HSSIP PROJECT

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Students, ABT-ECS
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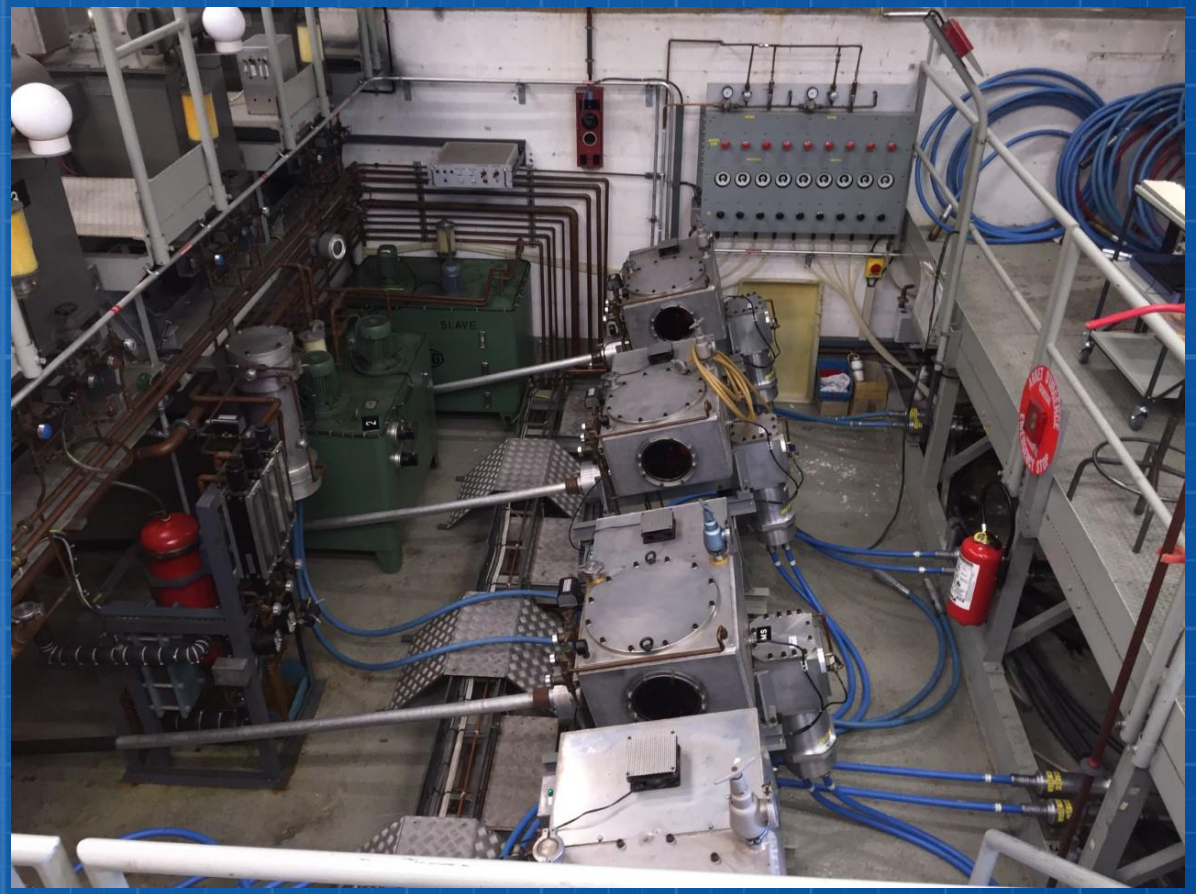
Presentation of our job

- CATIA, sketch
- Project area KFA45
- PS RING
- Upgrade equipment
- Find favorable solution



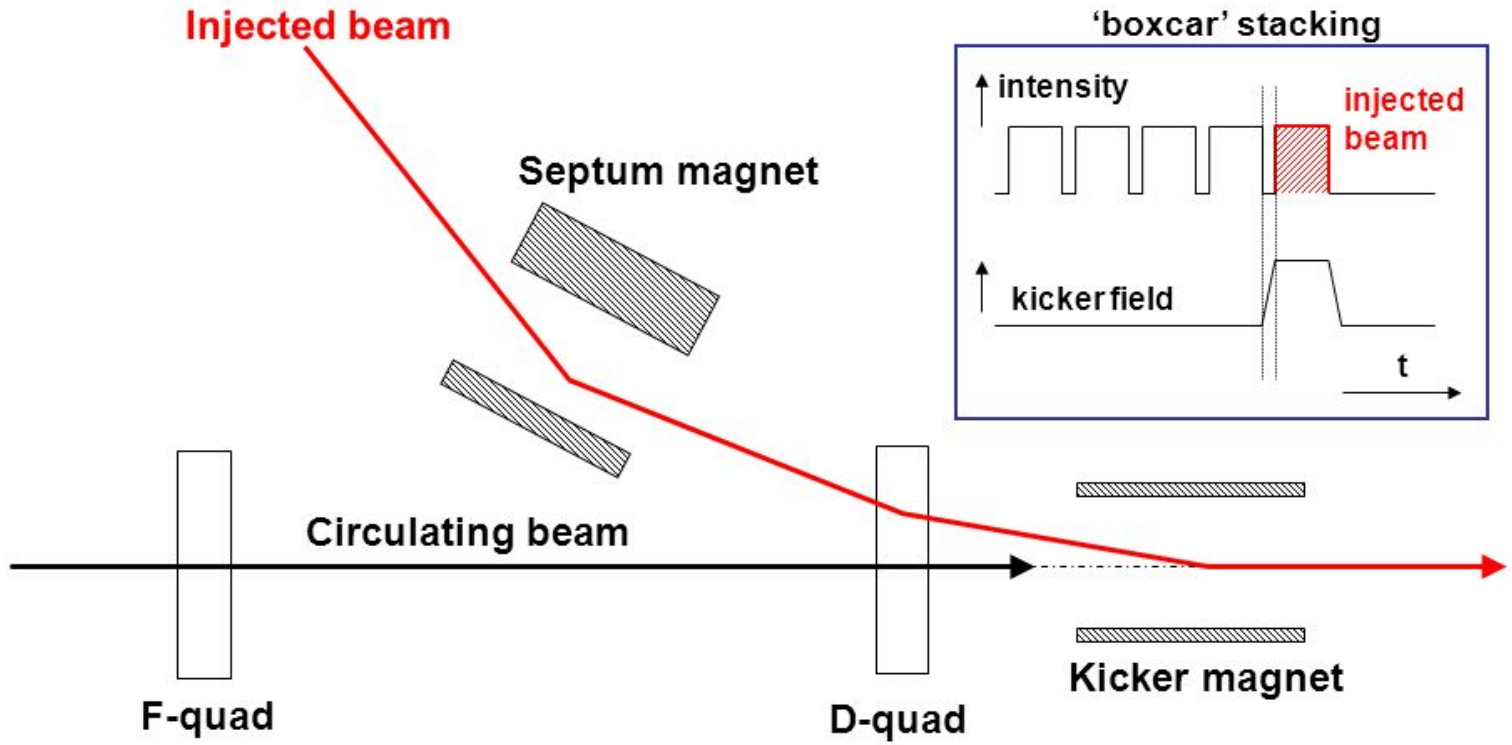
“The big picture”

-Complete **process, chain of stages is required**

-Power to the magnets Septa and kickers → injection and extraction

-Filter/cooling unit

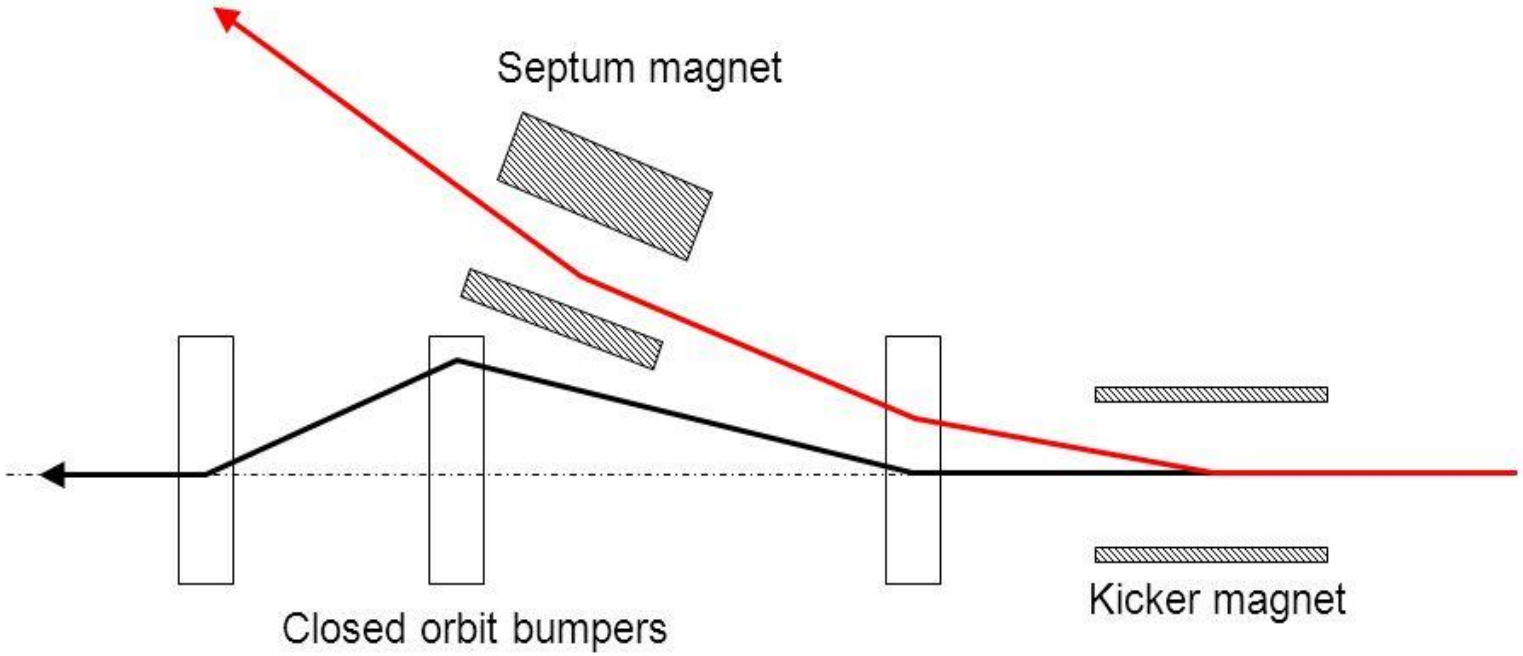
Single-turn injection – septum and kicker



- Septum deflects the beam onto the closed orbit at the centre of the kicker
- Kicker compensates for the remaining angle
- Septum and kicker either side of D quad to minimise kicker strength

Fast single turn extraction

Whole beam kicked into septum gap and extracted.



- Kicker deflects the entire beam into the septum in a single turn
- Septum deflects the beam entire into the transfer line
- Most efficient (lowest deflection angles required) for $\pi/2$ phase advance between kicker and septum

Our task

-Model figures (CATIA), sketches of the equipment in KFA45

-PS RING

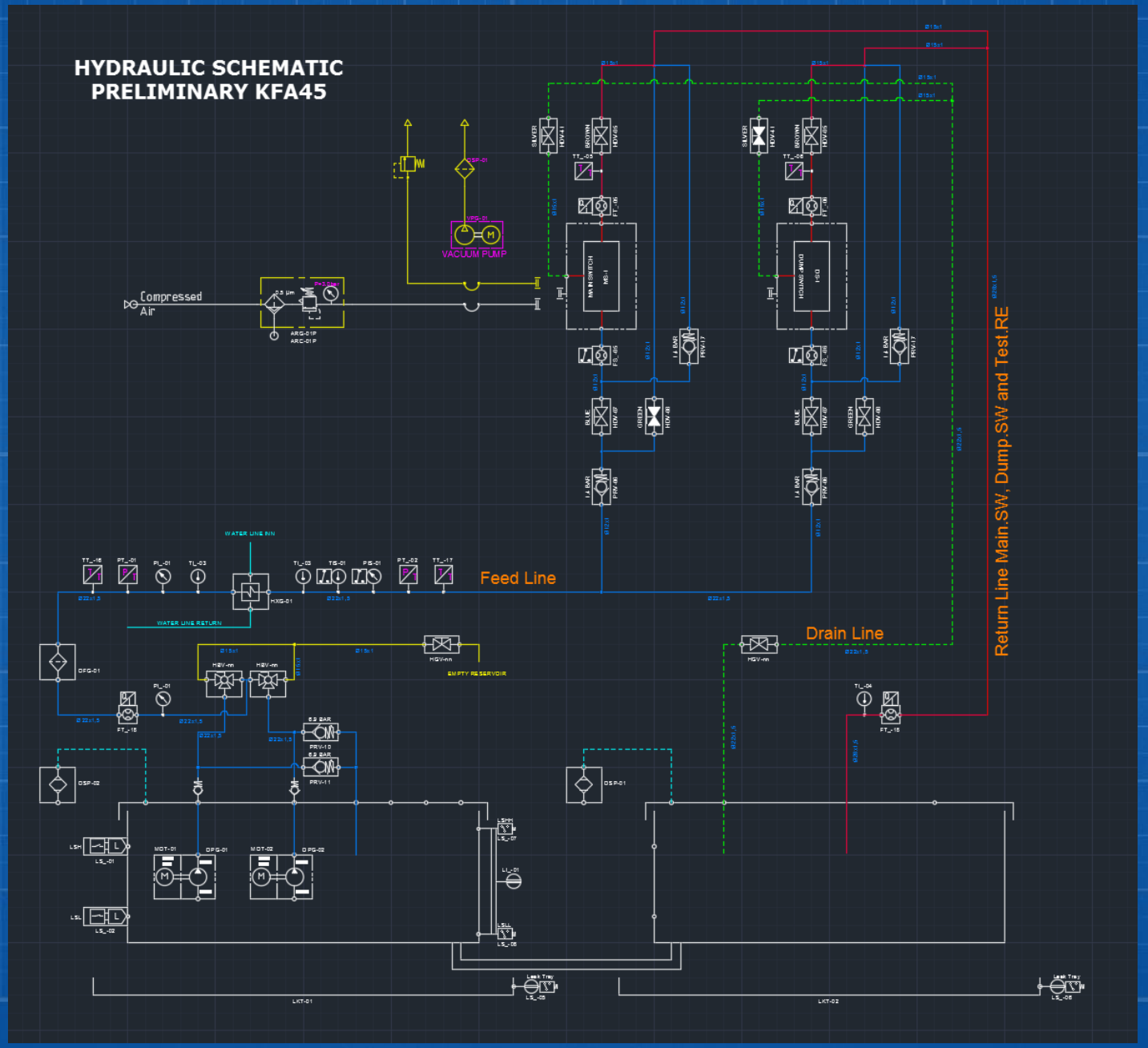
-Measure up distances in the testroom

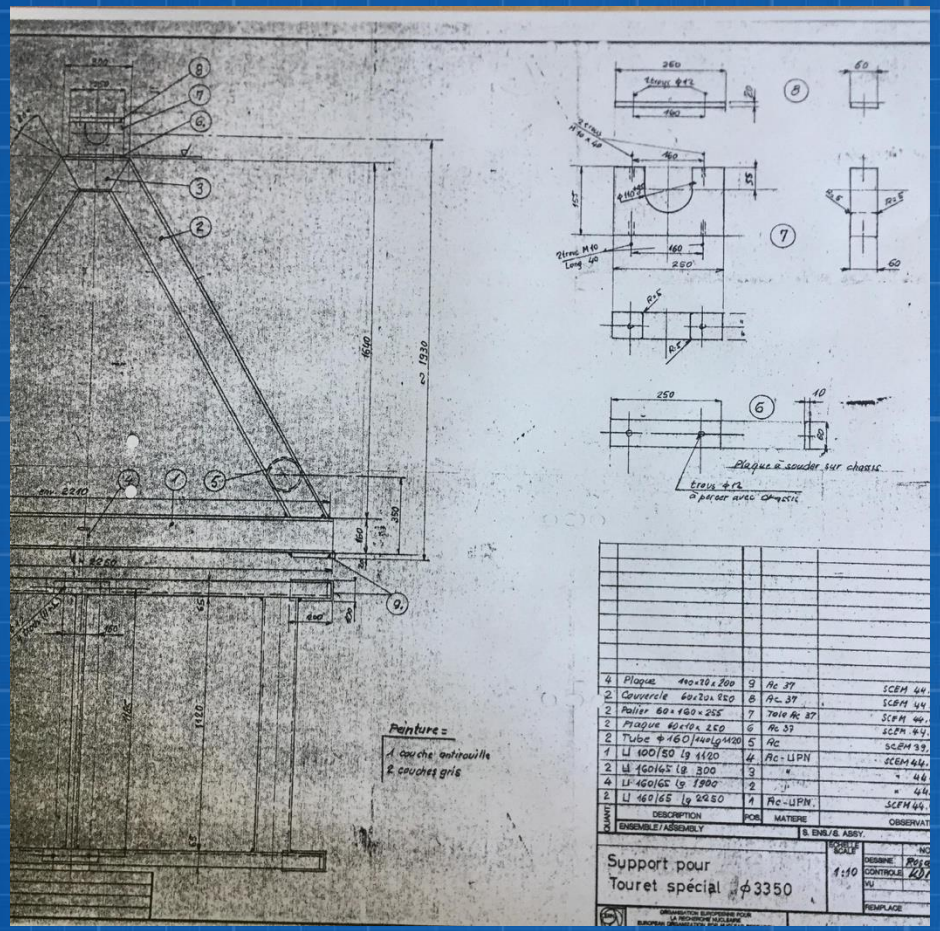
-Look for differences between sketch and irl

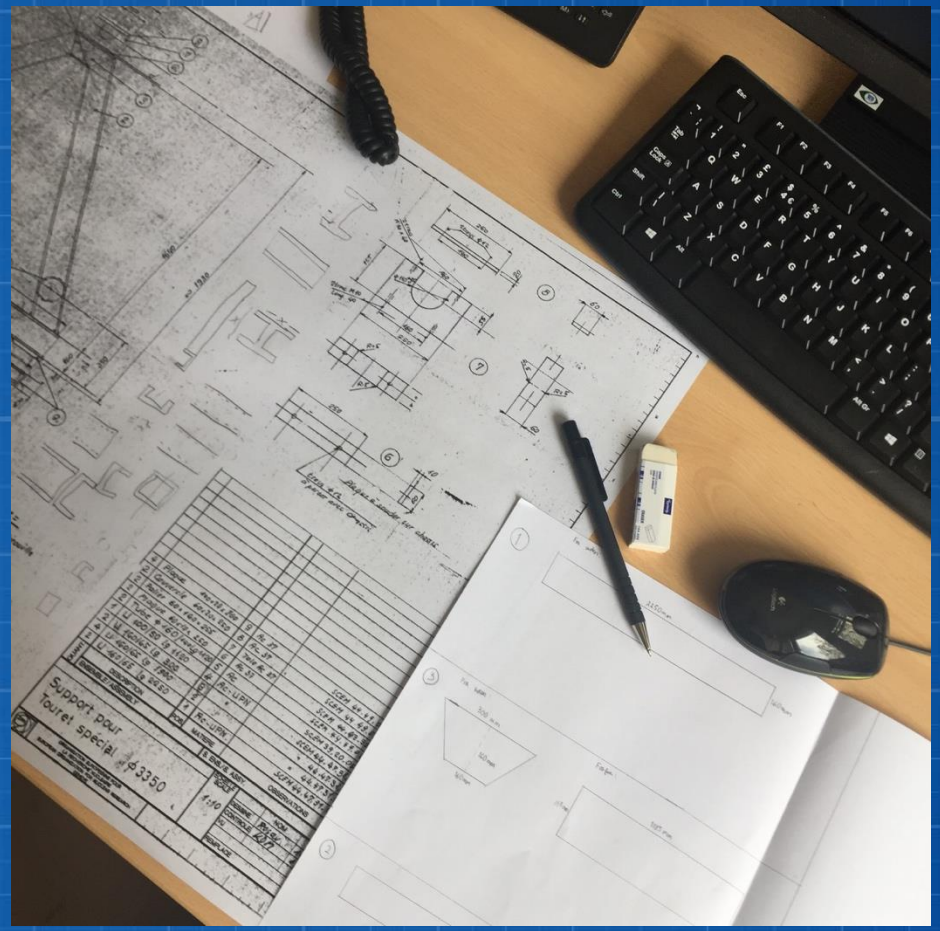
-Modelling of parts and assembly

-Hydraulic schematics

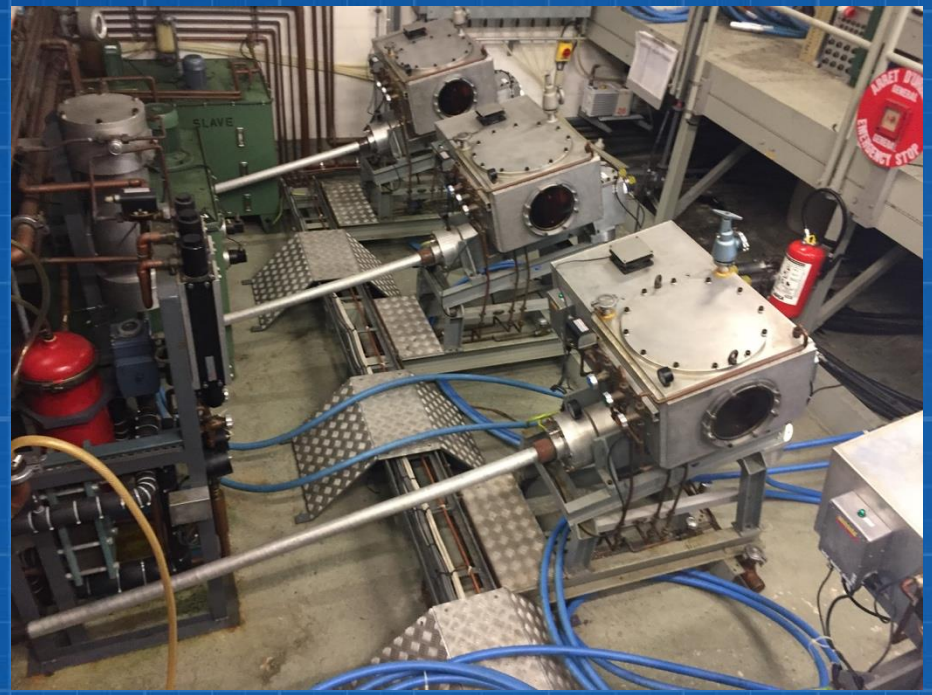
Hydraulic schematic



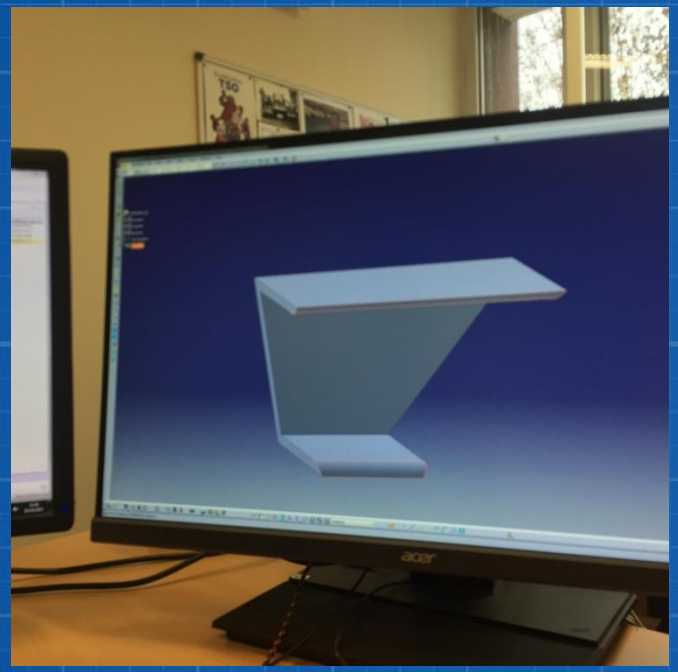

Peinture :
1 couche antirouille
2 couches gris
Plaque à souder sur chassis
Support pour
Touret spécial ϕ3350
1:10

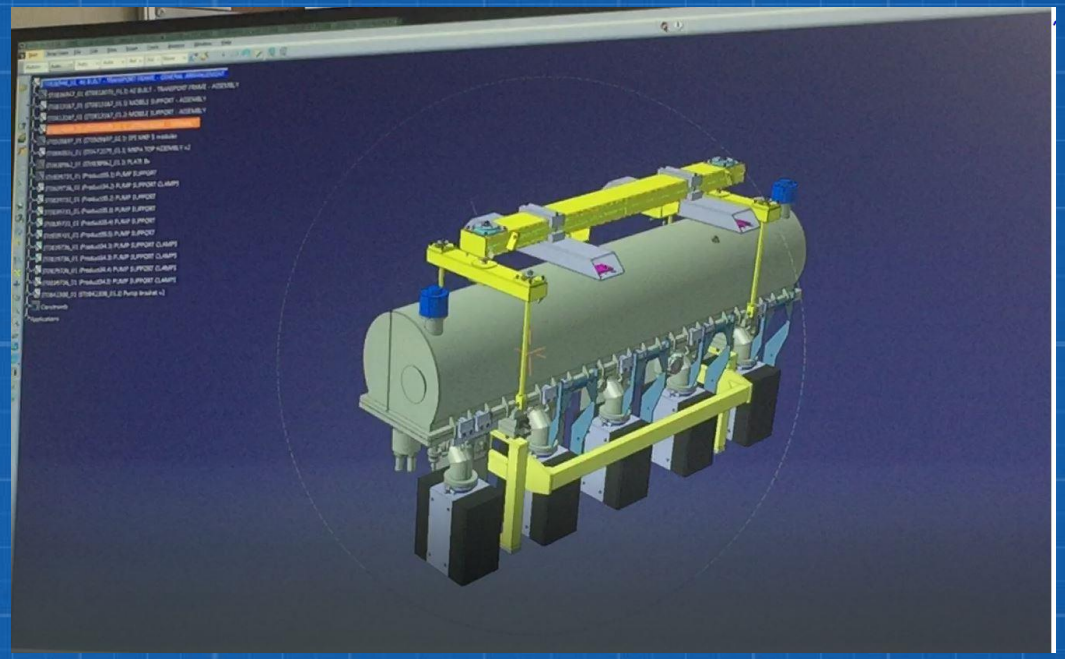

Support pour
Touret spécial ϕ3350

KFA 45



CATIA 3D





AD-ELENA

The future of CERN

-Dependent on new discoveries

-Global collaboration

-Continue providing job opportunities

-Develop new technology

- Accelerator
- Detectors

ADVICE FOR NEW STUDENTS AT HSSIP

-Ask questions, be curious

-Collaborate with other students

-Take photos

-Take notes

-Be confident, talk to the cernies