Study & Readiness for the LS3 dismantling activities of WP3

Transport and handling aspects

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WP3- dismantling activities planned for LS3

- Removal of inner triplet @ IP1 and IP5
- Removal of D1 @ IP1 and IP5
- Removal of DFBX @ IP1 and IP5
- Removal of D2, Q4, Q5 @ IP1 and IP5
- Underground transport routes
- WDP & Co
- Some points we would have to pay attention
- Some questions to answer
- Conclusion
- Biographie

Removal of inner triplet @ IP1 and IP5

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LHC

REFERENCE
LHC-LQX-IP-0008

Date: 2015-03-25

INSTALLATION PROCEDURE

Procedure for Removing the LHC Triplets in LSS1, LSS2, LSS5 & LSS8

ABSTRACT:

This document determines the procedure for removing the triplets HCLQX (A-B-C). This procedure shows the dismantling of the environmental equipment around the triplets in order to give access, the opening of the interconnections and the removal of the triplets.

The dismantling takes place in a radioactive area. Failure to follow these instructions could cause personal injury and damage property.

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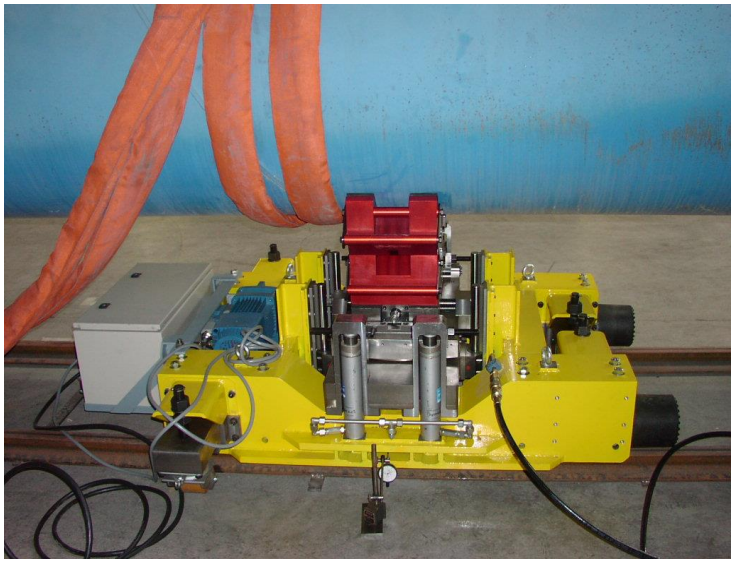
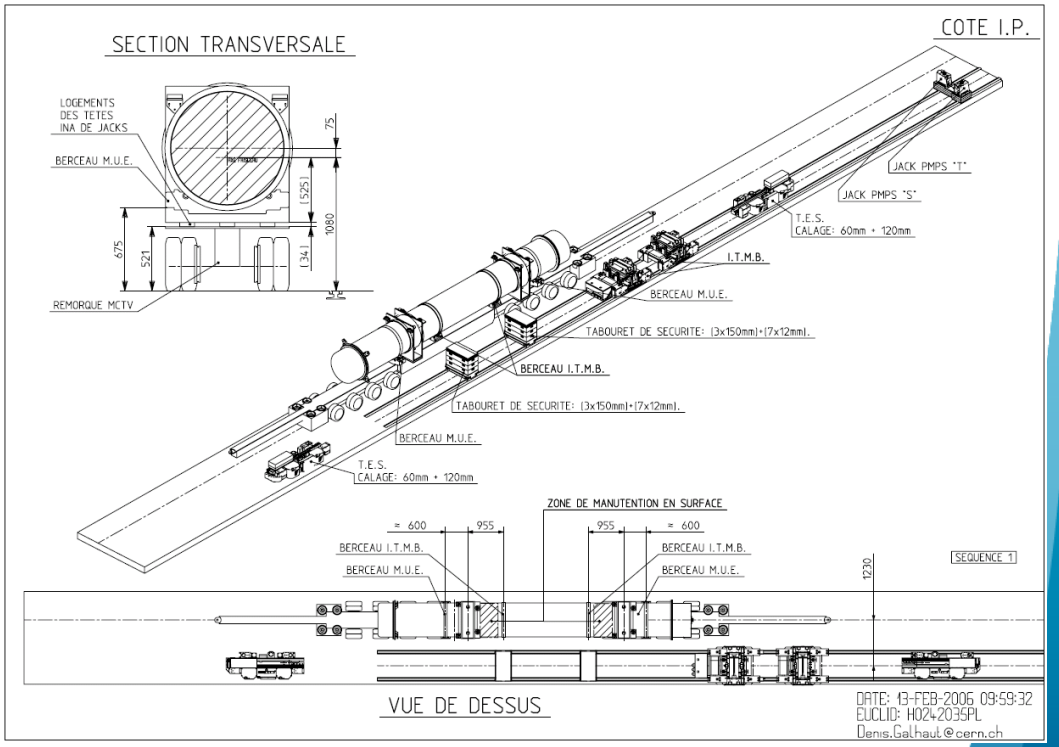
Removal of inner triplet @ IP1 and IP5



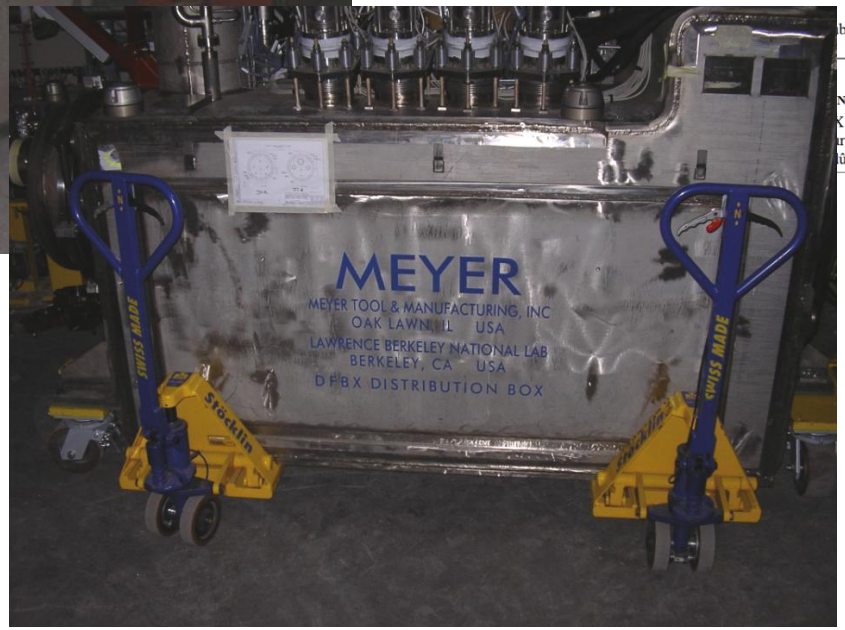


Removal of D1 @ IP1 and IP5

Reverse procedure as for the installation

Removal of DFBX @ IP1 and IP5

- Reverse procedure as for installation



EDMS: 768054
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Date: 2006-08-23

MEMORANDUM

A / To : S. Bartolome, E. Dugue, S. Pelletier, S. Prodon, F. Stach, G. Trinquart / TS-IC, R. Ostojic / AT-MEL

De / From : C. Bertone, F. Cottenot, P. Minginette / TS-IC

C/c : *J. Weber /TS-HDO, C. Hauviller, R. Valbuena / TS-IC*

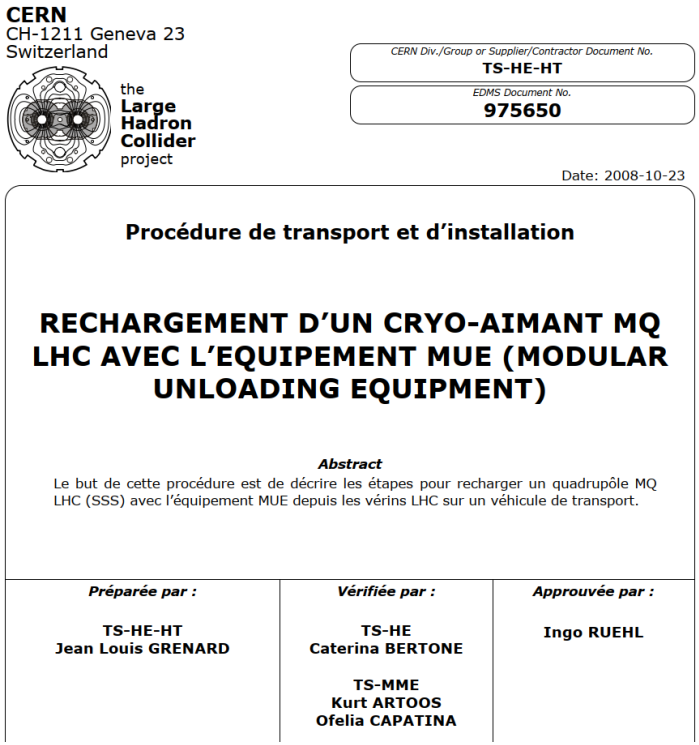
bject : Procédure de transport et d'installation des DFBXE et F en IP5

NTRODUCTION

X E et F à installer à gauche et droite de l'IP5 se trouvent dans une fosse de 150mm de
r en position finale.
û au fait que l'axe faisceau est à 950mm du sol en IP5 au lieu des 1100mm pour les

Removal of D2, Q4, Q5 @ IP1 and IP5

- General procedure for deinstallation of a cryomagnets



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the Large Hadron Collider project

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975650

Date: 2008-10-23

Procédure de transport et d'installation

RECHARGEMENT D'UN CRYO-AIMANT MQ LHC AVEC L'EQUIPEMENT MUE (MODULAR UNLOADING EQUIPMENT)

Abstract

Le but de cette procédure est de décrire les étapes pour recharger un quadrupôle MQ LHC (SSS) avec l'équipement MUE depuis les vérins LHC sur un véhicule de transport.

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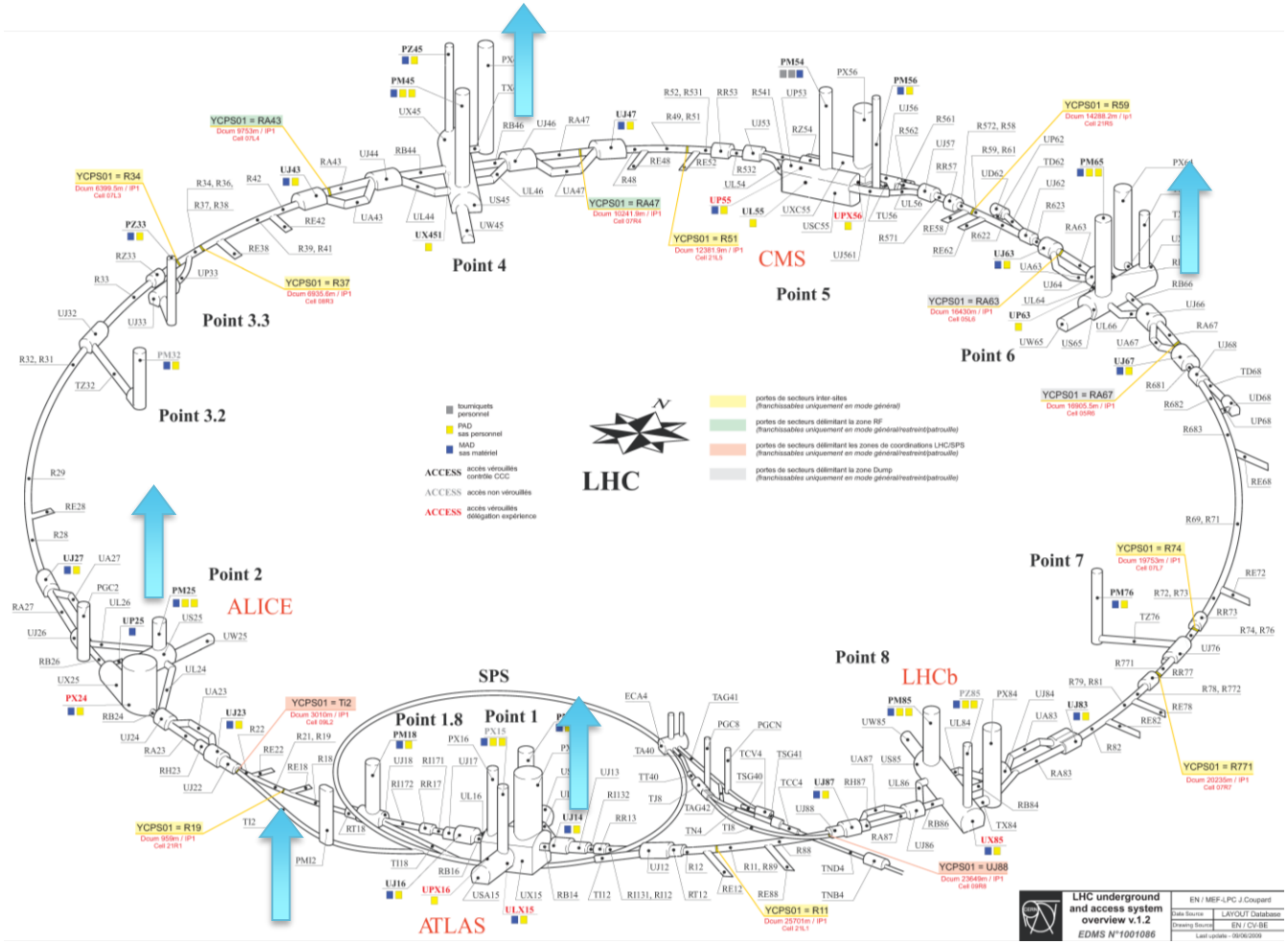
Underground transport routes

Transport path to be clarified /optimized



WDP & Co

- All times have been estimated for the removal of the inner triplets (in the procedure)
- What is missing
  - WDP for DFBX, (D1, D2, Q4, Q5)
  - The dose rate estimation for the finalization of the WDP's
- Can we optimize? -> Open question

Some points we would have to pay attention

- Waste: Where all this will stored? ISR?
- There is some destructive work to plan for the removal of the supports (required for the handling operation)
- Transport: We have to respect the transport rules (ADR)
- Storage: we need to have a place on the surface building for a temporary storage for a couple of days (for the whole LS3 for the shieldings)

Some questions to answer

- **A)** Is the estimated time for removal reasonable/correct?

  To be discussed
- **B)** Dismantling preferential order?

  For DFBX and inner triplet -> Yes as defined in the procedure
- **C)** Removal must be done in parallel on several IP sides; how many teams could be planned? (→ impact on RESOURCES) for transport and handling we can do only one magnet a at a time best is to do one IP side then move to the next one
- **D)** Critical transport aspects ? Yes as explained in this presentation
- **E)** Procedures are all existing and/or updated? 90% done
- **F)** Any mock-up to be developed? For cryomagnet we have mock up to train our operators
- **G)** Any other ?

Conclusion

- For the removal of all those components all the procedures exist
- A lot of details need to be finished
- A lot of coordination to be done between the different parties (especially for the triplets)
- We are on time for all those activities
- We would have to look for the optimization of the work procedure to optimize doses (ALARA)
- We have the required resources to continue the work

We are far from LS3 a lot of things could easily change!!

Biographie

- GENERAL TRANSPORT VOLUME CRYOMAGNET - SEVERAL TRANSPORT SECTION
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- CRYO-MAGNET TUNNEL TRANSPORT - DIPOLE IN TRANSPORT CONDITIONS
- https://edms.cern.ch/document/335736/0
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- https://edms.cern.ch/document/354909/0
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- https://edms.cern.ch/document/627236/1
- Transport et manutention des cryoaimants LHC MQ ARC pendant leur installation dans le tunnel
- https://edms.cern.ch/document/635313/1
- Formation installation LSS
- https://edms.cern.ch/document/737556/1
- Fiches de chargement et d'installation des cryo-aimants LSS, DS et certains cryo elements spéciaux
- https://edms.cern.ch/document/876986/1
- Rechargement d'un cryo-dipole MB LHC
- https://edms.cern.ch/document/784591/4
- Rechargement d'un cryo-aimant MQ LHC
- https://edms.cern.ch/document/784592/1

Questions?