



Items supplied by CERN and procurement plan



Y.Leclercq on behalf of the DF development team WP6a
31 Jan. 2019

Conceptual design review of the DFX

Items supplied by CERN

Defined in DFX functional specification EDMS 1905633 §4

- Insulation vacuum:
 - Elastomer seals (specific to the integrated dose)
 - Pumps, valves and pressure transducers
- Cryogenics:
 - Wired instrumentation and electrical feedthroughs
 - Electrical heaters
 - Safety relief pressure devices
- Survey:
 - External survey targets for installation.
- Circuit protection:
 - V-taps and feedthroughs.
- Test in SM18 – Proto test:
 - Supporting structure and installation tooling.

		EDMS NO: 1905633	REV: 0.2	VALIDITY: DRAFT
REFERENCE: LHC-EOCOD-ES-XXXX				
FUNCTIONAL SPECIFICATION INTERFACES DEFINITION				
DFX CRYOSTAT COLD POWERING WORK PACKAGE – WP6A <small>[HL-LHC EOCOD ACCORDING TO CONFIGURATION MANAGEMENT]</small>				
Abstract The HL-LHC project requires a cold powering system for the supply of the new inner triplet magnets on each side of ATLAS and CMS experiments. Each inner triplet's cold powering system includes a cryostat – DFX- electrically connected to the Superconducting Link, on the 4.2 K side, and to the magnet bus-bas, on the 1.9 K side. This document presents the functional specifications, details the interfaces and define the delivery conditions of the DFX device.				
TRACEABILITY				
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0.1	2018 06 05	Draft version		
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Procurement plan

Insulation vacuum:

- Elastomer seals (specific to the integrated dose)
- Hardware (installed @ CERN)

Cryogenics instrumentation, hardware

Circuit protection: V-taps feedthroughs.

Test in SM18: Supporting structure and installation tooling.

	Prototype	Series	1 st use	1 st need
Insulation vacuum: Elastomer seals (specific to the integrated dose)	No	Yes	String test	2021
Insulation vacuum: Hardware (installed @ CERN)	No	Yes	String test	2021
Cryogenics instrumentation, hardware	Yes	Yes	Assy proto	Q3 2019
Circuit protection: V-taps feedthroughs.	Yes	Yes	Assy proto	Q3 2019
Test in SM18: Supporting structure and installation tooling.	Yes	No	SM18 test	Q1 2020

- Conceptual design approved
- Detailed design approved
- Manufacturing
- Cryogenics instru., hardware
- Circuit protection hardware
- SM18 test supports & tooling

