Actual status on hand over of documents WP04 to AMTF „Cavity Testing"

- Hold points during cavity production and treatments
  (Acceptance levels according to XFEL Specification)

- Overview on documents collection for WP 4

- Transfer of data from industry to WP 4

- Data collected by WP 4

- Hand over document WP4 to AMTF Test team

- Open issues

• Hold points during cavity production and treatments

The acceptance levels are summarized again in table TA 1.

Level	Cavity status
One	Acceptance of the cavity without helium tank
Two	Acceptance of the cavity with helium tank
Three	Handover of all documents to the orderer (to be done for each individual cavity and before transportation to DESY)

Table TA 1: Overview on acceptance levels (XFEL / 003; 13)

At each acceptance level there is a complete stop of cavity production / preparation

WP 4 team is informed on that hold by EDMS and/ or email
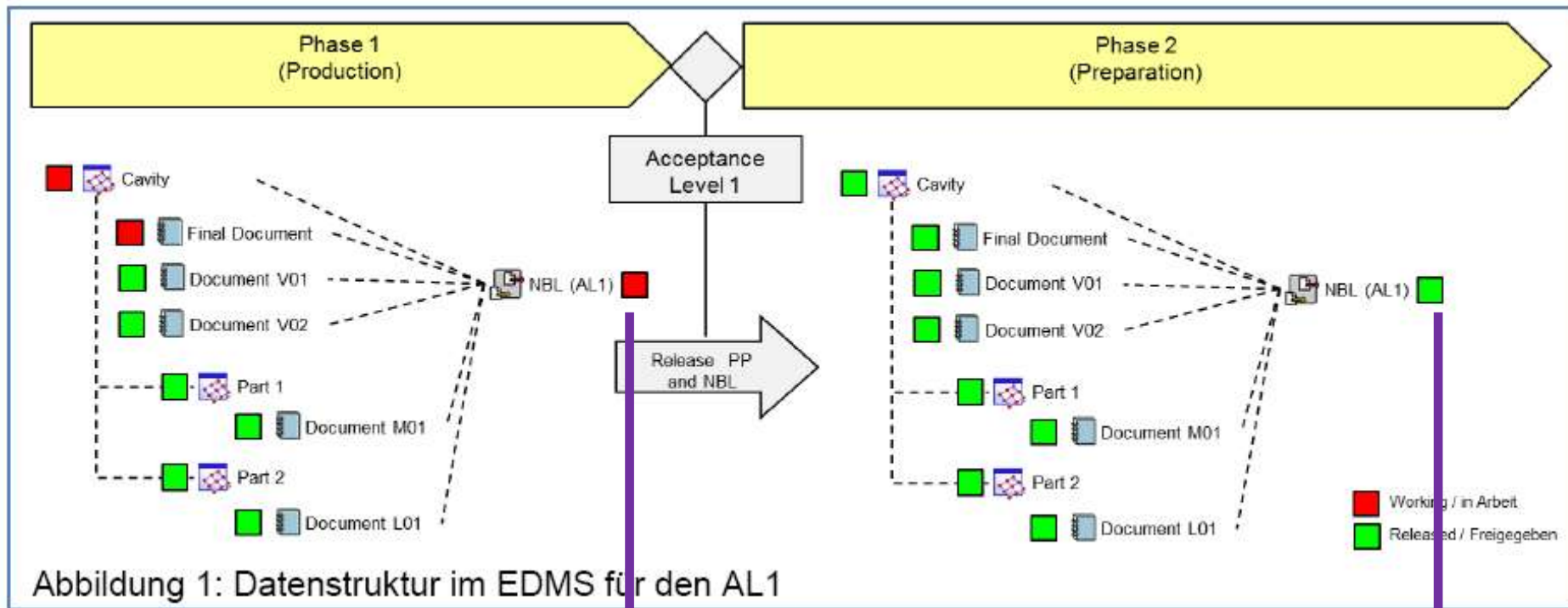EDMS (automatism under development)

WP 4 controls completeness of documents and process steps
WP 4 releases documents and continuing of fabrication/ preparation

Company continuous with production / preparation / delivery

Abbildung 1: Datenstruktur im EDMS für den AL1

Stop and wait for release by WP4 □ released by WP4 → continue processing

Specification

Interface for data transfer from cavity supplier to DESY

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1. Overview

This document presents a short specification of an interface for creating and releasing quality management documents of the cavity fabrication into EDMS. The interface will be provided in the form of two web services:

- „EDMSCavLogin" web service will allow to login or logout from the EDMS
- „EDMSCavCreateAndRelease" web service will allow to create and release a document in EDMS

The upload sequence shall proceed according to the following sequence:
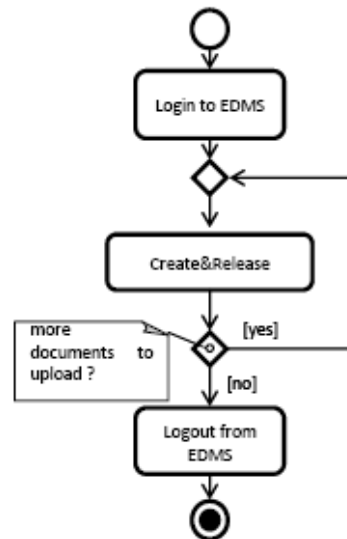
Data collected by WP 4

(Example: extraction from Documentation - Overview List)
Company internally leading documents are work low and quality control plans

Test number		Spec Chapter	Type of test or documentation	Test object	Test point of time	Store in EDMS	Use DESY form	Add paper	Pre-scribed
first letter	second letter								
ACCEPTANCE LEVEL 1									
X	BCP01	C 3	Cavity weighing	CAV	during process	+	+	+	m
X	BCP02	C 4 + C 5	Cleaning and rinsing	CAV	during process	+	+	+	m
X	BCP04	C 6.1	Main EP inside	CAV	during process	+	+	+	m
X	BCP05	C 6.1	pH rinsing	CAV	during process	+	+	+	m
X	BCP06	C 4 + C 5	Cleaning	CAV	during process	+	+	+	m
X	BCP07	C 6.1	Rinsing to resistance >12 MΩ·cm	CAV	during process	+	+	+	m
X	BCP08	C 9	HPR, 1x short	CAV	during process	+	+	+	m
X	BCP09		Drying	CAV	before next step	+	+	+	m
X	BCP10	C 3	Cavity weighing	CAV	during process	+	+	+	m
X	BCP11	C 6.2.1	BCP outside	CAV	during process	+	+	+	m

			No.	XFEL/...	
BCP1	Cavity weighing		C 3	Weight	
BCP2	Cleaning and rinsing		C 4 + C 5	Water temperature	
				Duration	
				Resistance	
BCP3	Equip cavity for EP		C 6.1	-	
BCP4	Main EP inside		C 6.1	Acid fill time	
				Average temperature at return line	
				Polishing time	
				Average voltage	
				Average current	
				Average Acid flow rate	
				Average overlay flow rate	
				Acid draining time	
				Rinsing time	
				Resistance	
BCP5	pH rinsing		C 6.1	pH value	
BCP6	Cleaning		C 4 + C 5	Water temperature	
				Duration	
				Resistance	
BCP7	Rinsing to resistance >12 MΩ·cm		C 6.1	Resistance	

m   mandatory (prescribed)
m*   mandatory (prescribed, depends on manufacturers fabrication sequences)
f   facultative (if necessary for contract fulfillment, or at the decision of the manufacturer)
TP   Test plan
Proc. Processing
Manuf. Beginning of manufacturing
FMS   Field profil measurement system
       necessary up to Acceptance Level 1
       necessary up to Acceptance Level 2
       necessary up to Acceptance Level 3

Related data stored

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Y	BCP40	C 10.1	Install accessories for vertical test	CAV_HT	during process	+	+	+	m
Y	BCP41	C 11	Leak check/Residual gas analysis	CAV_HT	during process	+	+	+	m
Y	BCP42	C 9	HPR, 6x standard	CAV_HT	during process	+	+	+	m
Y	BCP43		Drying	CAV_HT	before next step	+	+	+	m
Y	BCP44	C 10.1	Install beam tube flange	CAV_HT	during process	+	+	+	m
Y	BCP45	C 11	Leak check/Residual gas analysis	CAV_HT	during process	+	+	+	m
Y	BCP46	C 15 / C 11	120 C bake-out/Leak check/Residual gas analysis	CAV_HT	during process	+	+	+	m
Y	F03	C 13.5	RF measurement: Spectrum, Transmission	CAV_HT	during process	+	D*2575141	+	m
Y	BCP48	C 16	Packaging of cavity to transport box	CAV_HT	during process	+	+	+	m
Y	BCP49	XFEL/003 + C 17	Hand over Documents	CAV_HT	during process	+	+	+	m
Y	T01		Traceability report	CAV_HT	final	+	-	+	m
Y	C01		Conformity certificate	CAV_HT	final	+	-	+	m
ACCEPTANCE LEVEL 3									

m   mandatory (prescribed)
m*   mandatory (prescribed, depends on manufacturers fabrication sequences)
f   facultative (if necessary for contract fulfillment, or at the decision of the manufacturer)
TP   Test plan
Proc.   Processing
Manuf.   Beginning of manufacturing
FMS   Field profil measurement system
   necessary up to Acceptance Level 1
   necessary up to Acceptance Level 2
   necessary up to Acceptance Level 3

BCP46	120°C bake-out	C 15	Particle count during vacuum connection
			Diagram of temperature cycle
			Diagram of pressure
	Leak check	C 11	Pressure total
			Zero line
			He background
			leak rate
	Residual gas analysis	C 11	RGA Diagram
		C 15	Particle count during vacuum disconnection
BCP47	RF measurement: Spectrum, Transmission	C 13.5	Protocol
BCP48	Packaging of cavity to transport box	C 16	Protocol of visual inspection of transport box, functionality check and start of shock log system
BCP49	Hand over and transport to orderer	XFEL/ 003 + C 17	

Related data stored

At level three   (example extraction from company internal QC plan)

Info to DESY by EDM + Mail?   for example : Line 352
acceptance by WP4 release of EDM docs   for example : line 353
Company starts delivery of cavities to DESY   for example : line 354
Hand over from WP 4 to AMT takes place.

Step Fase	Fabrication and control step / Fase di fabbricazione e controllo	Specification Procedure - DWG / Specifica Procedura - DIS	E. ZANON HWR / SIGN-FIRMA	E. ZANON DATE	DESY HWR / SIGN-FIRMA	DESY DATE	TUEV HWR / SIGN-FIRMA	TUEV DATE	HWR / SIGN-FIRMA	DATE	CERTIFICATE	NON CONFORMITÀ DEVIATION	NOTE
352.	Rimozione telaio movimentazione 2 e imballaggio cavità e preparazione per la spedizione / Removing transport frame 2 - Packaging and preparation for shipment	3060.S.039 3060.S.034 3060.S.035	H										BCP 48 - 49
353.	LIVELLO DI ACCETTAZIONE 3 / ACCEPTANCE LEVEL 3												
354.	Emissione report tracciabilità + certificato di conformità per solo il Modulo B (PED 97/23/EC). (Cavità S/N: CAV_HT00508 ÷ CAV_HT00515). / Issuing traceability report + Conformity certificate for Module B only (PED 97/23/EC). (Cavities S/N: CAV_HT00508 ÷ CAV_HT00515).	3060.PR.001	H								Y_T01 Y_C01 Test Report by NoBo		

Relevant data for Hand over to AMTF cavity testing

Acceptance level 2: signed test repot from notified body
[PED Issues are accepted]

Acceptance level 3: Release document of WP4 cavity for transport
[foreseen just release note from WP4 to
company and AMTF team /Cav Owner]

Transport papers requested from DESY Department "Warenwirtschaft"
and or EU rules for material flow.

Legal transport papers from transport company

• **Open issues** (not decided until now)

1) **Hand out of documents electronically to AMTF team/ Cav Owner** (preferred by WP4)
or / and as a paper copy inside transport box

2) **Handling of detailed information's transfer to AMT Team** (to be organized by AMTF team/ Cav Owner)
(Mode spectrum; vacuum pressure before hand out; etc.)

Solution A) AMTF Team has access to EDM and extracts requested data form here
(Easy to realize no additional development needed)
Solution B) AMTF team defines data which will be transferred for EDM to Data base
(Need definition of data + man power for programming)
Solution C) Paper copy of requested data in folder inside transport box.

3) **Transport information's**
Old fashioned way-→ email from company to WP4 and Cavity owner
Contend: 			Amount of cavities on board of truck
Cavity numbers
Expected arrival date and time

4) General **Data transfer electronically by EDM or other solution ???**