

LCLS Project

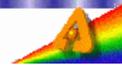
Documentation Numbering Process

A. Drawing Number Creation

This assumes that MIS has entered the approved LCLS WBS into the system.

Process:

1. The responsible Engineer will determine the general organization of the design.
2. The Engineer will produce a simple block diagram that displays the dependence of the major assembly and the subordinate sub-assemblies.
3. The block diagram will encompass the assemblies' WBS number and the logical drawing number (LDN).
4. The Designer will obtain drawing numbers through the APS web-based Document Change Notice (DCN) system, the format is as follows:
[Project][WBS]-[LDN]-[Revision]
 - a. Project – For LCLS this will be the letter “L” in the first column.
 - b. WBS – The first three entries will be entered without any zeros as separators and the next two will be entered along with the zeros. Anything beyond the first 5 levels will only use the level 5 number and it will be organized within the LDN section of the number.
 - i. Example: Level 3 Diagnostics – WBS 1.04.05
Drawing Number is L145
 - ii. Example: Level 4 RF BPM – WBS 1.04.05.05
Drawing Number is L14505
 - iii. Example: Level 5 Prototype Collimator – WBS 1.04.04.04.02
Drawing Number is L1440402
 - iv. Example: Level 6 Signal Interface – WBS 1.04.02.06.05.02
Drawing Number is L1420605 it is the LDN where the distinction between Signal Interface and Position Detection is made.
 - c. LDN – This is a six digit number that identifies parts and assemblies.
 - i. First two numbers identify the major assembly
 - ii. Second two numbers identify the sub assembly
 - iii. Third two numbers identify the part number
 - iv. Example: Major Assembly
 1. L14502-100000
 - v. Example Sub Assembly
 1. L14502-200100
 - vi. Example Part Number
 1. L14502-201103
 - d. Revision
 - i. This are consecutive numbers starting at -00 and incrementing after every change documented in the DCN system. Drawings will not go out without this number.



- The Drawing Number will be also the file name of the item and be entered into Pro\Intralink along with other required attributes, see figure 1.

Primary Dim's in mm, inches are ref

Titles 3, 4, 5, and 6 (if required)
Title 1, LCLS not on Dwg
Title 2, Undulator System not on Dwg
Both title 1 & 2 in LCLS block

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES ARE FOR REFERENCE ONLY TOLERANCES DECIMALS ANGULAR .3 ± .5 ± .3 .3K ± .10 .3KK ± .025 SURFACE FINISH IN MICRONS REMOVE ALL BURRS AND BREAK SHARP EDGES .75 MAX. SURFACE TEXTURE IN ACCORDANCE WITH LATEST ASME B46.1-2002 DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH LATEST ASME Y14.5M-1994	DRAWN BY: M. GIVENS CHECKED BY: DESIGNED BY: M. GIVENS RESPONSIBLE ENGINEER: S.H. LEE CAM: D.R. WALTERS LCLS MANAGER: S.V. MILTON RELEASE LEVEL: WIP	DATE 09-May-04 DATE 09-May-04 DATE DATE DATE MODEL VER: DIM VER: 5t 2t	THIS DRAWING IS THE PROPERTY OF ARGONNE NATIONAL LABORATORY ADVANCED PHOTON SOURCE LCLS LINAC COHERENT LIGHT SOURCE UNDULATOR SYSTEM <div style="border: 2px solid green; padding: 10px; display: inline-block;"> BEAMLINE LATTICE </div>
PART NUMBER: L14-200000	MATERIAL DESCRIPTION: SEE PARTS LIST	SIZE: PART NUMBER: E L14-200000	SLAC DRAWING NUMBER: MA-381-000-11 REV. 00
ELECTRONIC FILE NAME: N/A	SLAC SPIRES TITLE: LCLS UND SYST BEAMLINE LATTICE		
2	1	1	1

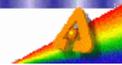
In this case the file name is the same as the part number

ANL/APS Generated Part and Control Number

Part Number Issued from SLAC

SLAC SPIRES Title

Figure 1



- a. Data to be put into Pro/Intralink
 - a. Designer name
 - b. Drafter name
 - c. Responsible Engineer
 - d. Cost Account Manager (CAM)
 - e. Drawing titles for WBS
 - f. Part name
 - g. ANL/APS part number
 - h. SLAC part number, maybe obtained after initial issuance
 - i. Release level
 - i. Work in Process (WIP)
 - ii. Engineering Release
 - iii. Release
 - j. Model version
 - k. Drawing version
 - l. Electronic file name, obtained from DCN
 - m. Revision number, obtained from DCN

B. Obtaining a Sketch number for LCLS

This is a simpler system for items that are temporary. If an item is to be part of the LCLS system, than it must be converted from a sketch to a drawing number using the system above.

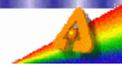
Process

1. Designer takes a list of items and titles to Document Control
2. Document Control issues sketch numbers for LCLS given the following information:
 - a. Designer Name
 - b. Engineer Name
 - c. Project
 - d. Item Name
3. Document Control will issue numbers based on the following:

[L][14][X]-1[XXXX]

 - a. [L] for LCLS
 - b. [14] Undulator system
 - i. [X] = 2 Controls
 - ii. [X] = 3 Undulator Magnet & Support
 - iii. [X] = 4 Vacuum Systems
 - iv. [X] = 5 Diagnostics
 - v. [X] = 6 Undulator System Installation and Alignment
 - c. [XXXX] consecutive number issued from Document Control
4. Example: Motor Bracket for LCLS: L143-10001 by Tom Grabinski for Emil.
5. The next sketch will be: L143-10002 and so on.

C. Obtaining a Specification number for LCLS



This is a simple system for issuing control numbers for Specifications and Statement of Works. This is similar to the Sketch system with one simple change.

Process

1. Designer takes a list of items and titles to Document Control
2. Document Control issues sketch numbers for LCLS given the following information:
 - a. Designer Name
 - b. Engineer Name
 - c. Project
 - d. Item Name
3. Document Control will issue numbers based on the following:
[L][14][X]-0[XXXX]
 - a. [L] for LCLS
 - b. [14] Undulator system
 - i. [X] = 2 Controls
 - ii. [X] = 3 Undulator Magnet & Support
 - iii. [X] = 4 Vacuum Systems
 - iv. [X] = 5 Diagnostics
 - v. [X] = 6 Undulator System Installation and Alignment
 - c. The number in the fifth position, 0, is to indicate a specification or statement of work
 - d. [XXXX] consecutive number issued from Document Control
4. Example: Magnet specification for LCLS: L143-00030
5. The next specification number will be: L143-00031 and so on.