FUSION FOR ENERGY

NAMING CONVENTION

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Quality Assurance Instruction

NAMING CONVENTION

Abstract

This document defines the 'Fusion for Energy' naming convention for parts, components and electronic documents.

Version:	2.0	Date:	October 2010

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Effected changes from Revision 1.4

Added "Models and CAD data in the CAD Management System to be reintegrated to the ENOVIA database" in 4.3.1

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TERMS AND DEFINITIONS

F4E	'The European Joint Undertaking for ITER and the Development of Fusion Energy (Fusion for Energy)
PBS	Product Breakdown Structure
PM	Project Manager
QA	Quality Assurance
supplier	Economic operator that provides supplies, services or works described in the technical specification. The successful tenderer is referred in the document as the "supplier". The supply-chain follows the scheme below Supplier (Associate/Consortium/Industry) -> Organisation (F4E) -> Customer (e.g. ITER organisation)
WP	Work Package
WPM	Work Package Manager

REFERENCE AND APPLICABLE DOCUMENTS

F4E-QA-001	"Quality Manual" (F4E_D_22HXAQ)
F4E-CADM	"F4E CAD Manual" (F4E_D_22BE49)
F4E-ESIEV	"Executive Summary – Integration to Enovia VPM" (F4E_D_228V9P)
ITER-NS	"ITER Numbering System" (ITER_D_28QDBS v1.3)

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1. PURPOSE

This document defines the 'Fusion for Energy' naming convention for parts, components and electronic documents.

2. SCOPE

The naming conventions are applicable to all F4E projects and shall be applied in:

- Part/component referencing:
    - within F4E;
    - between F4E and it's clients;
    - between F4E and it's suppliers;
- Drawing and Model referencing
- File naming:
    - technical documentation within F4E,
    - information exchange between F4E and it's suppliers.

3. RESPONSIBILITIES

Project Manager: responsible for ensuring requirements relating to naming convention is established for a particular project, including the definition of the PBS and the parts definition.

Work Package Manager: responsible for implementing the appropriate naming convention and ensuring that the supplier follows the convention.

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4. NAMING CONVENTION

4.1. PART AND COMPONENT IDENTIFICATION

At the start of any project the PM and the WPMs shall define the PBS and the different part types/functions applicable.

The part and component naming shall have the following convention independently of the nature of the project:

F4E Part Number (mandatory)

F4E Unique Identifier			Additional information					
DT	_	**NNNNNNNN**	_	**N1.N2.N3**	_	**AA.AA.AA**	_	**ORG**
Doc. Type		Sequential Number		3 levels of PBS		Customized levels		Originator Entity
Always **PR** or **MD** Abbreviation for: PR – Assembly MD – Single Part		Sequential number unique identifier for the component, a block of numbers can be provided by F4E to their supplier upon request (fixed 8 digits length, 00000000 if null)		PBS number (3 levels deep) PP.PP.PP Predefined Project PBS which the part/component belongs to. (up to 6 characters)		extra 3 levels of PBS or other alphanumeric identification to be customized by the supplier (up to 6 characters)		Identifies the originator of the information (3 characters)

Rules:

- The Doc. Type plus the Sequential Number will be the unique identifier of the component, the other fields are extra information

- For a single part/assembly the following documents must have the same Sequential number: CATPart / CATProduct and CATDrawing.

- For the ITER project:
  - The F4E Part Number has to be defined in the ITER Property "External_ID"
  - N1.N2.N3 are the 3 main levels defined by IO
  - The ITER Part Number is the ITER unique identifier for a part given by ITER ENOVIA once the CATIA file is stored in the database (it is a random number)
  - The ITER Drawing Number is the ITER unique identifier for a drawing given ITER ENOVIA once the drawing is stored in the database and will be shown in the ITER Title Block (it is a sequential number and different from the ITER part Number)
  - For full details on how to define file name in CATIA refer to the F4E-CADM and the F4E-ESIEV (latest issue of both documents)

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4.2. DRAWINGS

The drawings and models shall have a reference / numbering on the title block comprising the following format:

CAD Reference / Number (mandatory)

Unique Identifier		Additional information				
DT		**NNNNNNNN**	**N1.N2.N3**	**AA.AA.AA**	**ORG**	
Doc. Type		Sequential Number	3 levels of PBS	Customized levels	Originator Entity	

Title Block	
CAD Specific Info	Mandatory for Drawings
S_AAA	**SH-SH**
Status Revision	Sheet # of Sheets

Description Mandatory
Mandatory Textual Description of 35 characters max
extra 72 characters available for drawings only

The different parts are defined as below:

Part	Characters	Description	Example
DT	2	Predefined Document type: PR – Assembly / CATproduct MD- Single Part / CATPart, DR – Drawing / CATDrawing WP- product which is a work package BM – bill of material, PT – used for part and component referencing (internal). MS- modification sheet FD- Flow Diagram	DR (for drawing)
NNNNNN	8 numeric	Sequential number is an identifier which is dependent of the PBS (generated by the F4E drawing management database)	00000123
N1.N2.N3	6 alphanumeric	First 3 levels of the PBS which the part/component belongs to (inherited from part/component "type id")	03.CD.21 or 15.PR.__
AA.AA.AA	max 6 alphanumeric	Customized levels: possibly extra 3 levels of PBS or other alphanumeric identification defined by the supplier	21.2.4 or 0
ORG	2 to 3	Issuer Entity –predefined for each entity – see attachment 1. For Drawings and Models to supply to IO in the name of EU DA this code is "EU"	F4E
S_AAA	1 + 3	S – Status: W – in work C – in check D – Draft R - Reviewed X – Rejected A - Approved AAA – Revision alphanumeric designator	R_A01
SH-SH	4	Drawing sheet ## of ## sheets	01-02

Example: DR_00000123_03.CD.21_00.00.00_F4E.CATDrawing

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4.3. FILE NAMING

The electronic files of formal documents will have a filename comprising the following format:

4.3.1. FORMAL DOCUMENT ISSUED BY F4E:

Models and CAD data in the CAD Management System:

Unique Identifier			Additional information		
DT	_	**NNNNNNNN**	**N1.N2.N3**	**AA.AA.AA**	**ORG**
Doc. Type		Sequential Number	3 levels of PBS	Customized levels	Originator Entity

The different parts are defined in section 4.2 (Drawings).

Models and CAD data in the CAD Management System to be reintegrated to the ENOVIA database:

Description Reference		Unique Identifier			Additional information		
DESCRIPTION_REFERENCE	**#**	**DT**	_	**NNNNNNNN**	**N1.N2.N3**	**AA.AA.AA**	**ORG**
ITER Property It is a description of the component. The description reference should clearly and concisely describe the part. (more info: F4E CAD Manual).		Doc. Type		Sequential Number	3 levels of PBS	Customized levels	Originator Entity

The Unique Identifier and Additional Information format are defined in the section 4.2 (Drawings).

All Other files - Document Management System:

Optional Description			Document Management System Unique ID					
N1.N2	**-**	**Description**	_	**F4E**	_ **D** _		**AAAAAA**	_ **vNN.N**
First 2 levels of PBS or WBS		Optional, textual description (max 80)		Issuer Entity	Doc.		F4E Uniquely Random Reference	Version

Full filename example: 03.CD-Supply Contract Copper Strand_F4E_D_654CBA_v1.1.pdf

4.3.2. FORMAL DOCUMENT ISSUED BY SUPPLIERS

Optional Description			Document Management System Unique ID			Status
N1.N2	**-**	**Description**	_ **ISS** _		**XXXXXX**	_ **vNN.N**
First 2 levels of PBS or WBS of the F4E Contract/GA		Optional, textual description (max 80)	Issuer Entity		Issuer unique reference	Version

Full filename example: 03.CD-reply to status report 2_IBE_002568843_v1.1.pdf

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The different parts are defined as below:

Part	Characters	Description	Example
N1.N2	max 4 alphanumeric	First 2 levels of the PBS which the part/component belongs to (inherited from Component/Part Identifier) For Suppliers, this is the PBS/WBS defined by F4E for the contract.	03.CD. 15
extra info	Max 80 alphanumeric	Optional, textual description including: isometrics, CAD references, contract ID, document type	any text
ISS	3 alphanumeric	Issuer Entity –predefined for each entity – see attachment	F4E, EFD
D	1	Letter indicating the type of reference – D for documents	D
AAAAAA	6 alphanumeric	F4E Uniquely Random Reference (from F4E document management system)	AA0123
XXXXXX	(issuer defined)	Issuer Unique reference (from issuer system)	002568843
vNN.N	Up to 4	Version number	v1.1

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ATTACHMENT 1 – ISSUER ENTITIES

Criteria for assigning the 3 letter code:

1. If entity already has a 3 letter code and it does not conflict with an existing code, use it.

2. In case of conflict or if no code exists, use first 3 letters of main entity name if it does not conflict with an existing code;

3. In case of conflict in the 2 above cases, select 3 letters from main name that do not conflict with existing codes.

ISS	Issuer Entity
ALS	ALSTOM Magnets and Superconductors, FR
CEA	CEA Association, FR
CCF	Culham Centre for Fusion Energy
CFN	IST/CFN - Centro de Fusão Nuclear, PT
CIE	CIEMAT - Laboratorio Nacional de Fusión, SP
CNI	CNIM – Constructions Industrielles de la Méditerranée
CRP	CRPP - Centre de Recherches en Physique des Plasmas, CH
EFD	EFDA
EGY	Consortium EGYC
EPF	EPFL - Ecole Polytechnique Fédérale de Lausanne, CH
ENE	ENEA Frascati - FTNP Department, IT
F4E	Fusion for Energy, EU
FOM	FOM-Institute for Plasma Physics Rijnhuizen, NL
FZJ	FZJ -Forschungszentrum Jülich, DE
IBE	Iberdrola, SP
IFP	(ENEA) CNR - Istituto di Fisica del Plasma, IT
IJS	Jožef Stefan Institute, SL
IPL	IPPLM, Institute of Plasma Physics and Laser Microfusion, PL
IPP	IPP - Max-Planck-Institut für Plasmaphysik, DE
ITR	ITER Organisation
KFK	KFKI RESEARCH INSTITUTE, HU
KIT	Karlsruhe Institute of Technology
NRG	The Nuclear Research and consultancy Group, NL
MAG	ITERMAG
OAW	ÖAW Austrian Fusion Research Programme, AU
POR	Pori Superconductors, FI
RFX	(ENEA) Consorzio RFX, IT
RIS	Risø - Risø National Laboratory, DK
SCK	SCK-CEN, Belgian Nuclear Research Centre, BE
STU	Studsvik AB, SE
TEK	TEKES – Finish Funding Agency for Technology and Inovation
UKA	UKAEA Fusion Association, UK
VTT	VTT Technical Research Centre of Finland, FI

(new codes may be created as necessary)