



**GENERAL SAFETY & HYGIENE GROUP
MECHANICAL SAFETY SECTION**

SAFETY STUDY REPORT

CMS- "DEE" FRAME STRUCTURAL ANALYSIS

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Document(s): EDMS 808250

Building(s): pt.5

This safety study report concerns the mechanical assessment of the lifting devices called "D" frame. The tooling has been recovered from the OPAL experiment and adapted to the new CMS ECAL ENDCAP load. Calculations according to F.E.M. standard were run in order to provide evidences of the tool's reliability.

According to submitted documents SC/GS/MS approves the submitted calculations. We nevertheless stress the attention on the fact that the lifting tool may be used for lifting in X axis direction and rotation around the Z axis (FEA coordinate system). All rotations around Y axis are not covered by the calculation note.

Please make contact with CERN staff Laurent Colly (160644) for lifting test.

SC/GS/MS

Andrea Astone

NB: These remarks are based on the specific items(s) actually presented.
Further remarks may be forthcoming during the development of the project

NB : Le projet sus mentionné a été étudié en fonction des données actuelles.
D'autres remarques peuvent encore être faites en cours d'évolution du projet.