - Samples and checklists

Table of content


Cover Sheet
Sender
Recipient
Production process and product release form
Report covering other samples
Sample submission
New parts
Product modification:
Production process modification:
Submission level:
Reapprove of PPA Process
Long-term production stop (more than 12 months)
Modification in the supply chain

Attachments / items for inspection
Product / Process

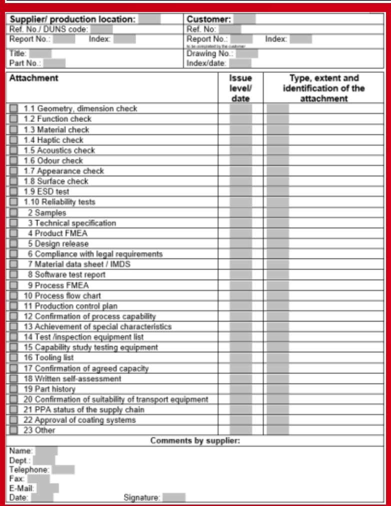
1.1 Geometry, dimension check
1.2 Function check
1.3 Material check
1.4 Haptic check
1.5 Acoustics check
1.6 Odour check
1.7 Appearance check
1.8 Surface check
1.9 ESD test
1.10 Reliability tests
2 Samples
3 Technical specification
4 Product FMEA
5 Design release
6 Compliance with legal requirements
7 Material data sheet / IMDS
8 Software test report
9 Process FMEA
10 Process flow chart
11 Production control plan
12 Confirmation of process capability
13 Achievement of special characteristics
14 Test /inspection equipment list
15 Capability study testing equipment
16 Tooling list
17 Confirmation of agreed capacity
18 Written self-assessment
19 Part history
20 Confirmation of suitability of transport equipment
21 PPA status of the supply chain
22 Approval of coating systems
23 Other

Supplier details

Supplier/ production location:	Ident. No./ DUNS	Customer:
Part description:	Delivery note No.:	Report No.:
Part No:	Quantity supplied:	Goods Inwards No./ date:
Drawing No:	Batch No.:	Order schedule No./ date:
Issue/ date:	Weight of sample:	Unloading point:

Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2
Name: Telephone: The IMDS data-set has been drawn up under IMDS ID-No.:
Dept.: Fax / E-mail:
Comments: Date: Signature:

Customer´s decision
Releases
Product / Process
Overall | Overall process | Overall Product | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 1.10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23
OK
Conditionally OK – follow-on submission required
NOK – reapprove of PPA required
Deviation approval No.: Valid until: Quantity: Follow-on submission date: If returned: delivery note No. & date:
Name: Telephone:
Dept.: Fax/ E-mail:
Comments: Date Signature
Distribution: 1 2 3 4 5 6 7 8 9 10 11 12 13 14


Supplier/ production location: Customer:
Ref. No./ DUNS code: Ref. No:
Report No.: Index: Report No.: Index:
Title: Drawing No.:
Part No.: Index/date:

Attachment	Issue level/ date	Type, extent and identification of the attachment
1.1 Geometry, dimension check		
1.2 Function check		
1.3 Material check		
1.4 Haptic check		
1.5 Acoustics check		
1.6 Odour check		
1.7 Appearance check		
1.8 Surface check		
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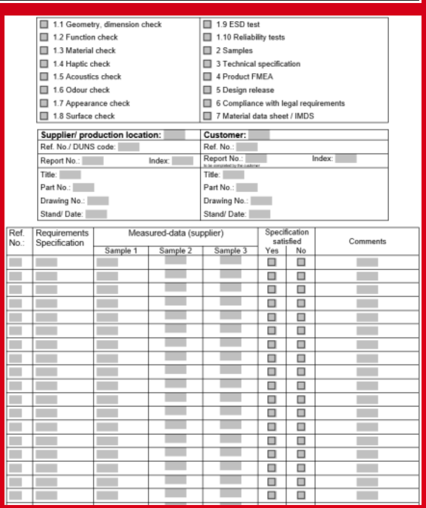
23 Other		

Comments by supplier:
Name:
Dept.:
Telephone:
Fax:
E-Mail:
Date: Signature: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1.4 Haptic check
1.5 Acoustics check
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1.7 Appearance check
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Supplier/ production location: Customer:
Ref. No./ DUNS code: Ref. No.:
Report No.: Index: Report No.: Index:
Title: Title:
Part No.: Part No.:
Drawing No.: Drawing No.:
Stand/ Date: Stand/ Date:

Ref. No.:	Requirements Specification	Measured-data (supplier)			Specification satisfied		Comments
		Sample 1	Sample 2	Sample 3	Yes	No	

DEUTZ Sample Documentation - Samples and checklists

Requirements based on DEUTZ specification H0758-2

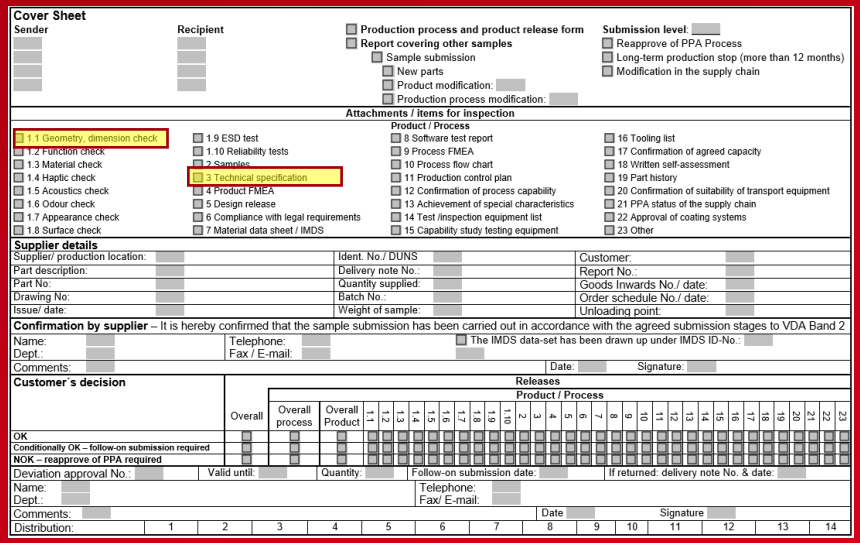
- All dimensions, characters, notes must be stamped or marked with a running number:
  - Including written notes
  - Referring specifications (e.g. coating, painting)
  - Material requirements in bill of material
  - CC‘s including (short time) capability study (just 20+3 pieces acceptable)
- The number must correlate with the report / measurement results:
  - 3 parts must be measured / part 1-3 labeled (serial number is ok)
  - Nominal value always include tolerance
  - Actual results always include decision (ok./n.o.k.)

Ref-No.	Requirements	Actual-Value Supplier			Evaluation .. satisfactory	Evaluation .. not satisfactory
		Part 1	Part 2	Part 3		
20	Ra 1,6	0,862	1,103	0,756	X	
21	20°±1°	20,09	20,06	20,03	X	

See also examples on following slides

DEUTZ Sample Documentation - Samples and checklists

Table of content


Cover Sheet

Sender

Recipient

Production process and product release form

Report covering other samples

Sample submission

New parts

Product modification:

Production process modification:

Submission level:

Reapprove of PPA Process

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Drawing No:
Batch No.:
Order schedule No./ date:
Issue/ date:
Weight of sample:
Unloading point:

Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2

Name:
Dept.:
Telephone:
Fax / E-mail:
The IMDS data-set has been drawn up under IMDS ID-No.:
Comments:
Date:
Signature:

Customer´s decision

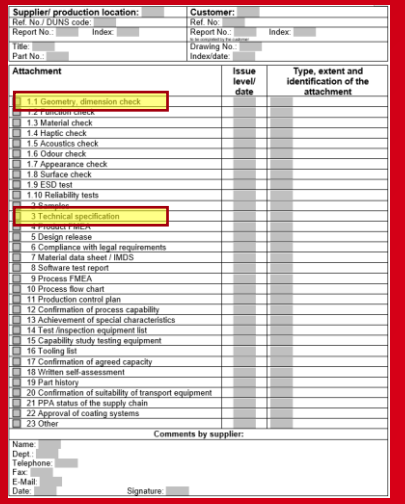
Releases

Product / Process

Overall
Overall process
Overall Product
1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

OK
Conditionally OK – follow-on submission required
NOK – reapprove of PPA required

Deviation approval No.:
Valid until:
Quantity:
Follow-on submission date:
If returned. delivery note No. & date:
Name:
Dept.:
Telephone:
Fax/ E-mail:
Comments:
Date
Signature
Distribution:
1 2 3 4 5 6 7 8 9 10 11 12 13 14


Supplier/ production location:
Ref. No./ DUNS code:
Report No.:
Index:
Title:
Part No.:
Customer:
Ref. No.:
Report No.:
Index:
Drawing No.:
Index/date

Attachment
Issue level/ date
Type, extent and identification of the attachment

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Name:
Dept.:
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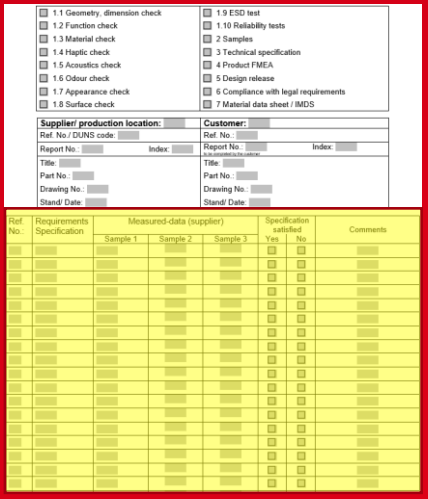
Date:
Signature:


1.1 Geometry, dimension check
1.2 Function check
1.3 Material check
1.4 Haptic check
1.5 Acoustics check
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1.7 Appearance check
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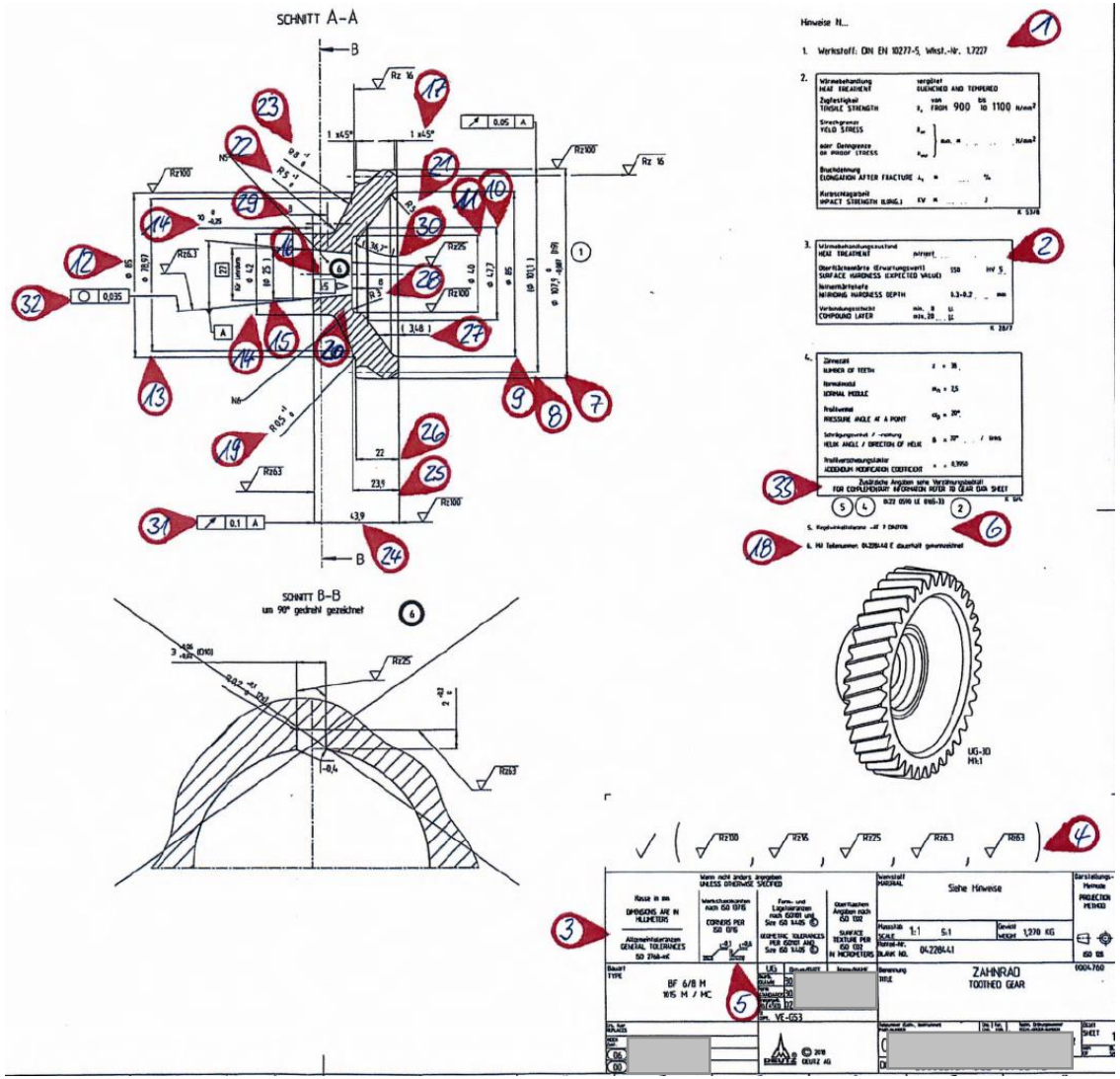
Ref. No./ DUNS code:
Report No.:
Index:
Title:
Part No.:
Drawing No.:
Stand/ Date:
Customer:
Ref. No.:
Report No.:
Index:
Title:
Part No.:
Drawing No.:
Stand/ Date:

Ref. No.
Requirements Specification
Measured-data (supplier)
Sample 1
Sample 2
Sample 3
Specification satisfied
Yes
No
Comments

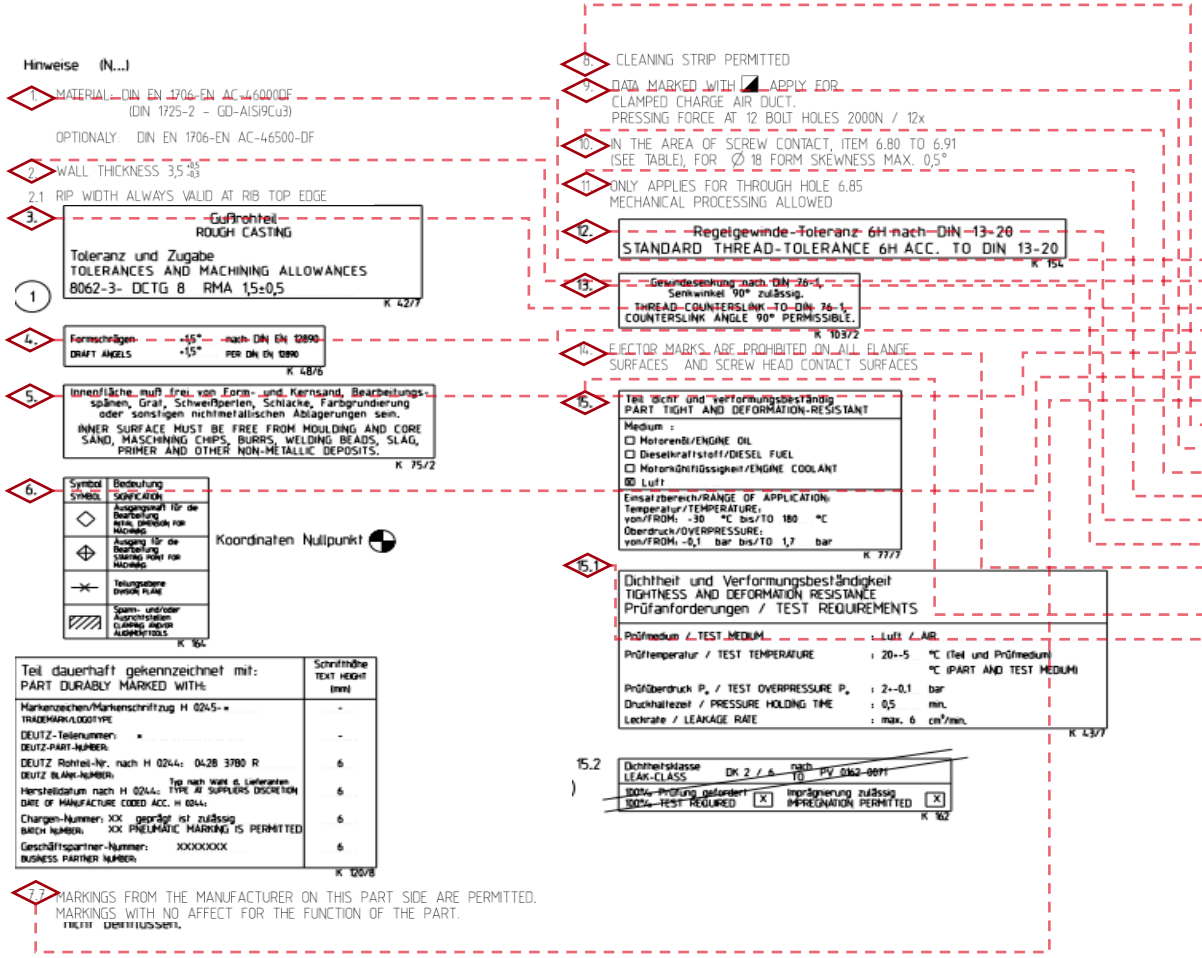
DEUTZ Sample Documentation - Samples and checklists

Example - Stamped DEUTZ drawing



DEUTZ Sample Documentation - Samples and checklists

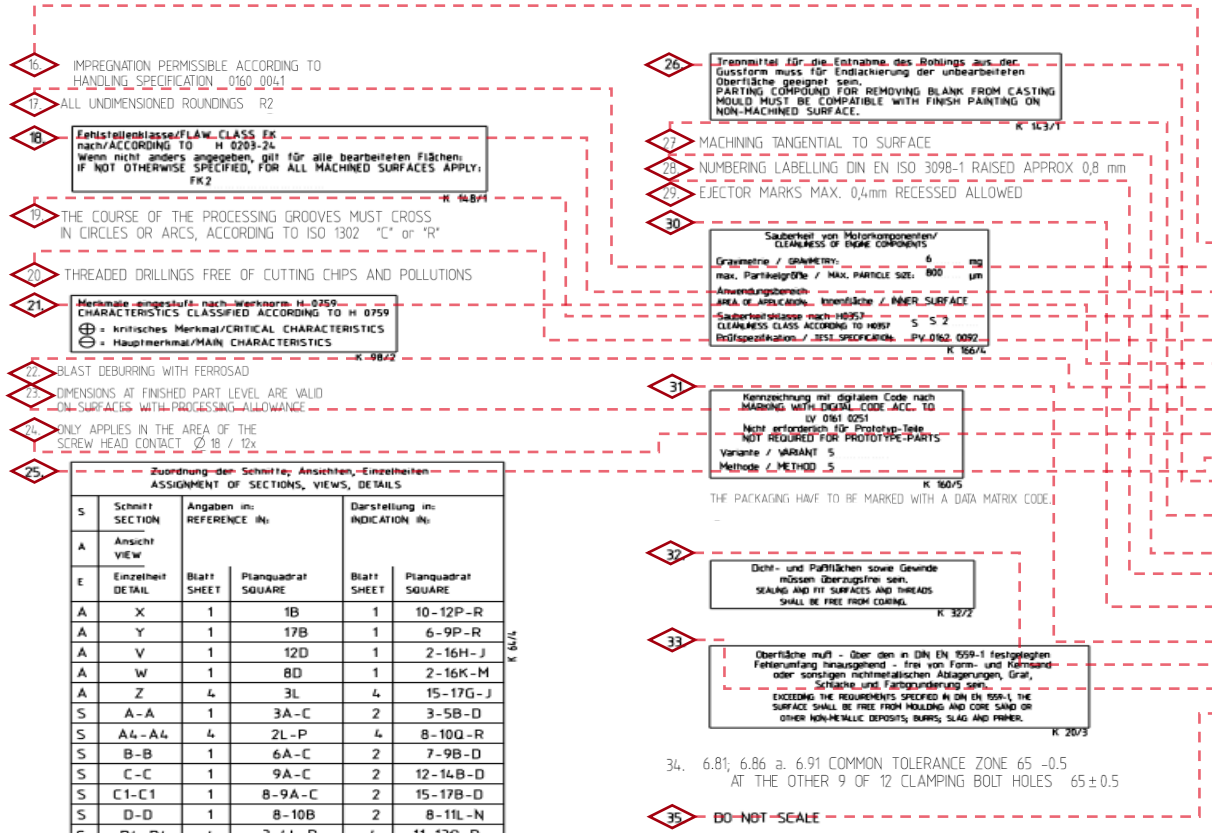
Examples appendix „A“ (1/3) – Dimensional testing



Ref. No.	Requirements Specifications	Measured data(supplier)			Specifications met		Comments:
		Sample 2	Sample 3	Sample 9	Yes	No	
Note1	Material	OK	OK	OK	☒	☐	
Note2	Wall thickness	3.2-4.0	3.2-4.0	3.2-4.0	☒	☐	
Note3	Tolerance	OK	OK	OK	☒	☐	
Note4	Draft Angle	OK	OK	OK	☒	☐	
Note 5	Free of pollution	OK	OK	OK	☒	☐	
Note 6	Symbols	OK	OK	OK	☒	☐	
Note 7	Marking	OK	OK	OK	☒	☐	
Note 8	Cleaning strip	OK	OK	OK	☒	☐	
Note 9	Data Mark	OK	OK	OK	☒	☐	
Note 10	Ø18 Draft	OK	OK	OK	☒	☐	
Note 11	6.5 Hole	OK	OK	OK	☒	☐	
Note 12	Thread tol.	OK	OK	OK	☒	☐	
Note 13	Countersink	OK	OK	OK	☒	☐	
Note 14	Ejector marks	OK	OK	OK	☒	☐	
Note 14.1	Thread type	OK	OK	OK	☒	☐	
Note 15	Part tight	OK	OK	OK	☒	☐	
Note 15.1	Leak test 6cm3/min max	0.71	0.19	0.24	☒	☐	
Note 15.2	Leak class				☒	☐	

DEUTZ Sample Documentation - Samples and checklists

Examples appendix „A“(2/3) – Dimensional testing



S	Schnitt SECTION	Angaben in: REFERENCE IN:		Darstellung in: INDICATION IN:	
A	Ansicht VIEW				
E	Einzelheit DETAIL	Blatt SHEET	Planquadrat SQUARE	Blatt SHEET	Planquadrat SQUARE
A	X	1	1B	1	10-12P-R
A	Y	1	17B	1	6-9P-R
A	V	1	12D	1	2-16H-J
A	W	1	8D	1	2-16K-M
A	Z	4	3L	4	15-17G-J
S	A-A	1	3A-C	2	3-5B-D
S	A4-A4	4	2L-P	4	8-10Q-R
S	B-B	1	6A-C	2	7-9B-D
S	C-C	1	9A-C	2	12-14B-D
S	C1-C1	1	8-9A-C	2	15-17B-D
S	D-D	1	8-10B	2	8-11L-N
S	D4-D4	4	3-4L-P	4	11-13Q-R
S	E-E	1	3A-C	2	3-5G-J
S	F-F	3	4-5G-J	3	11-13G-J
S	G-G	1	7-8D-F	2	7-9G-J
S	H-H	1	9D-E	2	12-13G-J
S	J-J	1	10-11Q-R	1	3-4P-Q

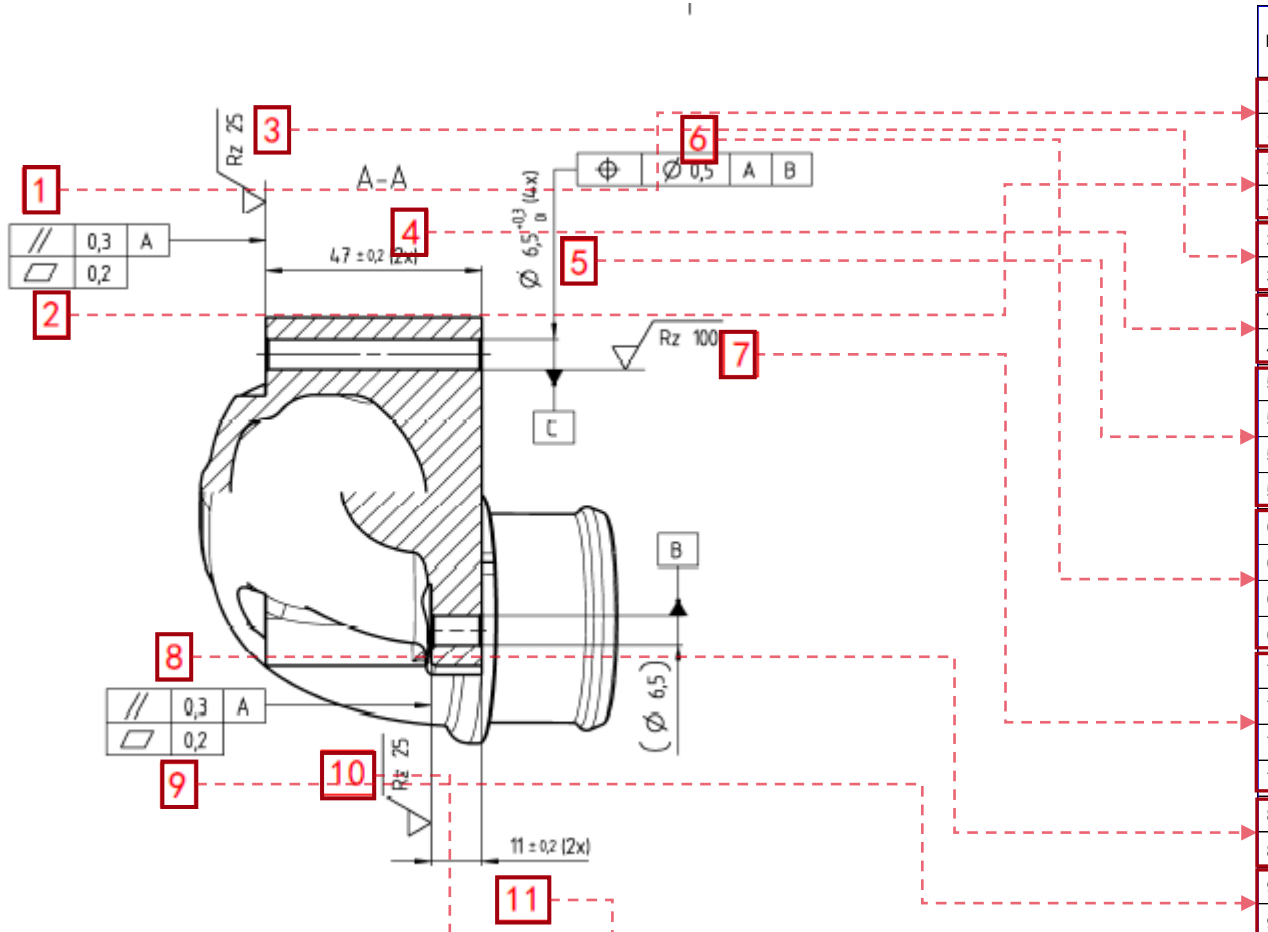
K 64/4

Ref. No.	Requirements Specifications	Measured data(supplier)			Specifications met		Comments:
		Sample 2	Sample 3	Sample 9	Yes	No	
Note 16	Handling	OK	OK	OK	☒	☐	
Note 17	Roundings	OK	OK	OK	☒	☐	
Note 18	Flaw class FK2	OK	OK	OK	☒	☐	
Note 19	Grooves	OK	OK	OK	☒	☐	
Note 20	Threaded	OK	OK	OK	☒	☐	
Note 21	Features	OK	OK	OK	☒	☐	
Note 22	Deburring	OK	OK	OK	☒	☐	
Note 23	Surface treatment	OK	OK	OK	☒	☐	
Note 24	℄ 18 Bolt	OK	OK	OK	☒	☐	
Note 25	Drawing detail	OK	OK	OK	☒	☐	
Note 26	Casting surface	OK	OK	OK	☒	☐	
Note 27	Maching tangential to surface	OK	OK	OK	☒	☐	
Note 28	Numbering labelling	OK	OK	OK	☒	☐	
Note 29	Ejector Mark	OK	OK	OK	☒	☐	
Note 30	Cleanliness 6mg, 800µm	0	0	0	☒	☐	
Note 31	Marked with blank	OK	OK	OK	☒	☐	
Note 32	Sealing surface	OK	OK	OK	☒	☐	
Note 33	Nonmetallic substance	OK	OK	OK	☒	☐	
Note 35	DO not scale	OK	OK	OK	☒	☐	

Missing values, see also example „Appendix G“ on slide 21

DEUTZ Sample Documentation - Samples and checklists

Examples appendix „A“(3/3) – Dimensional testing



No.	Ref. No.	Requirements Specifications	Measured data (supplier) Sample 1	Sample 2	Sample 3	Specifications met Yes	No	Comments:
1-1	B6	// 0,3 A	0,005	0,003	0,004	☒	☐	
1-2	B6	// 0,3 A	0,006	0,005	0,006	☒	☐	
2-1	B6	▱ 0,2	0,000	0,000	0,001	☒	☐	
2-2	B6	▱ 0,2	0,001	0,000	0,002	☒	☐	
3-1	B7	Rz25	6,316	5,921	7,336	☒	☐	
3-2	B7	Rz25	8,106	5,285	7,953	☒	☐	
4-1	B7	47±0.2	47,05	47,06	47,07	☒	☐	
4-2	B7	47±0.2	47,04	47,05	47,08	☒	☐	
5-1	B8	φ6.5（+0.3/0）	6,7	6,74	6,73	☒	☐	
5-2	B8	φ6.5（+0.3/0）	6,72	6,75	6,75	☒	☐	
5-3	B8	φ6.5（+0.3/0）	6,73	6,73	6,73	☒	☐	
5-4	B8	φ6.5（+0.3/0）	6,72	6,75	6,74	☒	☐	
6-1	B8	⌖ Ø 0,5 A B	0	0	0	☒	☐	
6-2	B8	⌖ Ø 0,5 A B	0,06	0,043	0,021	☒	☐	
6-3	B8	⌖ Ø 0,5 A B	0,082	0,027	0,034	☒	☐	
6-4	B8	⌖ Ø 0,5 A B	0,083	0,043	0,071	☒	☐	
7-1	B8	Rz100	66,806	68,102	67,542	☒	☐	Test results after other parts are damaged
7-2	B8	Rz100	67,416	66,843	67,916	☒	☐	
7-3	B8	Rz100	39,452	38,482	35,623	☒	☐	
7-4	B8	Rz100	38,625	37,846	45,179	☒	☐	
8-1	D6	// 0,3 A	0,003	0,003	0,003	☒	☐	
8-2	D6	// 0,3 A	0,003	0,002	0,001	☒	☐	
9-1	D6	▱ 0,2	0,0003	0,0014	0,001	☒	☐	
9-2	D6	▱ 0,2	0,0005	0,0001	0,0003	☒	☐	
10-1	D7	Rz25	5,692	6,492	6,942	☒	☐	
10-2	D7	Rz25	7,662	5,861	5,384	☒	☐	
11-1	E8	11±0.2	11,02	11,01	11,03	☒	☐	
11-2	E8	11±0.2	11,03	11,02	11,02	☒	☐	

DEUTZ Sample Documentation - Samples and checklists

Common mistakes in dimensional testing documentation

- Missing references: stamped drawing to measured data
  - Not all specifications from stamped drawing are listed in documentation
  - Missing results
  - 3 samples = 3 measurements
  - 3 times the same results (even at the 3rd digit)
- Missing tolerances
- Missing values
  - e.g. using „OK“
  - Correct values e.g.
    - for surface: nominal: LV 0161 0068 / actual: LV 0161 0068
- Missing decimal places
- Same results as in other part no.

No.	Ref. No.	Requirements Specifications	Measured data(supplier)			Specifications met		Comments:
			Sample 1	Sample 2	Sample 3	Yes	No	
3	C5	Rz16 Rmax20	11	12	12	☒	☐	If you have measured the roughness you should receive a result like Rz 11.03. Please use also the fractional digits. The result for Rmax20 is missing.
5	Q7	$\Phi 12_{0}^{+0.13}$ Ø12.13	12.068 MAX 12.061Avg 12.053MIN	12.067 MAX 12.058Avg 12.049MIN	12.066 MAX 12.061Avg 12.055MIN	☒	☐	Same results as per part no. 0428 4111 That is not possible
8	Q6	120°	120.122	120.098	120.111	☒	☐	Same results as per part no. 0428 4111 That is not possible
15	F14	235	235.225	235.256	235.237	☒	☐	Tolerance is missing
21	H5	Rz20 C	13	13	13	☒	☐	Please use also the fractional digits.

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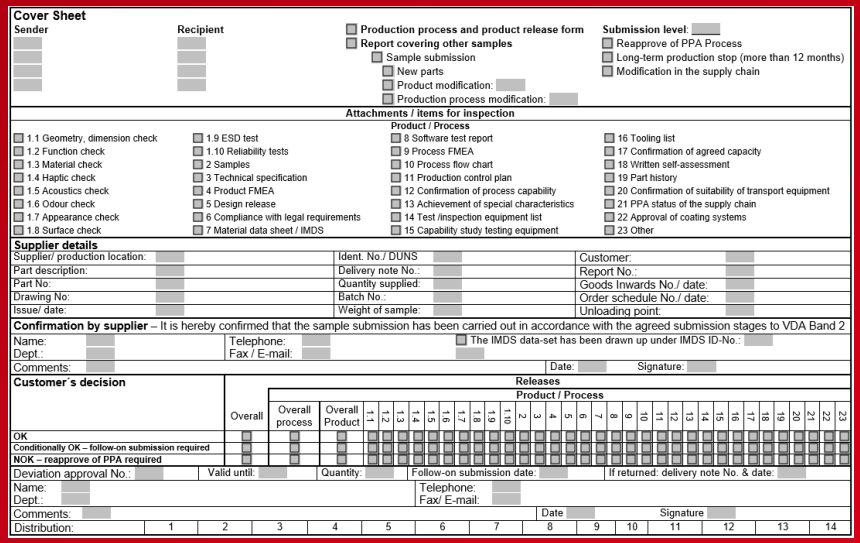
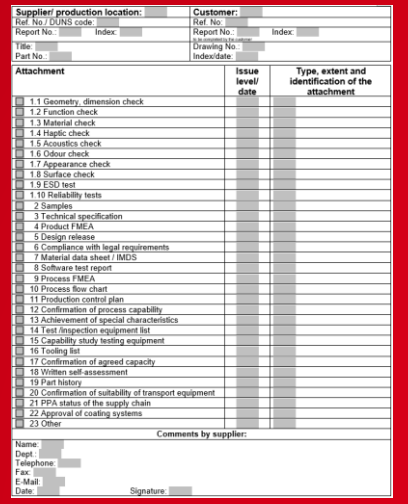
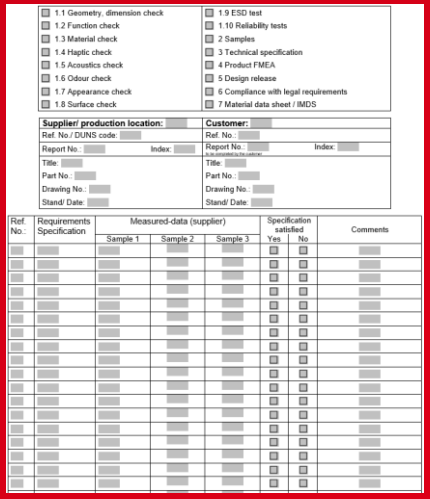


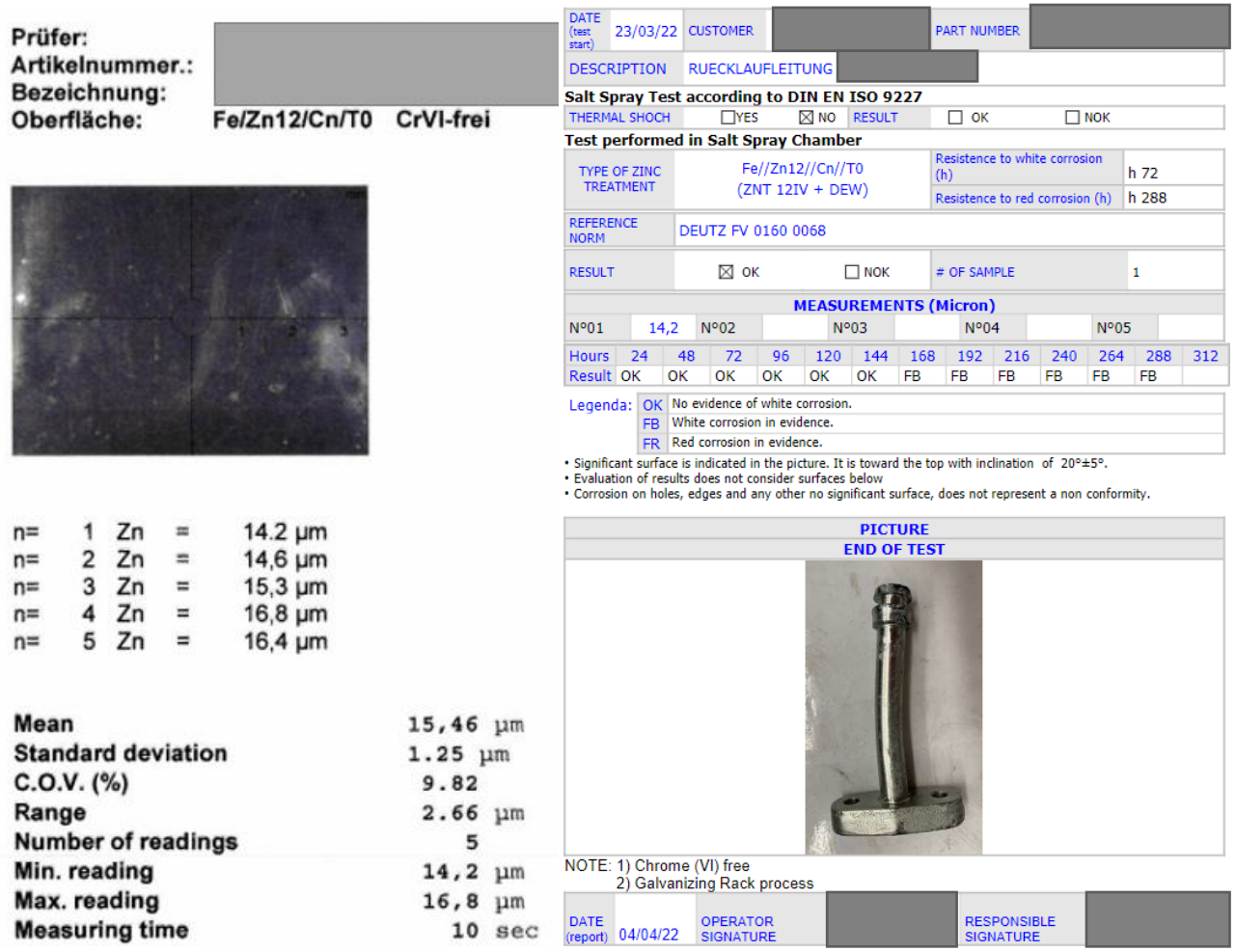




DEUTZ Sample Documentation - Samples and checklists

Surface treatment / coating - according to FV 0160 0068 / LV 0161 0144

- Surface treatment / coating needs to be done according DEUTZ requirement, e.g.
  - FV 0160 0068
  - LV 0161 0144
  - LV 0161 0149
  - …
- All requirements need to be confirmed, e.g.
  - Conformity of the Specification
  - Coater
  - Applied coating system
  - Coat thickness
  - Corrosion protection test report
  - …



Prüfer:
Artikelnummer.:
Bezeichnung:
Oberfläche: Fe/Zn12/Cn/T0 CrVI-frei

n= 1 Zn = 14.2 µm
n= 2 Zn = 14,6 µm
n= 3 Zn = 15,3 µm
n= 4 Zn = 16,8 µm
n= 5 Zn = 16,4 µm

Mean	15,46 µm
Standard deviation	1.25 µm
C.O.V. (%)	9.82
Range	2.66 µm
Number of readings	5
Min. reading	14,2 µm
Max. reading	16,8 µm
Measuring time	10 sec

DATE (test start)	23/03/22	CUSTOMER	PART NUMBER
DESCRIPTION	RUECKLAUFLEITUNG		

Salt Spray Test according to DIN EN ISO 9227

THERMAL SHOCH	☐ YES ☒ NO	RESULT	☐ OK ☐ NOK

Test performed in Salt Spray Chamber

TYPE OF ZINC TREATMENT	Fe//Zn12//Cn//T0 (ZNT 12IV + DEW)	Resistence to white corrosion (h)	h 72
		Resistence to red corrosion (h)	h 288
REFERENCE NORM	DEUTZ FV 0160 0068		
RESULT	☒ OK ☐ NOK	# OF SAMPLE	1

MEASUREMENTS (Micron)

N°01	14,2	N°02		N°03		N°04		N°05				
Hours	24	48	72	96	120	144	168	192	216	240	264	288	312
Result	OK	OK	OK	OK	OK	OK	FB	FB	FB	FB	FB	FB	

Legenda:	OK	No evidence of white corrosion.
	FB	White corrosion in evidence.
	FR	Red corrosion in evidence.

- Significant surface is indicated in the picture. It is toward the top with inclination of 20°±5°.
- Evaluation of results does not consider surfaces below
- Corrosion on holes, edges and any other no significant surface, does not represent a non conformity.

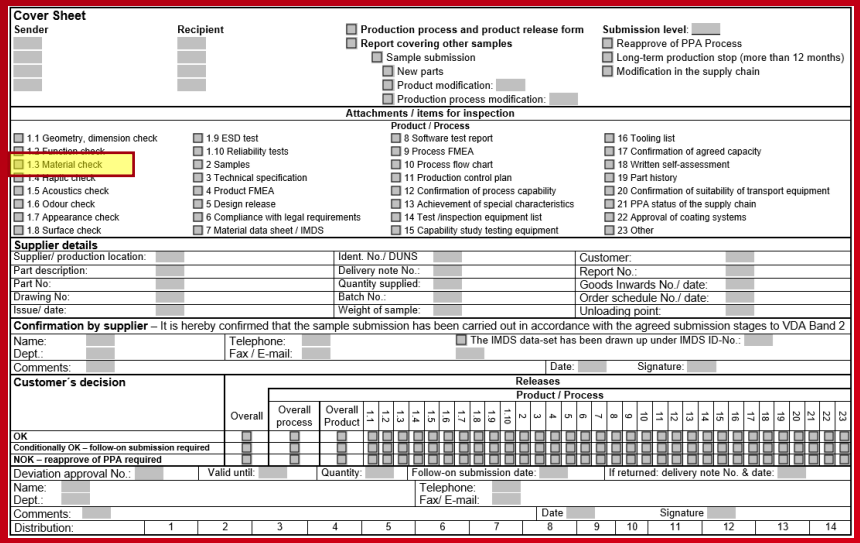
PICTURE
END OF TEST

NOTE: 1) Chrome (VI) free
2) Galvanizing Rack process

DATE (report)	04/04/22	OPERATOR SIGNATURE		RESPONSIBLE SIGNATURE	

DEUTZ Sample Documentation - Samples and checklists

Table of content


Cover Sheet

Sender | Recipient | Production process and product release form | Report covering other samples | Sample submission | New parts | Product modification: | Production process modification: | Submission level: | Reapprove of PPA Process | Long-term production stop (more than 12 months) | Modification in the supply chain

Attachments / items for inspection

Product / Process

1.1 Geometry, dimension check; 1.2 Function check; 1.3 Material check; 1.4 Haptic check; 1.5 Acoustics check; 1.6 Odour check; 1.7 Appearance check; 1.8 Surface check; 1.9 ESD test; 1.10 Reliability tests; 2 Samples; 3 Technical specification; 4 Product FMEA; 5 Design release; 6 Compliance with legal requirements; 7 Material data sheet / IMDS; 8 Software test report; 9 Process FMEA; 10 Process flow chart; 11 Production control plan; 12 Confirmation of process capability; 13 Achievement of special characteristics; 14 Test /inspection equipment list; 15 Capability study testing equipment; 16 Tooling list; 17 Confirmation of agreed capacity; 18 Written self-assessment; 19 Part history; 20 Confirmation of suitability of transport equipment; 21 PPA status of the supply chain; 22 Approval of coating systems; 23 Other

Supplier details

Supplier/ production location: | Ident. No./ DUNS | Customer:
Part description: | Delivery note No.: | Report No.:
Part No: | Quantity supplied: | Goods Inwards No./ date:
Drawing No: | Batch No.: | Order schedule No./ date:
Issue/ date: | Weight of sample: | Unloading point:

Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2

Name: | Telephone: | The IMDS data-set has been drawn up under IMDS ID-No.:
Dept.: | Fax / E-mail:
Comments: | Date: | Signature:

Customer´s decision

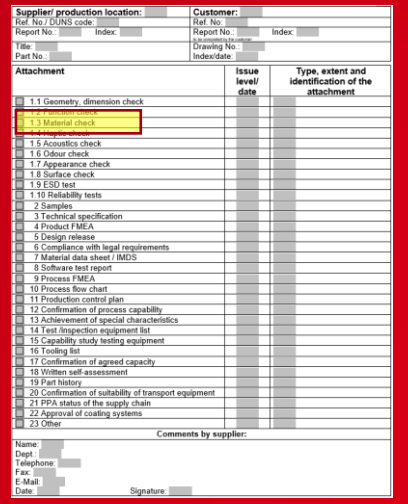
Releases

Product / Process

Overall | Overall process | Overall Product | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 1.10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23

OK
Conditionally OK – follow-on submission required
NOK – reapprove of PPA required

Deviation approval No.: | Valid until: | Quantity: | Follow-on submission date: | If returned. delivery note No. & date:
Name: | Telephone:
Dept.: | Fax/ E-mail:
Comments: | Date | Signature
Distribution: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14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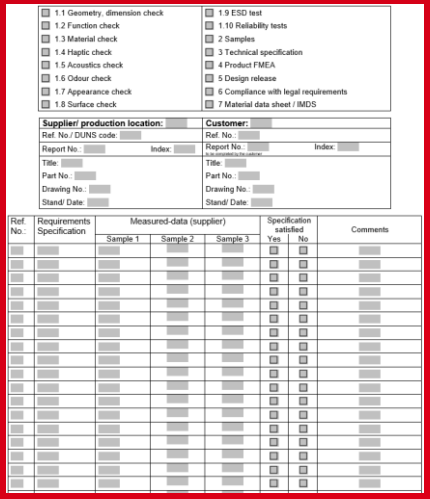
Ref. No./ DUNS code: | Ref. No.:
Report No.: Index: | Report No.: Index:
Title: | Drawing No.:
Part No.: | Index/date

Attachment | Issue level/ date | Type, extent and identification of the attachment

1.1 Geometry, dimension check; 1.2 Function check; 1.3 Material check; 1.4 Haptic check; 1.5 Acoustics check; 1.6 Odour check; 1.7 Appearance check; 1.8 Surface check; 1.9 ESD test; 1.10 Reliability tests; 2 Samples; 3 Technical specification; 4 Product FMEA; 5 Design release; 6 Compliance with legal requirements; 7 Material data sheet / IMDS; 8 Software test report; 9 Process FMEA; 10 Process flow chart; 11 Production control plan; 12 Confirmation of process capability; 13 Achievement of special characteristics; 14 Test /inspection equipment list; 15 Capability study testing equipment; 16 Tooling list; 17 Confirmation of agreed capacity; 18 Written self-assessment; 19 Part history; 20 Confirmation of suitability of transport equipment; 21 PPA status of the supply chain; 22 Approval of coating systems; 23 Other

Comments by supplier:

Name:
Dept.:
Telephone:
Fax:
E-Mail:
Date: Signature: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Supplier/ production location: | Customer:
Ref. No./ DUNS code: | Ref. No.:
Report No.: Index: | Report No.: Index:
Title: | Title:
Part No.: | Part No.:
Drawing No.: | Drawing No.:
Stand/ Date: | Stand/ Date:

Ref. No.: | Requirements Specification | Measured-data (supplier) Sample 1 | Sample 2 | Sample 3 | Specification satisfied Yes | No | Comments

DEUTZ Sample Documentation - Samples and checklists

Examples appendix „B“ – Material testing

QUALITY SYSTEM

DIMENSIONAL REPORT

Page 1 of 2

SUPPLIER : ADDRESS		SUPPLIER CODE:	N° REQUESTED:
DRAWING 04	TYPE	MATRICOLA	CLIENT DEUTZ
DESCRIPTION FUEL LINE		DATE OF DRAWING 24/11/2010 02	QUANTITY 3
ATTACHED TO DOC N°: DATE:	TOOLING ☐ PROTOT. ☐ PROVVIS. ☒ DEFINITIVE	PRESCRIZ. PARTICULAR ☒ LEGISLATION ☐ SECURITY	TIES ☐ V ☐ W ☐ K
MODIFICATION: ☒ PROJECT ☐ TOOLING ☐ PRODUCTIVE CYCLE ☐ MATERIAL ☐ TREATMENT			

PRODUCT CERTIFICATION

DRAWING CHARACTERISTIC	MEASURED CHARACTERISTICS 1	2	OUTCOME	OBSERVATIONS OR COMMENTS
1. Material Tube Ø 10 x 1 mm ✓	See Attach" A " ✓			
2. Material Adapter ✓	Material supplied from Deutz ✓			
3. Material Pressure Sensor ✓	Material supplied from Deutz ✓			
4. Material Screw ✓	Material supplied from Deutz ✓			
5. Material Gasket ✓	Material supplied from Deutz ✓			
6. Spot elevation of shaping ✓	See Attach" B " ✓			

Reference

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1
EN 10204:2005-01

Dokument-Nr.: 41 [redacted]
Document No.:
No. du document:

Prüf-Nr.: Blatt: 1 / 3
Inspection No.: Page:
No. du certificat: Page:

Kunden-Bestell-Nr.: 45 [redacted]
Purchase Order No.:
No. de commande du client:

Herstellerzeichen:
Manufacturer's brand:
Marque du producteur:

Auftrags-Nr.: 15 [redacted]
Order No.:
No. de commande

Versandanzeigen-Nr.: 41 [redacted]
Dispatch Note No.:
No. d'avis d'expédition:

Stempel des Abnahmebeauftragten: WA
Stamp of the inspection representative:
Poinçon du contrôleur:

Produkt: NAHTLOSE STAHLROHRE
Product: SEAMLESS STEEL TUBES
Produit: TUBES D' ACIER SANS SOUDURE

Stahlerschmelzungsverfahren: ELEKTROSTAHL
Steelmaking process: ELECTRIC FURNACE
Procédé d'élaboration de l'acier: FOUR ELECTRIQUE

Lieferbedingungen: Terms of delivery: Conditions de livraison:	EN 10305-4 January 2011, Opt.7, Opt.12, Opt.13
Maße - Toleranzen: Dimensions-tolerances: Dimensions-tolérances:	EN 10305-1 January 2010, Length acc. to EN 10305-4 January 2011
Stahlsorte:	E235

ALLEGATO "A"

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.: 41- [redacted]
Document No.:
No. du document:

Prüf-Nr.: Blatt: 2 / 3
Inspection No.: Page:
No. du certificat: Page:

Schmelzenanalyse [%] / Heat analysis [%] / Analyse sur coulée [%]

Pos. Item Poste	Schmelzen-Nr. Heat No. No. de coulée	C	SI	MN	P	S	AL
0040	213741	0,105	0,165	0,47	0,008	0,002	0,033

Prüfergebnisse / Test results / Résultats des essais

Die Rohre wurden zerstörungsfrei geprüft: The tubes are non destructive tested: Les tubes ont passé un essai non destructif:		ET-test: acc. to EN ISO 10893-1, table 1; for leak tightness; drilled hole: 1,20 mm; 3 drilled holes rotated at 120°			PASSED
Augensichtkontrolle: Visual inspection: Examen visuel:	PASSED	Maßkontrolle: Dimensions examination: Vérification des dimensions:	PASSED	Ringfaltversuch: Flattening test: Essai d'aplatissement:	PASSED

Ergebnisse der mechanischen Prüfung / Results of mechanical testing / Résultats des essais mécaniques

Die Probennahme erfolgte an Vielfachlängen.
The sampling was carried out on multiple lengths.
L'echantillonage etait realise aux longueurs multiples.

ALLEGATO "A"

Reference

DEUTZ Sample Documentation - Samples and checklists

Common mistakes in material testing documentation

Hinweis/NOTE (N...)

1. Werkstoff/MATERIAL:
   EN 1706 - EN AC-43300-S (AlSi9Mg)
   wahlweise/OPTINAL:
   JIS AC4A

- Material not according to drawing /spec.
  - Deviations must already be clarified during feasibility study
- Correct values e.g.
  - for material: nominal: St45 / actual: St45
- No release according to H0670-99

材料试验报告 Material test report

产品名称 Part No.	Charge air elbow 006			材料 Material	EN 1706 AC 46200 AlSi8Cu3		供应商Supplier			炉号Batch No.	2020.01.11
实验项目 Test item		■化学成分Element		■抗拉强度 Tensile strength			■硬度 Hardness		□金相组织 Metallographic structure		
试验设备 Test equipment		光谱仪 Spectrograph		拉伸试验机 Tensile and compression testing machine			布氏硬度计 Brinell tester		金相显微镜 Metalloscope		

1.化学成分Element

元素Elements	含量% Percent											判定 Result
	Cu	Si	Mg	Zn	Fe	Mn	Ni	Cr	Pb	Sn	余量Remainer	
标准Standard	2.0-3.5	7.5-9.5	0.15-0.55	≤1.2	≤0.8	0.15-0.65	≤0.35	N/A	≤0.25	≤0.15	Al	
实测值 Tested	2,345	8,143	0,226	0,125	0,379	0,159	0,009	—	0,006	0,001		OK

2.硬度 Hardness

测试项目Test Project	标准 Requirement HB	检测结果Measured Value											
		样品1 Sample 1				样品2 Sample 2				样品3 Sample 3			
		位置1 Location1	位置2 Location2	位置3 Location3	平均值Average	位置1 Location1	位置2 Location2	位置3 Location3	平均值Average	位置1 Location1	位置2 Location2	位置3 Location3	平均值 Average
硬度Hardness	≥80	88	86	85	86	83	82	85	84	86	87	85	85
判定Result					OK				OK				OK

3.抗拉强度Tensile Strength MPa

标准HV Standard	≥240	实测值 Measured	250	判定 Result	OK

4.金相组织Metalloscope

部位 Sample	-----	判定 Result
评定级别 Grade	-----	-----
图片 Picture	-----	

5.综合评价 Evaluate: OK

编制 Prepaired by: 审核 Approve:

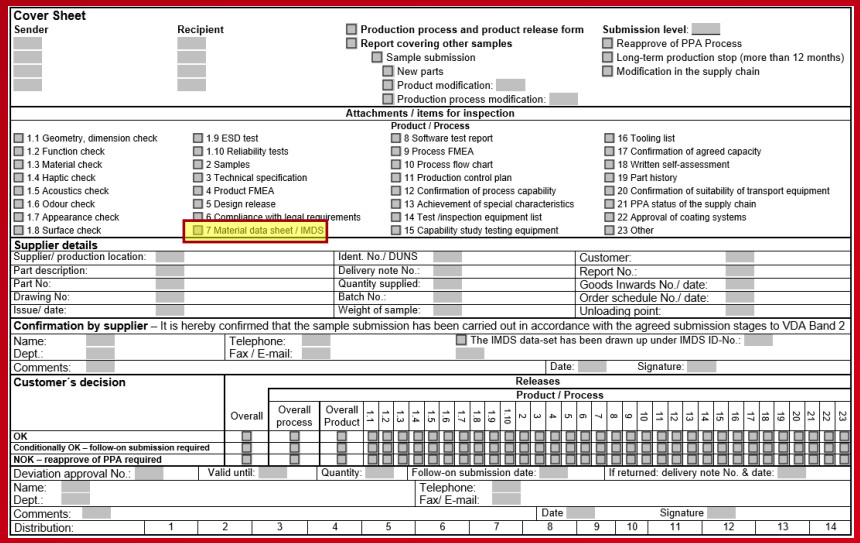
DEUTZ Sample Documentation - Samples and checklists

Common mistakes in material testing

- Missing 3.1 certificate
- Missing mechanical properties
  - Hardness
  - Yield point
  - Tensile strength
- Procedure for hardness test not mentioned
- No standard mentioned
- Missing comparison of substances
  - Chemical components: target <-> actual

DEUTZ Sample Documentation - Samples and checklists

Table of content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Sender | Recipient | Production process and product release form | Report covering other samples | Sample submission | New parts | Product modification: | Production process modification: | Submission level: | Reapprove of PPA Process | Long-term production stop (more than 12 months) | Modification in the supply chain

Attachments / items for inspection

Product / Process

1.1 Geometry, dimension check; 1.2 Function check; 1.3 Material check; 1.4 Haptic check; 1.5 Acoustics check; 1.6 Odour check; 1.7 Appearance check; 1.8 Surface check; 1.9 ESD test; 1.10 Reliability tests; 2 Samples; 3 Technical specification; 4 Product FMEA; 5 Design release; 6 Compliance with legal requirements; 7 Material data sheet / IMDS; 8 Software test report; 9 Process FMEA; 10 Process flow chart; 11 Production control plan; 12 Confirmation of process capability; 13 Achievement of special characteristics; 14 Test /inspection equipment list; 15 Capability study testing equipment; 16 Tooling list; 17 Confirmation of agreed capacity; 18 Written self-assessment; 19 Part history; 20 Confirmation of suitability of transport equipment; 21 PPA status of the supply chain; 22 Approval of coating systems; 23 Other

Supplier details

Supplier/ production location: | Ident. No./ DUNS | Customer:
Part description: | Delivery note No.: | Report No.:
Part No: | Quantity supplied: | Goods Inwards No./ date:
Drawing No: | Batch No.: | Order schedule No./ date:
Issue/ date: | Weight of sample: | Unloading point:

Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2

Name: | Telephone: | The IMDS data-set has been drawn up under IMDS ID-No.:
Dept.: | Fax / E-mail:
Comments: | Date: | Signature:

Customer´s decision

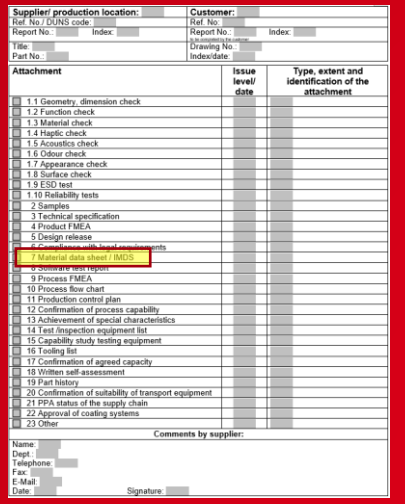
Releases

Product / Process

Overall | Overall process | Overall Product | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 1.10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23

OK
Conditionally OK – follow-on submission required
NOK – reapprove of PPA required

Deviation approval No.: | Valid until: | Quantity: | Follow-on submission date: | If returned. delivery note No. & date:
Name: | Telephone:
Dept.: | Fax/ E-mail:
Comments: | Date | Signature
Distribution: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14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Ref. No./ DUNS code: | Ref. No.:
Report No.: Index: | Report No.: Index:
Title: | Drawing No.:
Part No.: | Index/date

Attachment	Issue level/ date	Type, extent and identification of the attachment
1.1 Geometry, dimension check		
1.2 Function check		
1.3 Material check		
1.4 Haptic check		
1.5 Acoustics check		
1.6 Odour check		
1.7 Appearance check		
1.8 Surface check		
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3 Technical specification		
4 Product FMEA		
5 Design release		
6 Compliance with legal requirements		
7 Material data sheet / IMDS		
8 Software test report		
9 Process FMEA		
10 Process flow chart		
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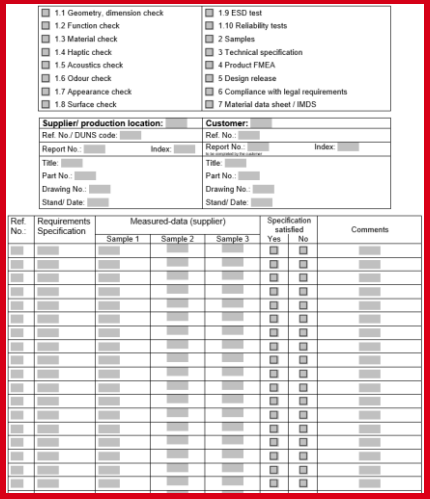
15 Capability study testing equipment		
16 Tooling list		
17 Confirmation of agreed capacity		
18 Written self-assessment		
19 Part history		
20 Confirmation of suitability of transport equipment		
21 PPA status of the supply chain		
22 Approval of coating systems		
23 Other		

Comments by supplier:

Name:
Dept.:
Telephone:
Fax:
E-Mail:
Date: Signature: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Supplier/ production location: | Customer:
Ref. No./ DUNS code: | Ref. No.:
Report No.: Index: | Report No.: Index:
Title: | Title:
Part No.: | Part No.:
Drawing No.: | Drawing No.:
Stand/ Date: | Stand/ Date:

Ref. No.:	Requirements Specification	Measured-data (supplier) Sample 1	Sample 2	Sample 3	Specification satisfied Yes	No	Comments

DEUTZ Sample Documentation - Samples and checklists

Example appendix „C“ - Bill of substances

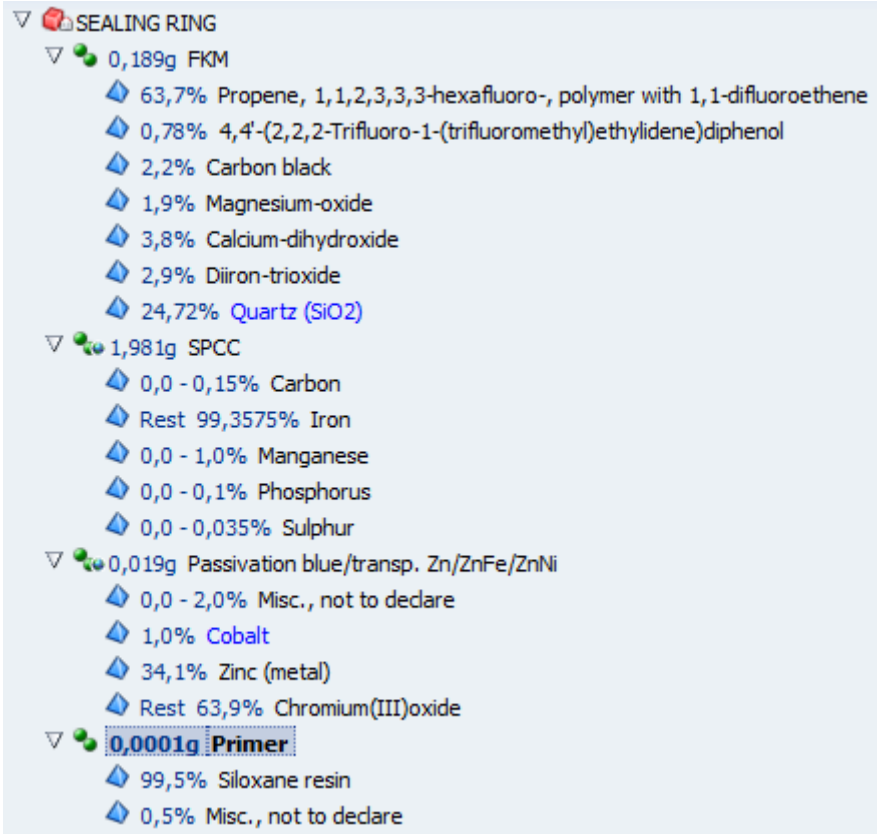
- Only via CDX (or IMDS)
  - DEUTZ ID CDX 18523
  - DEUTZ ID IMDS 485
- DEUTZ_Official Letter MDS

PDF-Datei

- DEUTZ_Guideline for data input CDX & IMDS

PDF-Datei

- IMDS / CDX data set: entry no. has to be mentioned



DEUTZ Sample Documentation - Samples and checklists

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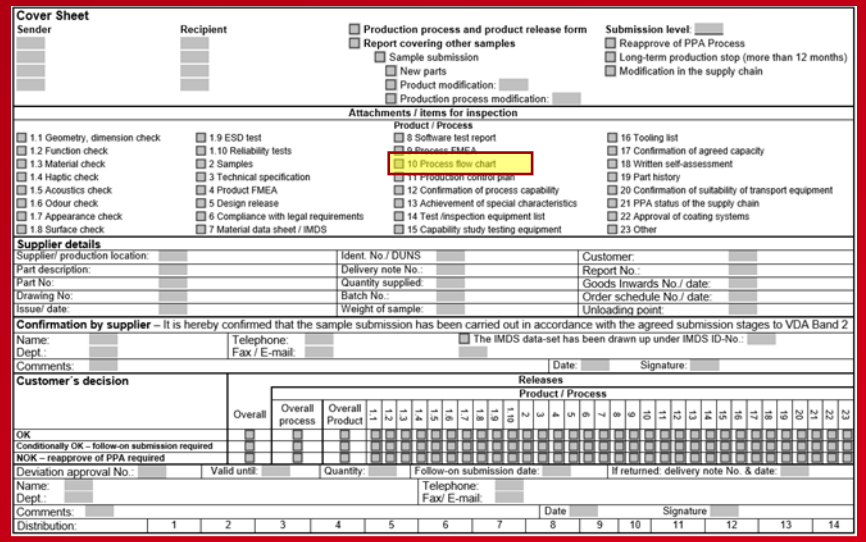
Cover Sheet
Sender
Recipient
Production process and product release form
Report covering other samples
Sample submission
New parts
Product modification:
Production process modification:
Submission level:
Reapprove of PPA Process
Long-term production stop (more than 12 months)
Modification in the supply chain
Attachments / items for inspection
Product / Process
1.1 Geometry, dimension check
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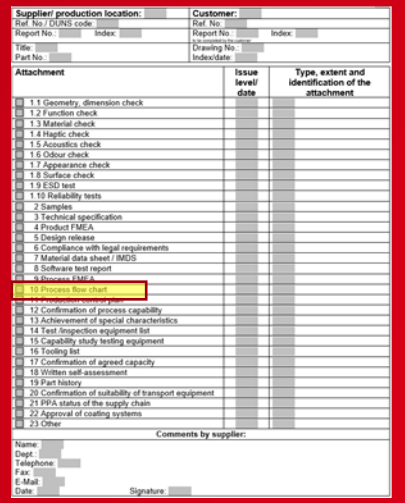
21 PPA status of the supply chain
22 Approval of coating systems
23 Other
Supplier details
Supplier/ production location:
Part description:
Part No:
Drawing No:
Issue/ date:
Ident. No./ DUNS
Delivery note No.:
Quantity supplied:
Batch No.:
Weight of sample:
Customer:
Report No.:
Goods Inwards No./ date:
Order schedule No./ date:
Unloading point:
Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2
Name:
Dept.:
Telephone:
Fax / E-mail:
The IMDS data-set has been drawn up under IMDS ID-No.:
Comments:
Date:
Signature:
Customer´s decision
Releases
Product / Process
Overall
Overall process
Overall Product
OK
Conditionally OK – follow-on submission required
NOK – reapprove of PPA required
Deviation approval No.:
Valid until:
Quantity:
Follow-on submission date:
If returned: delivery note No. & date:
Name:
Dept.:
Telephone:
Fax/ E-mail:
Comments:
Date
Signature
Distribution: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Ref. No./ DUNS code
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Report No.:
Index:
Title:
Part No.:
Drawing No.:
Index/date:
Attachment
Issue level/ date
Type, extent and identification of the attachment
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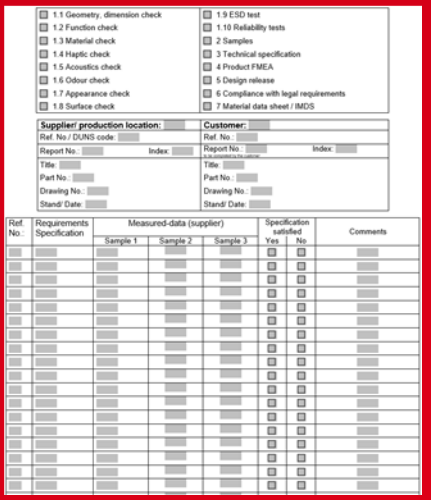
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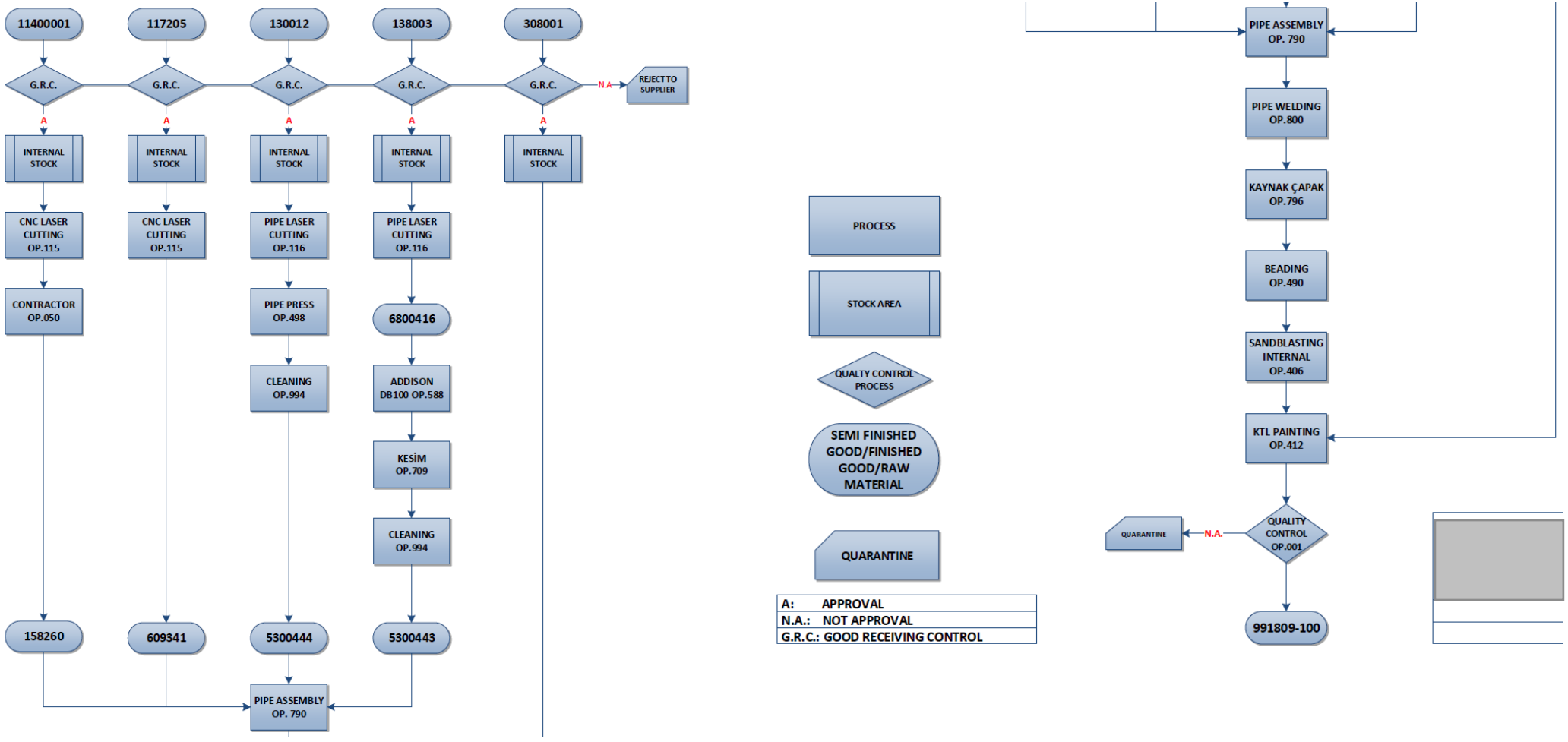
Supplier/ production location:
Customer:
Ref. No./ DUNS code
Ref. No.
Report No.:
Index:
Title:
Part No.:
Drawing No.:
Stand/ Date:
Ref. No.:
Requirements Specification
Measured-data (supplier)
Sample 1
Sample 2
Sample 3
Specification satisfied
Yes
No
Comments

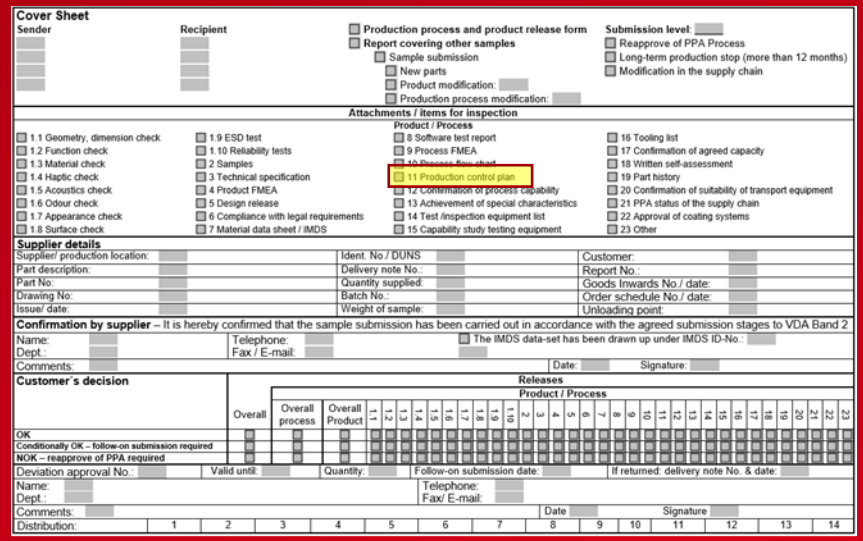
DEUTZ Sample Documentation - Samples and checklists

Example appendix „D“ - Process flow chart



DEUTZ Sample Documentation - Samples and checklists

Table of content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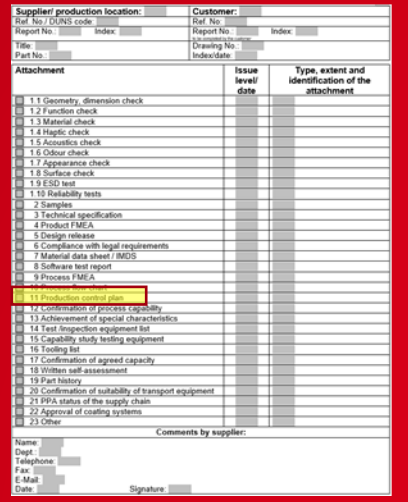
8 Software test report
9 Process FMEA
11 Production control plan
13 Achievement of special characteristics
14 Test /inspection equipment list
15 Capability study testing equipment
16 Tooling list
17 Confirmation of agreed capacity
18 Written self-assessment
19 Part history
20 Confirmation of suitability of transport equipment
21 PPA status of the supply chain
22 Approval of coating systems
23 Other
Supplier details
Supplier/ production location:
Ident. No./ DUNS
Customer:
Part description:
Delivery note No.:
Report No.:
Part No:
Quantity supplied:
Goods Inwards No./ date:
Drawing No:
Batch No.:
Order schedule No./ date:
Issue/ date:
Weight of sample:
Unloading point:
Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2
Name:
Dept.:
Telephone:
Fax / E-mail:
The IMDS data-set has been drawn up under IMDS ID-No.:
Comments:
Date:
Signature:
Customer´s decision
Releases
Product / Process
Overall
Overall process
Overall Product
OK
Conditionally OK – follow-on submission required
NOK – reapprove of PPA required
Deviation approval No.:
Valid until:
Quantity:
Follow-on submission date:
If returned: delivery note No. & date:
Name:
Dept.:
Telephone:
Fax/ E-mail:
Comments:
Date
Signature
Distribution: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Customer:
Ref. No./ DUNS code:
Ref. No:
Report No.:
Index:
Report No.:
Index:
Title:
Part No.:
Drawing No.:
Index/date:
Attachment
Issue level/ date
Type, extent and identification of the attachment
1.1 Geometry, dimension check
1.2 Function check
1.3 Material check
1.4 Haptic check
1.5 Acoustics check
1.6 Odour check
1.7 Appearance check
1.8 Surface check
1.9 ESD test
1.10 Reliability tests
2 Samples
3 Technical specification
4 Product FMEA
5 Design release
6 Compliance with legal requirements
7 Material data sheet / IMDS
8 Software test report
9 Process FMEA
11 Production control plan
12 Confirmation of process capability
13 Achievement of special characteristics
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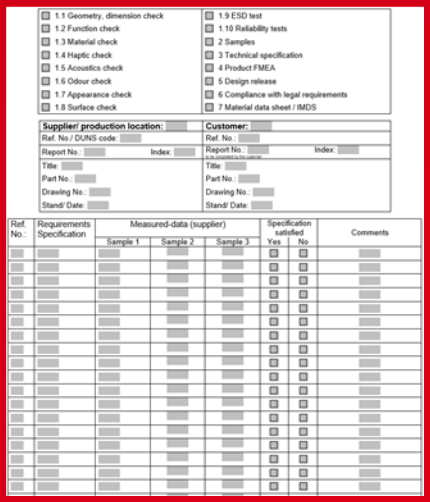
19 Part history
20 Confirmation of suitability of transport equipment
21 PPA status of the supply chain
22 Approval of coating systems
23 Other
Comments by supplier:
Name:
Dept.:
Telephone:
Fax:
E-Mail:
Date:
Signature: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1.5 Acoustics check
1.6 Odour check
1.7 Appearance check
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5 Design release
6 Compliance with legal requirements
7 Material data sheet / IMDS
Supplier/ production location:
Customer:
Ref. No./ DUNS code:
Ref. No.:
Report No.:
Index:
Report No.:
Index:
Title:
Part No.:
Drawing No.:
Stand/ Date:
Title:
Part No.:
Drawing No.:
Stand/ Date:
Ref. No.:
Requirements Specification
Measured-data (supplier)
Sample 1
Sample 2
Sample 3
Specification satisfied
Yes
No
Comments

DEUTZ Sample Documentation - Samples and checklists

Example appendix „E“ - Control plan

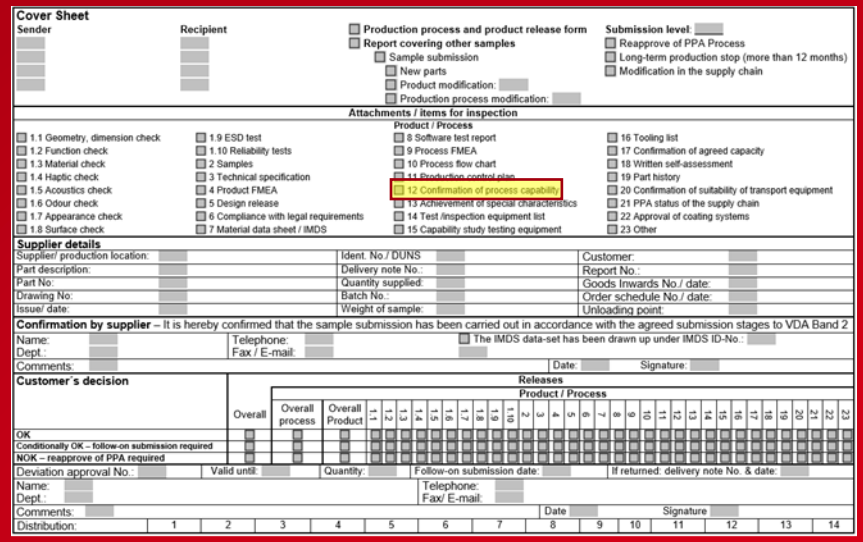
CONTROL PLAN

		Diffusion list	Approved by
		Copy to:	Supplier:
Product:	DEUTZ PIPES		
Type:			
Drawing:	Date of last change:		
Customer's dwg:	04 Date of last change:		
Table no.:	052 - C Sheet: 1 of: 2		
Applicability and	045 04		
Validity of Table			
Table ed. no.:	01	Legend	D=Drawing C=Specifications N=Standard
Date of Table:	26-09-12		T=Table A.A.=Accept.of Inbound goods
No. of Sheets	2		L=Machining S=Shipment Q=Qualif.

Ref. no.	Ref. flow.	Process/product description	Parameter/Checks Features	c / c	Reference Technical Documents	Stage	Mode	Schedule	Frequency	Means/ Criterion	Resp	Cycle Ref.	Data/Notes Record.
1)	10	CHECK OF	Material	+	Drawing	A.A.	Sampling	5 samples	Every batch	Hardness tester	CQ	Accept.	Filed on PC
2)		UNIONS AT	Critical values	C	C.P. 005			AQL 0,1		Acc.to charact.			
3)		INLET	Primary values	+	C.P. 005			AQL 0,6					
4)			Secondary values	-	C.P. 005			AQL 1					Not filed
5)	10	CHECK OF TUBES	Material	C	C.P. 001	A.A.	Document	1	Every batch	Supplier's Certif.	CQ	Accept.	Certified archiv.
6)		AT INLET	Inside/outside diameter	+	CP 012		Sampling	1 sample		Gauge 1/100			
7)	20	PIPE CUTTING	No rust/defects on bars	+	C.P. 010	L	Self-check	See CP	Every batch	Visual	OP	See cycle	On screen
8)		AND DEBURRS	Inside/outside diameter	+	CP 011		Adjustment			Gauge 1/100			
9)			Development of cut pipe	+						Rule/Gauge			
10)			Check quantity	-						Piece counter			
11)			Cleanliness	+			Self-check			Visual			
12)			No burrs	+									

DEUTZ Sample Documentation - Samples and checklists

Table of content


Cover Sheet
Sender
Recipient
Production process and product release form
Report covering other samples
Sample submission
New parts
Product modification:
Production process modification:
Submission level:
Reapprove of PPA Process
Long-term production stop (more than 12 months)
Modification in the supply chain
Attachments / items for inspection
Product / Process
1.1 Geometry, dimension check
1.2 Function check
1.3 Material check
1.4 Haptic check
1.5 Acoustics check
1.6 Odour check
1.7 Appearance check
1.8 Surface check
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19 Part history
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21 PPA status of the supply chain
22 Approval of coating systems
23 Other
Supplier details
Supplier/ production location:
Part description:
Part No:
Drawing No:
Issue/ date:
Ident. No./ DUNS
Delivery note No.:
Quantity supplied:
Batch No.:
Weight of sample:
Customer:
Report No.:
Goods Inwards No./ date:
Order schedule No./ date:
Unloading point:
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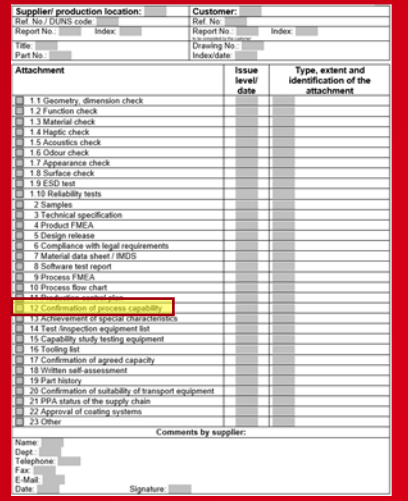
Dept.:
Telephone:
Fax / E-mail:
The IMDS data-set has been drawn up under IMDS ID-No.:
Comments:
Date:
Signature:
Customer´s decision
Releases
Product / Process
Overall
Overall process
Overall Product
OK
Conditionally OK – follow-on submission required
NOK – reapprove of PPA required
Deviation approval No.:
Valid until:
Quantity:
Follow-on submission date:
If returned: delivery note No. & date:
Name:
Dept.:
Telephone:
Fax/ E-mail:
Comments:
Date
Signature
Distribution:
1 2 3 4 5 6 7 8 9 10 11 12 13 14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Ref. No./ DUNS code
Ref. No.
Report No.:
Index:
Title:
Part No.:
Drawing No.:
Index/date:
Attachment
Issue level/ date
Type, extent and identification of the attachment
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1.3 Material check
1.4 Haptic check
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1.6 Odour check
1.7 Appearance check
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23 Other
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Name:
Dept.:
Telephone:
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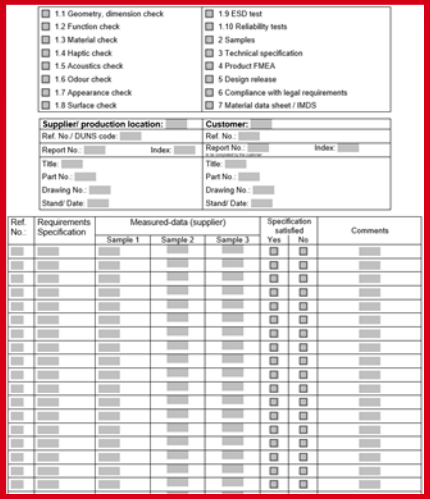
Date:
Signature: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6 Compliance with legal requirements
7 Material data sheet / IMDS
Supplier/ production location:
Customer:
Ref. No./ DUNS code
Ref. No.
Report No.:
Index:
Title:
Part No.:
Drawing No.:
Stand/ Date:
Ref. No.:
Requirements Specification
Measured-data (supplier)
Sample 1
Sample 2
Sample 3
Specification satisfied
Yes
No
Comments

DEUTZ Sample Documentation - Samples and checklists

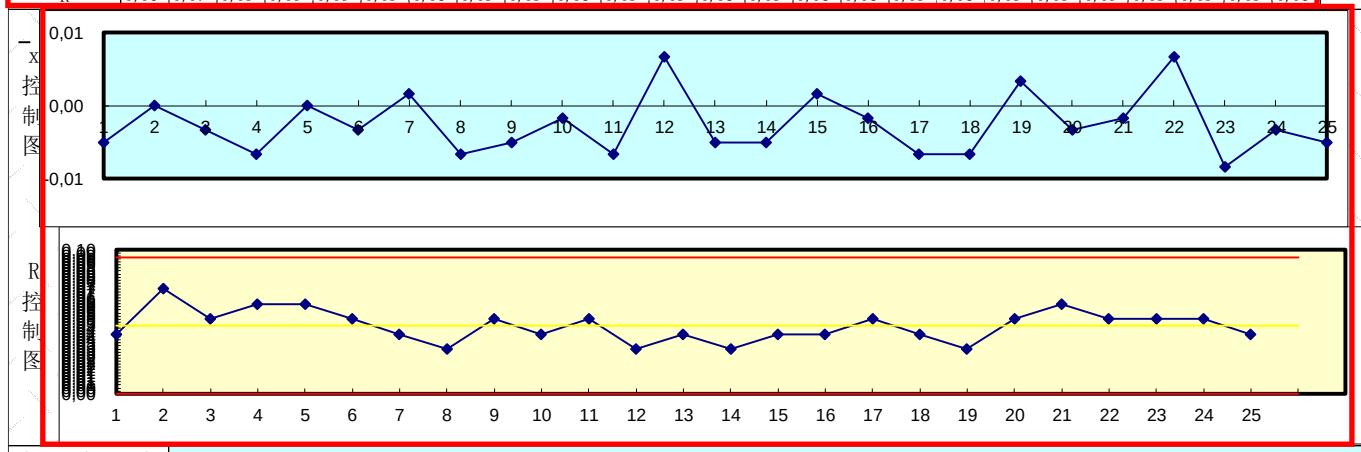
Example appendix „F“ - Confirmation of process capability

Confirmation of process capability

第 1 页 共1 页　　控制图编号：

产品名称 product name	42	规格	标 准	群组数大小	管 制	X̄ 图	R 图	制造部门	测定期间	2019. 1. 7
控制项目 control point	2	上限 USL	0, 200	6	上限 UCL	0, 02	0, 09		抽样方法	100%连续
测量单位	0. 01mm	中心限CL	0, 000	总组数	中心限CL	0, 00	0, 05	设备编号		
		下限 LSL	-0, 200	25	下限 LCL	-0, 02	0, 00	测定者	日期	2019. 1. 7

日期/ 时间																									合 计
批 号		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Σ X = -0, 39
样	1	-0, 01	0, 04	0, 02	-0, 02	0, 03	0, 01	0	-0, 01	-0, 02	-0, 02	0	0, 01	0, 02	0	0	0, 01	0, 02	0	0, 01	0	0, 02	0, 02	0	-0, 03	-0, 01	Σ R = 1, 14
本	2	-0, 02	-0, 03	-0, 03	0, 03	-0, 01	0, 01	-0, 01	-0, 02	0, 02	0, 01	-0, 01	0, 02	-0, 02	-0, 01	-0, 01	-0, 02	-0, 02	-0, 02	0, 02	0, 01	-0, 03	0, 03	-0, 01	0, 02	-0, 01	
位	3	0, 01	0, 03	0, 02	0, 01	-0, 03	-0, 02	0, 01	0	-0, 03	0, 02	-0, 03	0, 01	0, 01	0, 01	0, 01	0, 02	-0, 03	0, 02	0, 01	-0, 01	0, 03	0, 01	-0, 01	0, 01	0, 02	两侧数值时判定条件
定	4	-0, 02	-0, 01	0	-0, 03	0, 02	0, 02	-0, 02	0, 01	-0, 01	0	0, 01	0, 01	-0, 01	-0, 02	-0, 02	-0, 01	0	-0, 01	-0, 01	-0, 03	-0, 01	-0, 01	-0, 03	-0, 01	-0, 02	> USL 蓝色
值	5	-0, 01	-0, 01	-0, 01	-0, 02	0, 01	-0, 03	0, 01	-0, 01	-0, 01	-0, 01	0, 02	0	-0, 02	-0, 01	0, 01	-0, 01	-0, 02	-0, 01	0	-0, 01	-0, 02	0, 01	0, 02	0, 01	-0, 01	< LSL 紅色
	6	0, 02	-0, 02	-0, 02	-0, 01	-0, 02	-0, 01	0, 02	-0, 01	0, 02	-0, 01	-0, 03	-0, 01	-0, 01	0	0, 02	0	0, 01	-0, 02	-0, 01	0, 02	0	-0, 02	-0, 02	-0, 02	0	N 150
Σ X		-0, 03	0, 00	-0, 02	-0, 04	0, 00	-0, 02	0, 01	-0, 04	-0, 03	-0, 01	-0, 04	0, 04	-0, 03	-0, 03	0, 01	-0, 01	-0, 04	-0, 04	0, 02	-0, 02	-0, 01	0, 04	-0, 05	-0, 02	-0, 03	平 均
X̄		-0, 01	0, 00	0, 00	-0, 01	0, 00	0, 00	0, 00	-0, 01	-0, 01	0, 00	-0, 01	0, 01	-0, 01	-0, 01	0, 00	0, 00	-0, 01	-0, 01	0, 00	0, 00	0, 00	0, 01	-0, 01	0, 00	-0, 01	X̄ = 0, 001
R		0, 04	0, 07	0, 05	0, 06	0, 06	0, 05	0, 04	0, 03	0, 05	0, 04	0, 05	0, 03	0, 04	0, 03	0, 04	0, 04	0, 05	0, 04	0, 03	0, 05	0, 06	0, 05	0, 05	0, 05	0, 04	R̄ = 0, 046



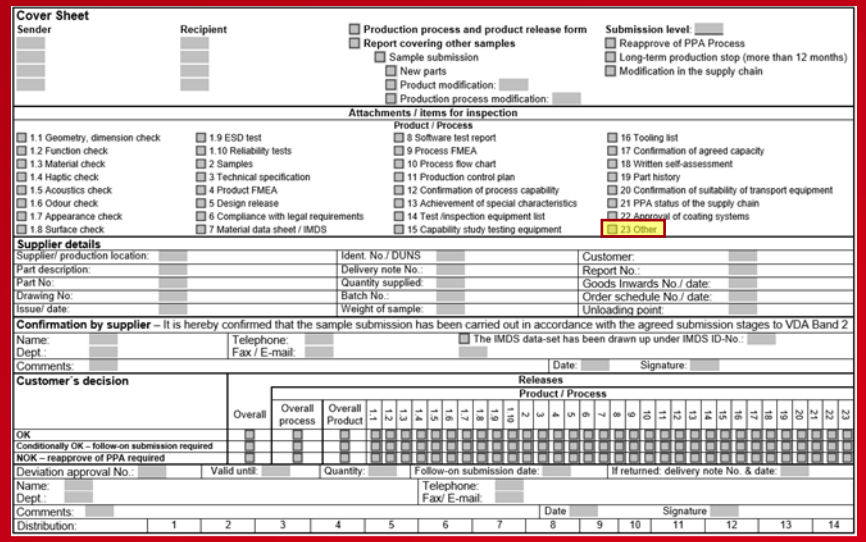
预估不良率 (PPM)
0

制程能力分析	
Std. Dev.	0, 02
Sigma	0, 02
P P K =	3, 91
PP =	3, 93
Ca =	0, 53%
C P K =	3, 68
CP =	3, 70
Grade =	A

备注及原因追查

DEUTZ Sample Documentation - Samples and checklists

Table of content


Cover Sheet

Sender | Recipient | Production process and product release form | Report covering other samples | Sample submission | New parts | Product modification: | Production process modification: | Submission level: | Reapprove of PPA Process | Long-term production stop (more than 12 months) | Modification in the supply chain

Attachments / items for inspection

Product / Process

1.1 Geometry, dimension check | 1.2 Function check | 1.3 Material check | 1.4 Haptic check | 1.5 Acoustics check | 1.6 Odour check | 1.7 Appearance check | 1.8 Surface check | 1.9 ESD test | 1.10 Reliability tests | 2 Samples | 3 Technical specification | 4 Product FMEA | 5 Design release | 6 Compliance with legal requirements | 7 Material data sheet / IMDS | 8 Software test report | 9 Process FMEA | 10 Process flow chart | 11 Production control plan | 12 Confirmation of process capability | 13 Achievement of special characteristics | 14 Test /inspection equipment list | 15 Capability study testing equipment | 16 Tooling list | 17 Confirmation of agreed capacity | 18 Written self-assessment | 19 Part history | 20 Confirmation of suitability of transport equipment | 21 PPA status of the supply chain | 22 Approval of coating systems | 23 Other

Supplier details

Supplier/ production location: | Ident. No./ DUNS | Customer:
Part description: | Delivery note No.: | Report No.:
Part No: | Quantity supplied: | Goods Inwards No./ date:
Drawing No: | Batch No.: | Order schedule No./ date:
Issue/ date: | Weight of sample: | Unloading point:

Confirmation by supplier – It is hereby confirmed that the sample submission has been carried out in accordance with the agreed submission stages to VDA Band 2

Name: | Telephone: | The IMDS data-set has been drawn up under IMDS ID-No.:
Dept.: | Fax / E-mail:
Comments: | Date: | Signature:

Customer´s decision

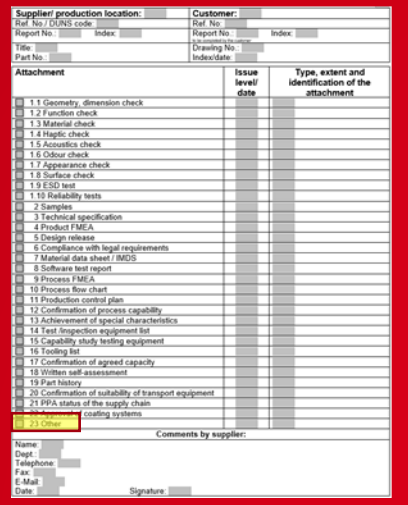
Releases

Product / Process

OK | Conditionally OK – follow-on submission required | NOK – reappove of PPA required

Deviation approval No.: | Valid until: | Quantity: | Follow-on submission date: | If returned: delivery note No. & date:

Name: | Telephone:
Dept.: | Fax/ E-mail:
Comments: | Date | Signature
Distribution: 1 2 3 4 5 6 7 8 9 10 11 12 13 14

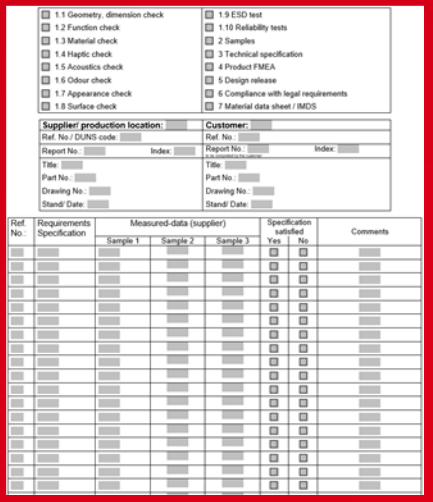

Supplier/ production location: | Customer:
Ref. No./ DUNS code | Ref. No.
Report No.: Index: | Report No.: Index:
Title: | Drawing No.:
Part No.: | Index/date:

Attachment | Issue level/ date | Type, extent and identification of the attachment

1.1 Geometry, dimension check | 1.2 Function check | 1.3 Material check | 1.4 Haptic check | 1.5 Acoustics check | 1.6 Odour check | 1.7 Appearance check | 1.8 Surface check | 1.9 ESD test | 1.10 Reliability tests | 2 Samples | 3 Technical specification | 4 Product FMEA | 5 Design release | 6 Compliance with legal requirements | 7 Material data sheet / IMDS | 8 Software test report | 9 Process FMEA | 10 Process flow chart | 11 Production control plan | 12 Confirmation of process capability | 13 Achievement of special characteristics | 14 Test /inspection equipment list | 15 Capability study testing equipment | 16 Tooling list | 17 Confirmation of agreed capacity | 18 Written self-assessment | 19 Part history | 20 Confirmation of suitability of transport equipment | 21 PPA status of the supply chain | 22 Approval of coating systems | 23 Other

Comments by supplier:

Name: | Dept.: | Telephone: | Fax: | E-Mail: | Date: | Signature: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Supplier/ production location: | Customer:
Ref. No./ DUNS code | Ref. No.
Report No.: Index: | Report No.: Index:
Title: | Part No.: | Drawing No.: | Stand/ Date:

Ref. No. | Requirements Specification | Measured-data (supplier) Sample 1 | Sample 2 | Sample 3 | Specification satisfied Yes | No | Comments

DEUTZ Sample Documentation - Samples and checklists

Example appendix „G“ - Others: cleanliness test (if required)

Technical Cleanliness according to VDA19.1

Description of Sample			
Component:	Fuel filter	Test Method:	Serial testing
Component No.:	0429 4356	Inspection Lot:	11111111111
Component Series:	TCD 2013	Delivery No.:	X11X11
Media Circulation:	Fuel area	Manufacturing Date:	01.09.2020
Surface [cm²]:	-	Washing Device:	PureWashX
Customer:	Deutz AG	Sample No.:	Serialnumber 123
Supplier:	Example supplier	Specification:	PV 0162 0068
Examiner:	Max Mustermann	Category acc. to LV:	12
Date of Analysis:	21.09.2020	Testing System:	Pall

Extraction & Gravimetry			
Extraction Method:	Flushing	Parts on Filter:	1
Liquid:	WBC 18 Kaltentfetter	Type of Filter:	5 µm
Extraction scope:	Excl. packaging	Filter conditioning	10 minutes at 80°C
Amount of Liquid per Component [ml]:	20000	Filter drying	30 minutes at 80°C
		Volume flow [L/min]:	9

Microscopic Analysis (Jomesa patricle count microscope)			
Scale:	3,0 µm/Pxl	Evaluated Ø [mm]:	47
Filter Occupancy [%]:	0,43	Allowed Occupancy:	1,5 % (Cellulose), 3 % (Nylon)

Biggest metallic Particle	Length [µm]:	728	Width¹ [µm]:	108
Biggest nonmetallic Particle	Length [µm]:	1548	Width¹ [µm]:	554
Stretched Length of longest Fiber²	L_{str} [µm]:	1769	Total [mm]:	16,7

Length [µm]	Code	on Filtermembrane			per Part / Component	
		Total²	Metallic	Specification	Total²	Metallic
Summary:						
> 600	J-N	2	1	-	2,0	1,0
100…600	F-I	324	113	-	324,0	113,0
15…100	C-E	9715	988	-	9715,0	988,0
Detailed Results:						
> 3000	N	0	0	0	0,0	0,0
2000…3000	M	0	0	0	0,0	0,0
1500…2000	L	1	0	0	1,0	0,0
1000…1500	K_L	0	0	0	0,0	0,0
600…1000	J	1	1	2	1,0	1,0
400…600	I	0	0	2	0,0	0,0
200…400	H	39	9*	8	39,0	9,0
100…200	F-G	285	91		285,0	91,0
150…200	G	47	20	20	47,0	20,0
100…150	F	238	40**	30	238,0	40,0
50…100	E	1467	260	250	1467,0	260,0
25…50	D	3739	401	-	3739,0	401,0
15…25	C	4509	257	-	4509,0	257,0
5…15	B	6498	73	-	6498,0	73,0

CCC (Component Cleanliness Code):
Total² =

Others / Remarks:

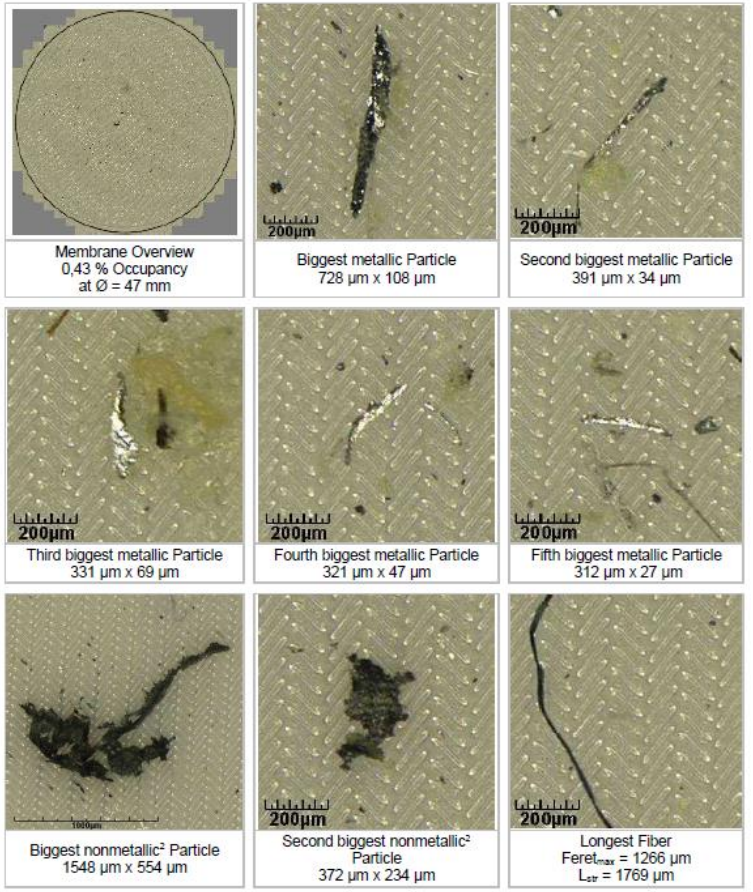
*Sould: 8, actual: 9 - The 1 particle can be transferred to the upper class J, because there the max. specification is not yet reached, OK.
**Should: 30, actual: 40 - Of the 10 particles, 2 particles can be transferred to class I, thus 8 particles exceed the specification in class F, not OK.

Test Results:	
Test Result:	Not OK
Biggest met. Particle:	728 µm x 108 µm
Second biggest met. Particle:	391 µm x 34 µm
Third biggest met. Particle:	331 µm x 69 µm
Max. Weight [mg]:	1,5
Weight [mg]:	0,89

Notes:

- Test Environment: Laboratory clean room, temperature 23°C ± 3°C
- Particle sizes <50 µm are only to be understood as a tendency value. The particles were manually checked and edited if necessary.
- Archiving of the filter membranes and the electronic archiving of data is limited to 5 years duration.
- Inspection results are exclusively related to the inspected and analyzed test items.
- This test report may be published only in a complete fully form. Publications of single information, partial contents, sheets and the other contents etc. of this test report is not permitted at any time.

Images:



Membrane Overview
0,43 % Occupancy
at Ø = 47 mm

Biggest metallic Particle
728 µm x 108 µm

Second biggest metallic Particle
391 µm x 34 µm

Third biggest metallic Particle
331 µm x 69 µm

Fourth biggest metallic Particle
321 µm x 47 µm

Fifth biggest metallic Particle
312 µm x 27 µm

Biggest nonmetallic² Particle
1548 µm x 554 µm

Second biggest nonmetallic² Particle
372 µm x 234 µm

Longest Fiber
$Feret_{max}$ = 1266 µm
L_{str} = 1769 µm

DEUTZ Sample Documentation - Samples and checklists

Checklist for technical cleanliness – residual dirt analysis

- Initial sample reports must contain a test report in accordance with VDA 19 (p.221) based on technical cleanliness **for each sample part**
- The test report must contain all characteristics of the test object, all data from the corresponding test specification and all results:
  - **General information about the test object**: designation, DEUTZ part no., test-specification, -unit and -date as well as tester
  - **Information about the pretreatment**: demagnetization, disassembly, pre-cleaning of contaminated surfaces
  - **Information of the extraction**: extraction procedure, test environment, extraction scope, test-liquid and –pressure
  - **Information of the filtration**: used filter, conditioning, drying
  - **Information on analysis**: light microscopy
  - **Test results**: gravimetry, particle sizes and particle size distribution by categories
  - **Picture of the filter occupancy**: filter overviews and at least pictures of the three largest metallic particles
- For further information see also appendix 2 of H0758-2

DEUTZ Sample Documentation - Samples and checklists

Table of content

DEUTZ Sample Documentation - Samples and checklists

Shipping checklist

- Shipping of samples:
  - Samples have to be delivered separately from serial delivery
  - Samples have to be marked clearly and referable to the results
    - „sample 1“, „sample 2“, „sample 3“

Disclaimer

This presentation contains forward-looking statements that are subject to various risks and uncertainties. Future results could differ materially from those described in these forward-looking statements due to certain factors, e.g. changes in business, economic and competitive conditions, regulatory reforms, foreign exchange rate fluctuations, uncertainties in litigation or investigative proceedings, and the availability of financing. DEUTZ does not undertake any responsibility to update the forward-looking statements in this presentation.

Thank you!

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