



GEORGIAN TECHNICAL UNIVERSITY

GEOMETRY CREATION METHODOLOGIES FOR LHC POINT 4

DAVIT SHEKILADZE

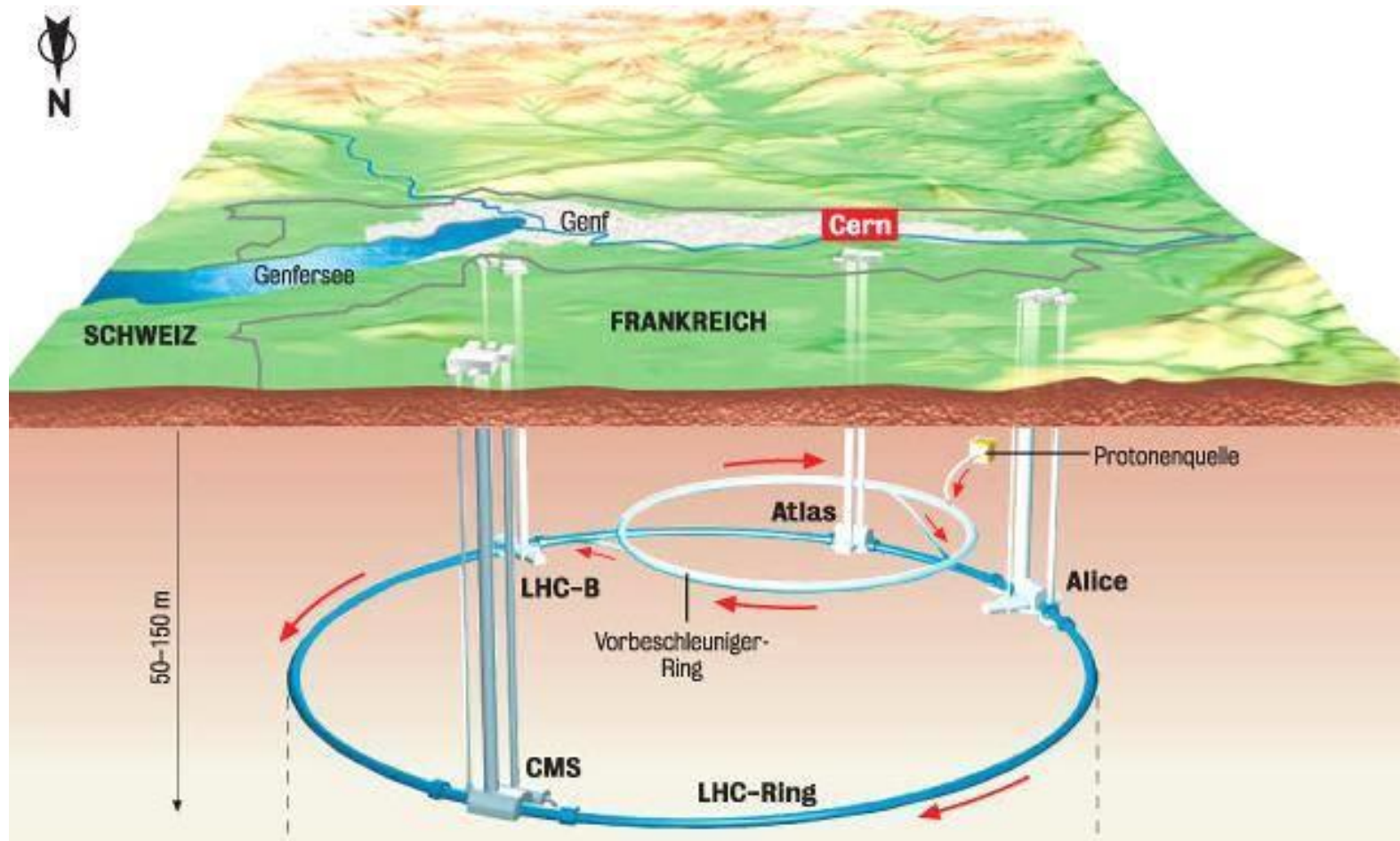
Responsible Chair: Mr. Alexander SHARMAZANASHVILI



EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH, CERN

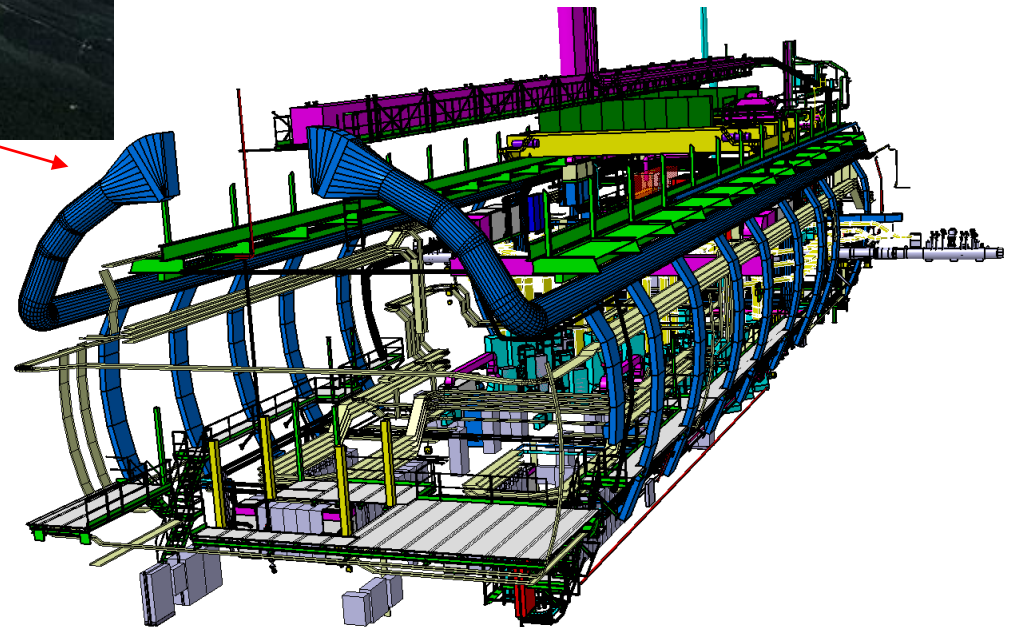
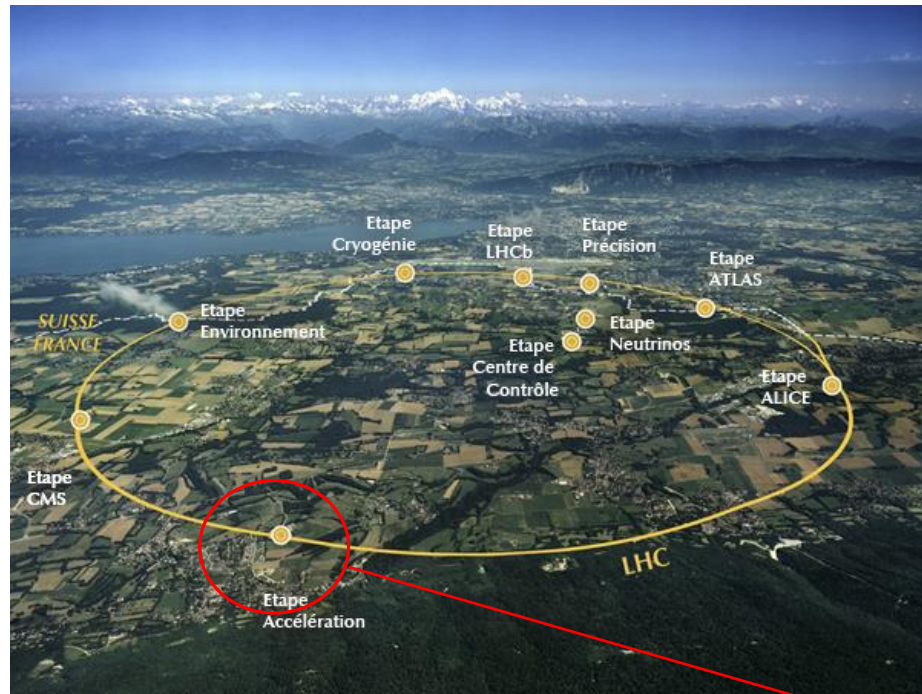


LHC

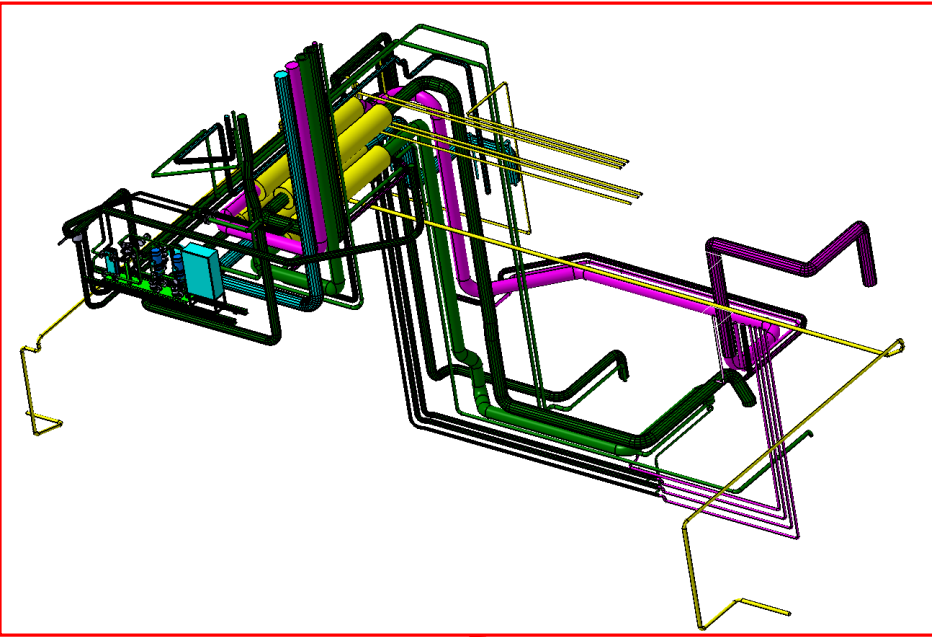


Point 4

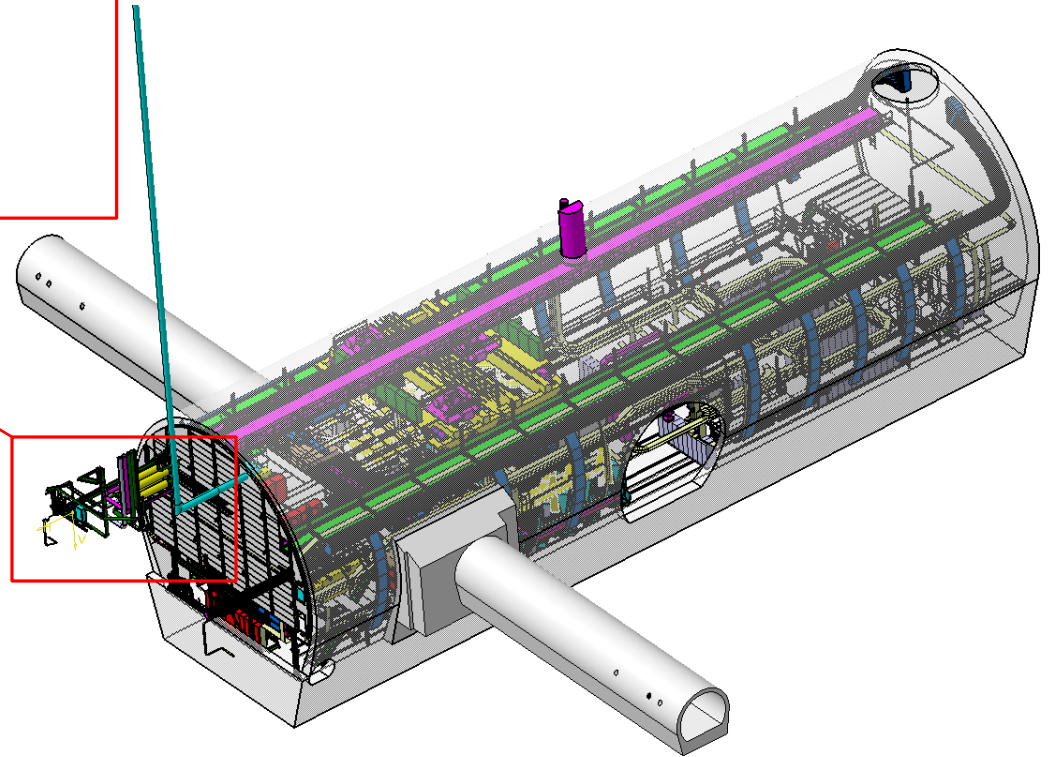
Location and geometry of Point 4



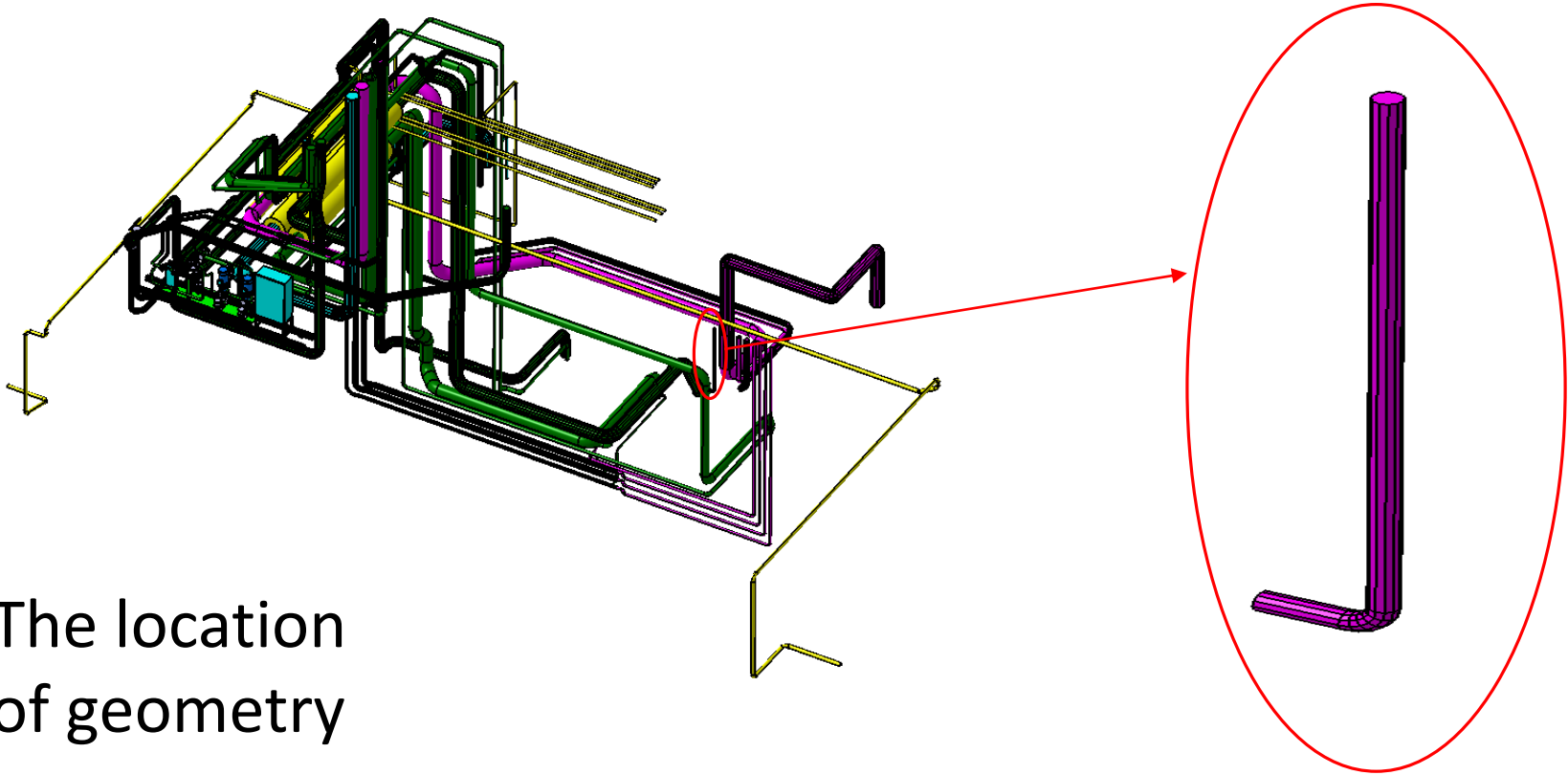
The first phase



Wrong geometry
of Point 4

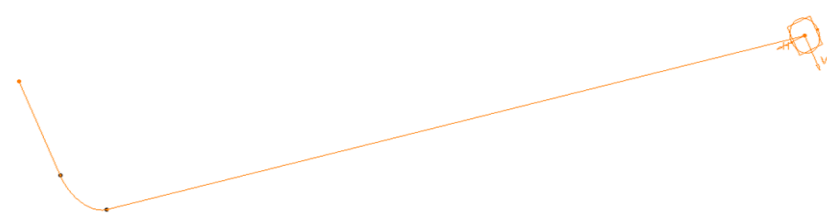
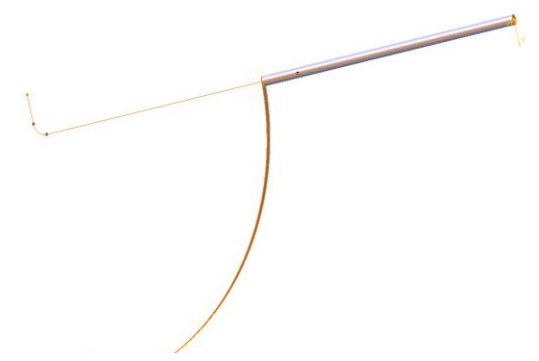
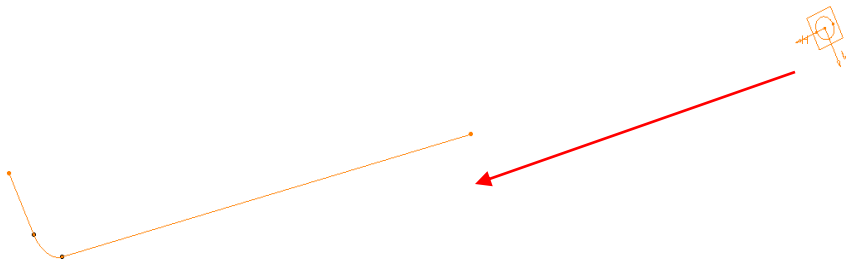


Displacement



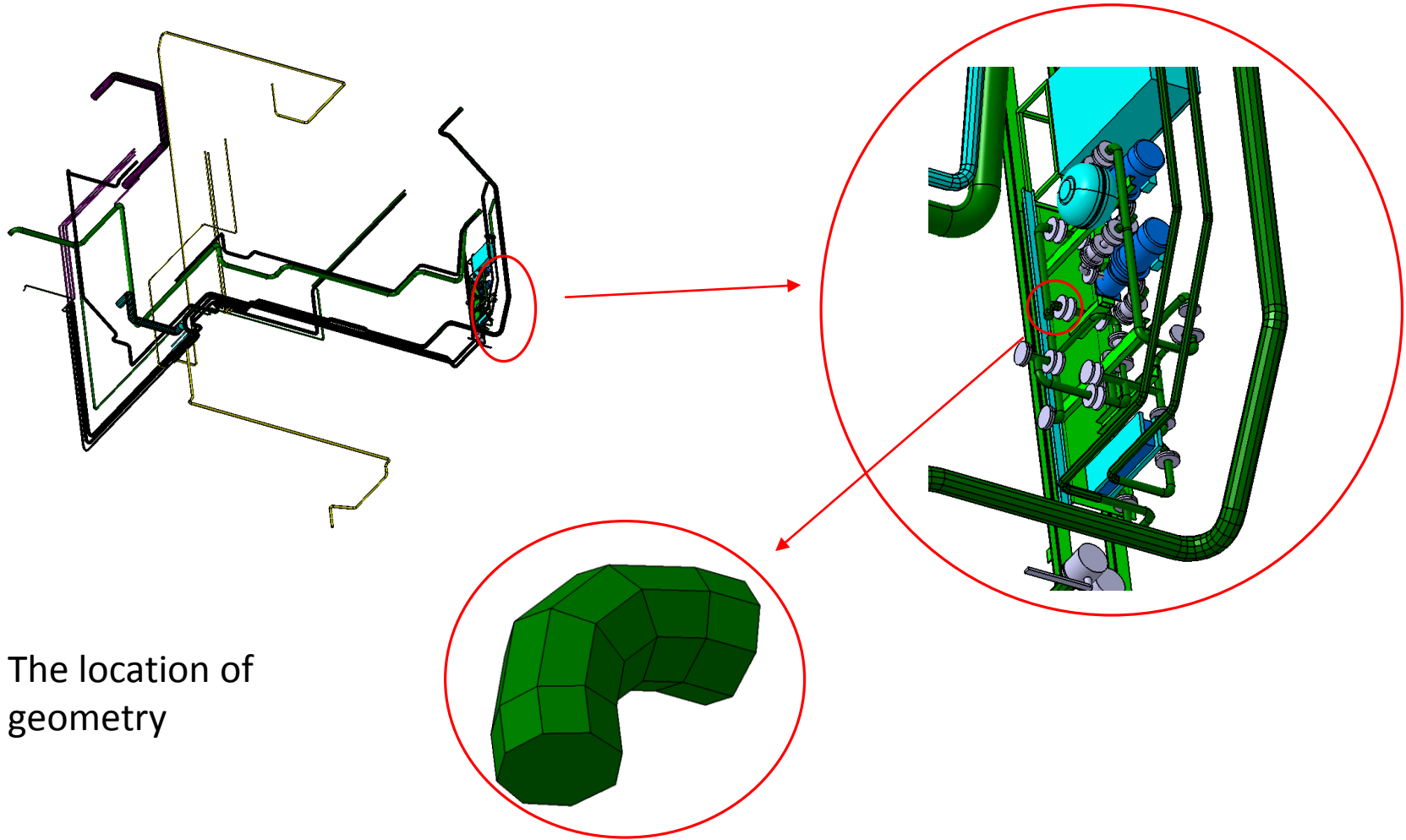
The location
of geometry

Displacement



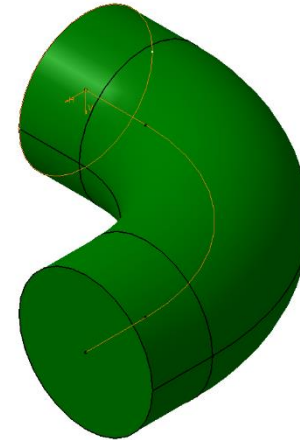
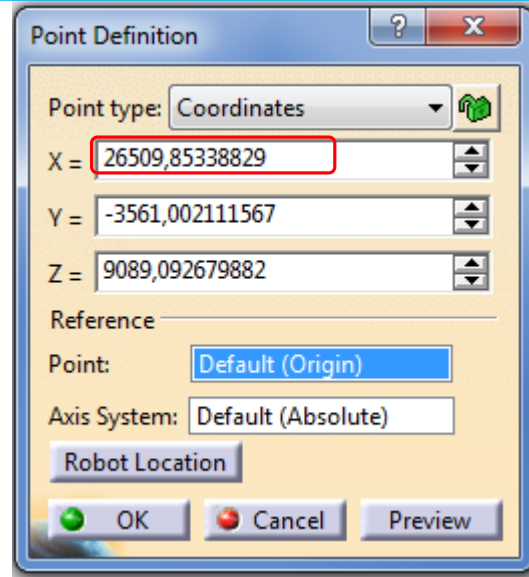
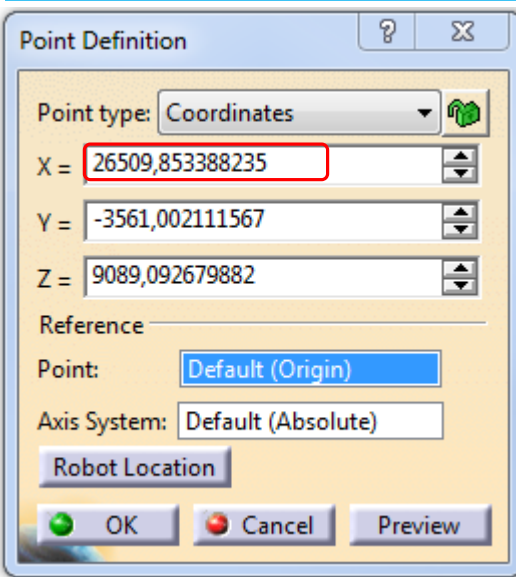
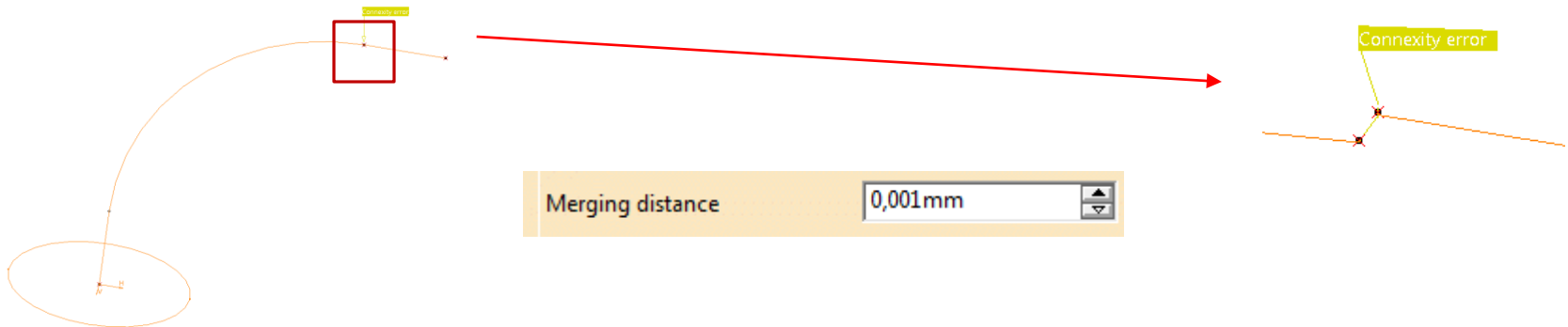
In sketch the circle and the line were far away from each other

Point Distance



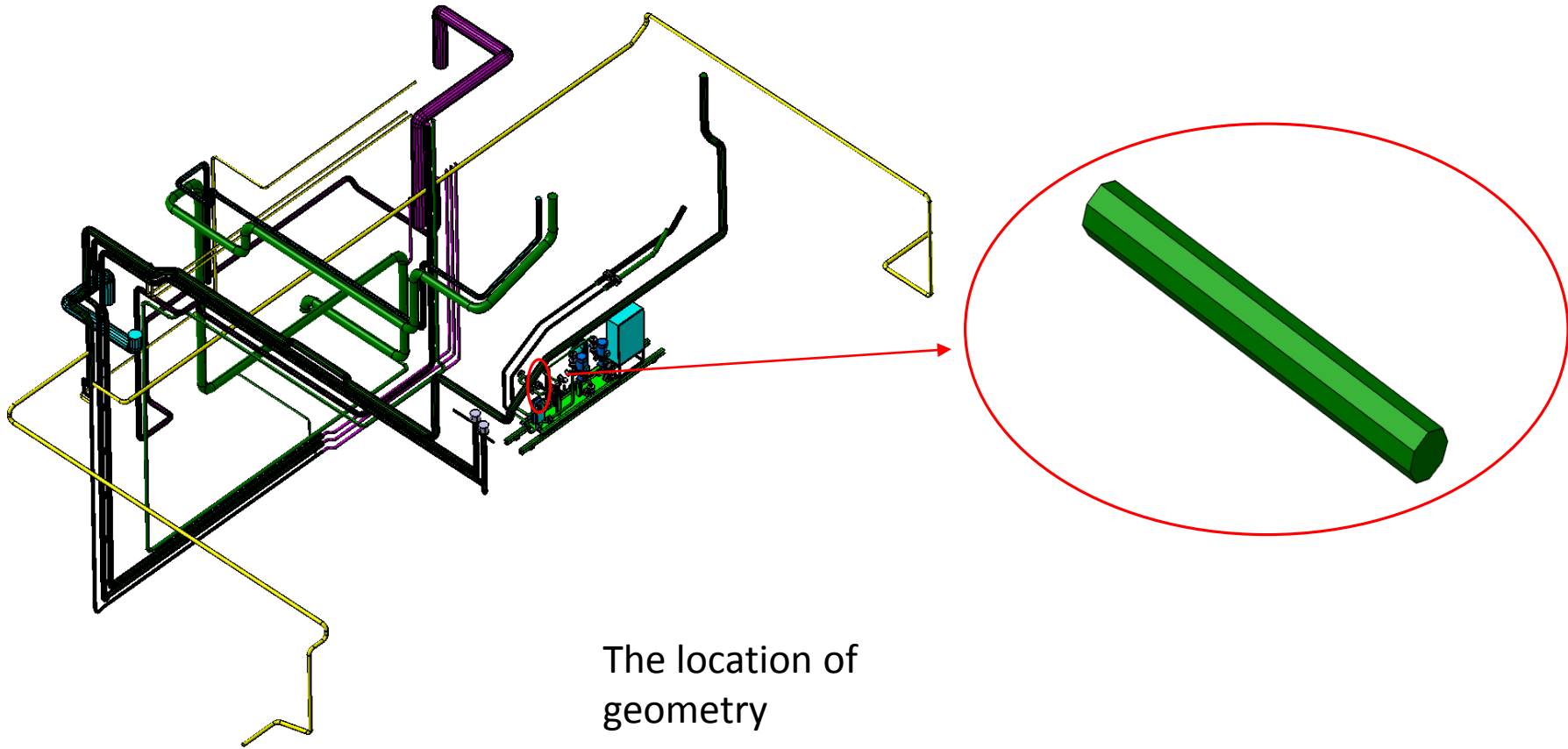
The location of
geometry

Point Distance

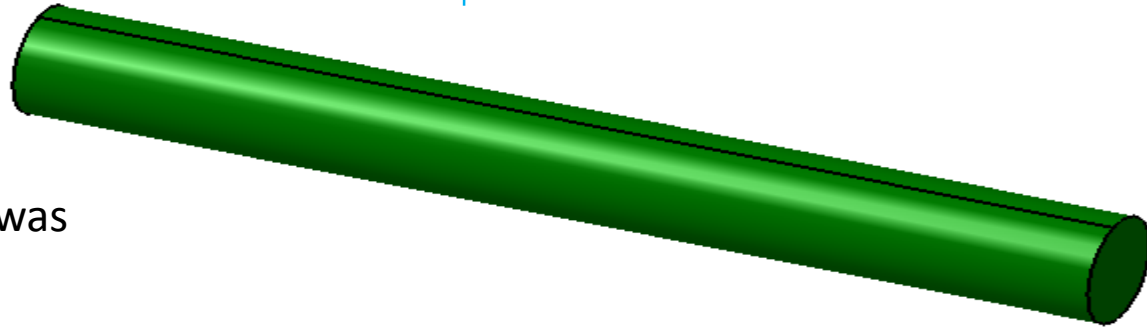
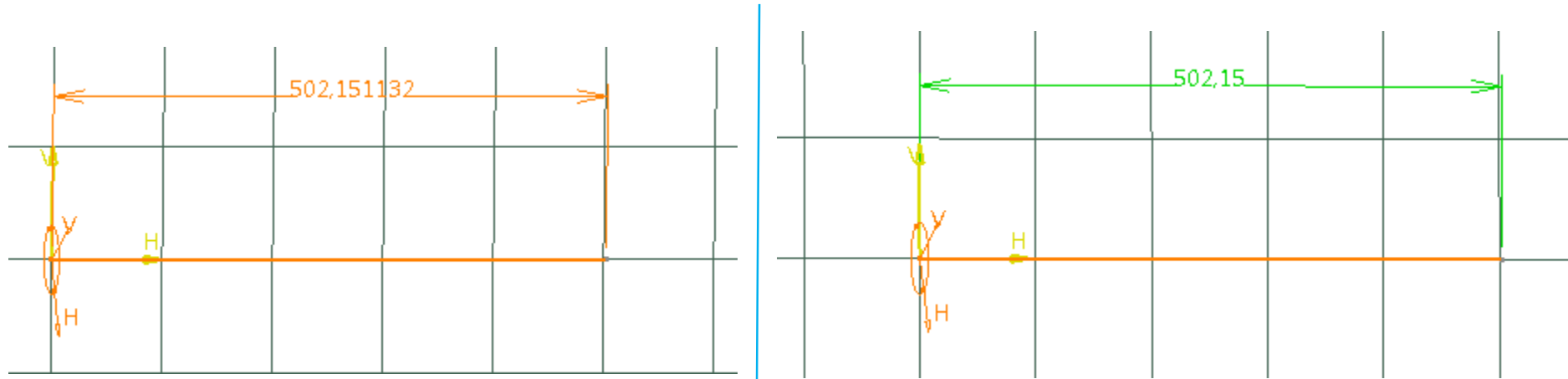


Two points of interlacement were far away on axis X

Sketch length problem

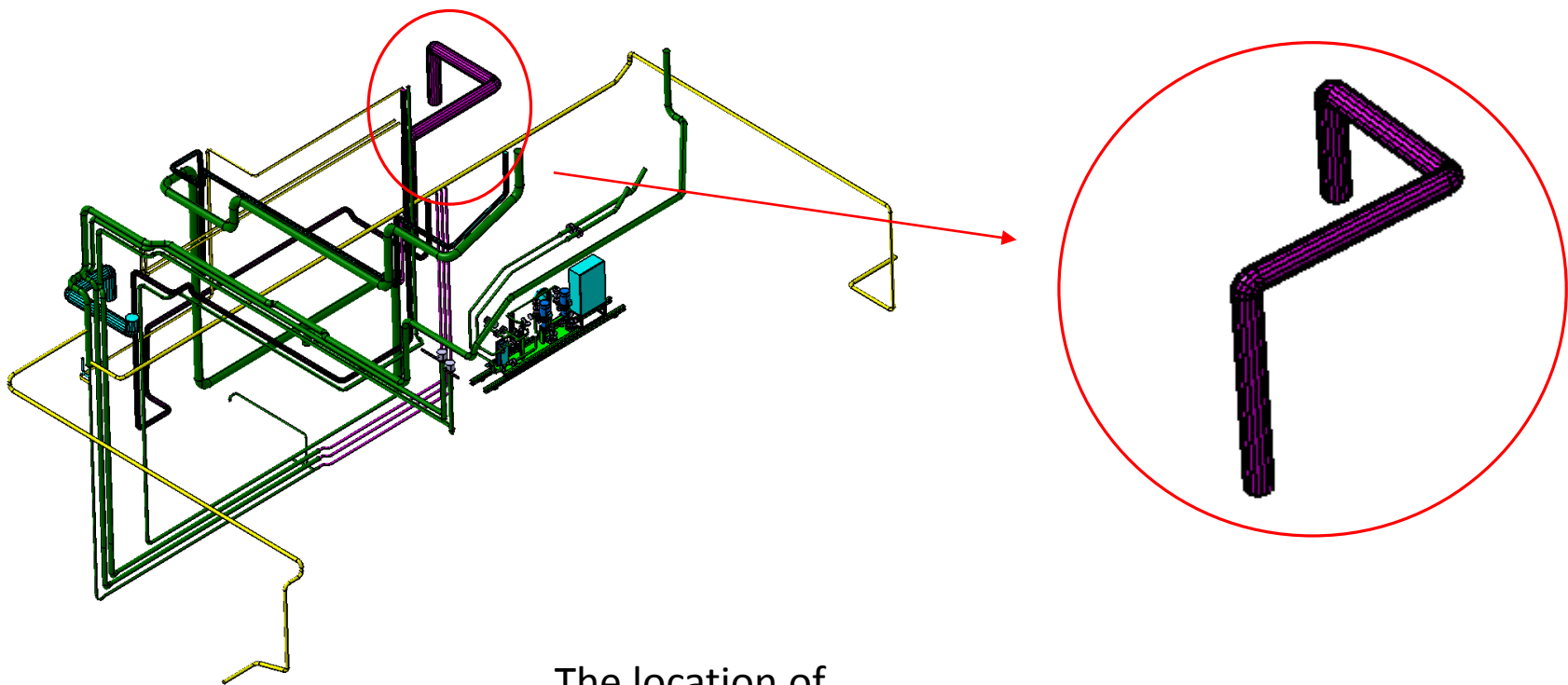


Sketch length problem



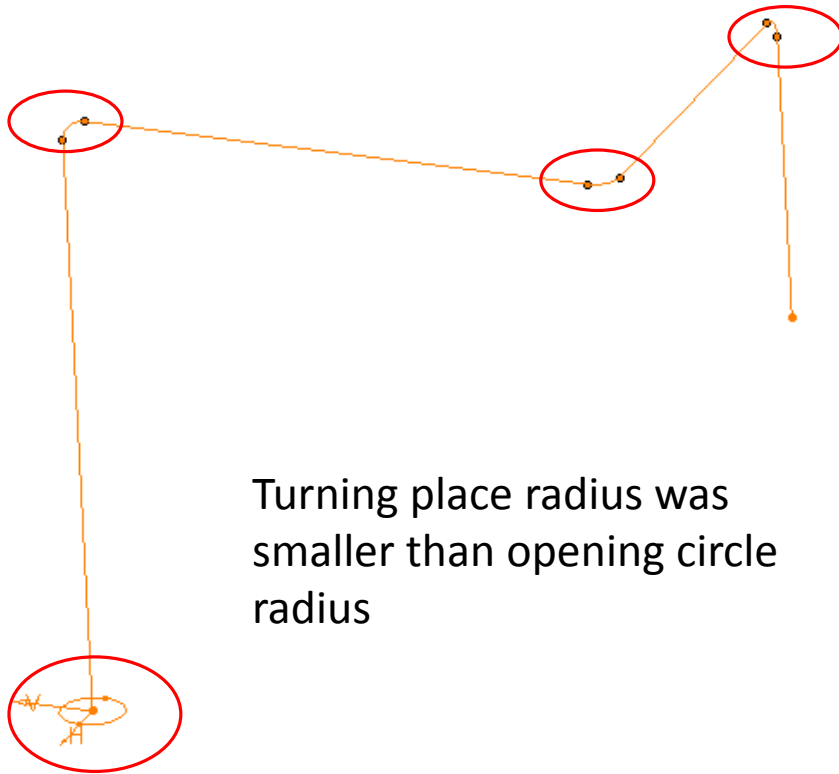
The length of sketch was
statuoried in details

Wrong Circle

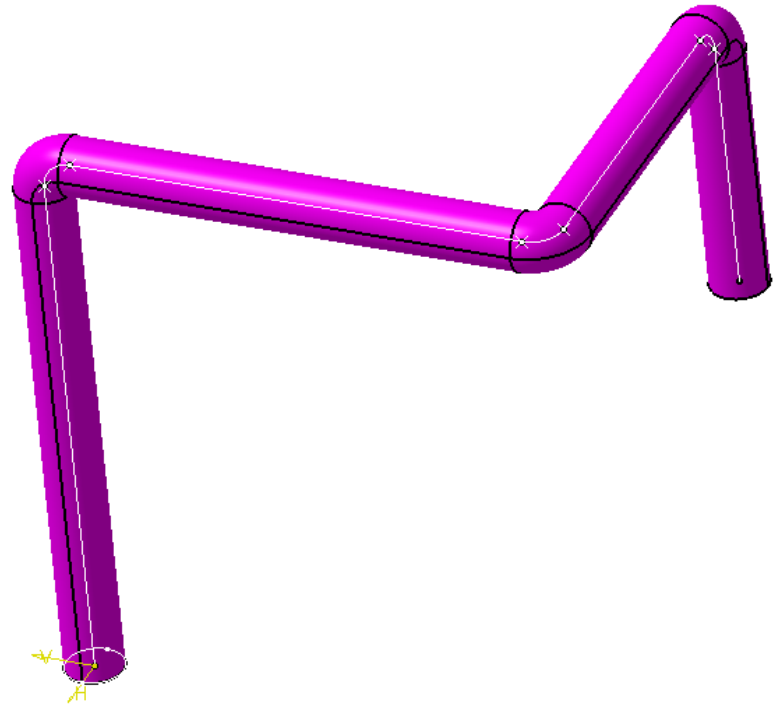
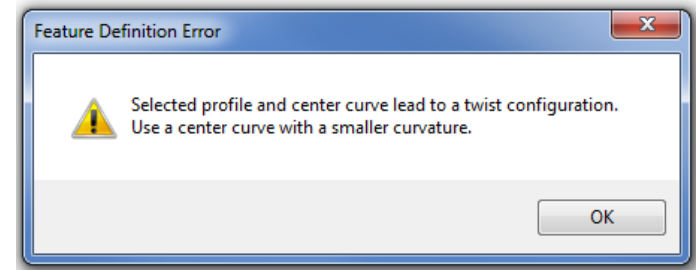


The location of geometry

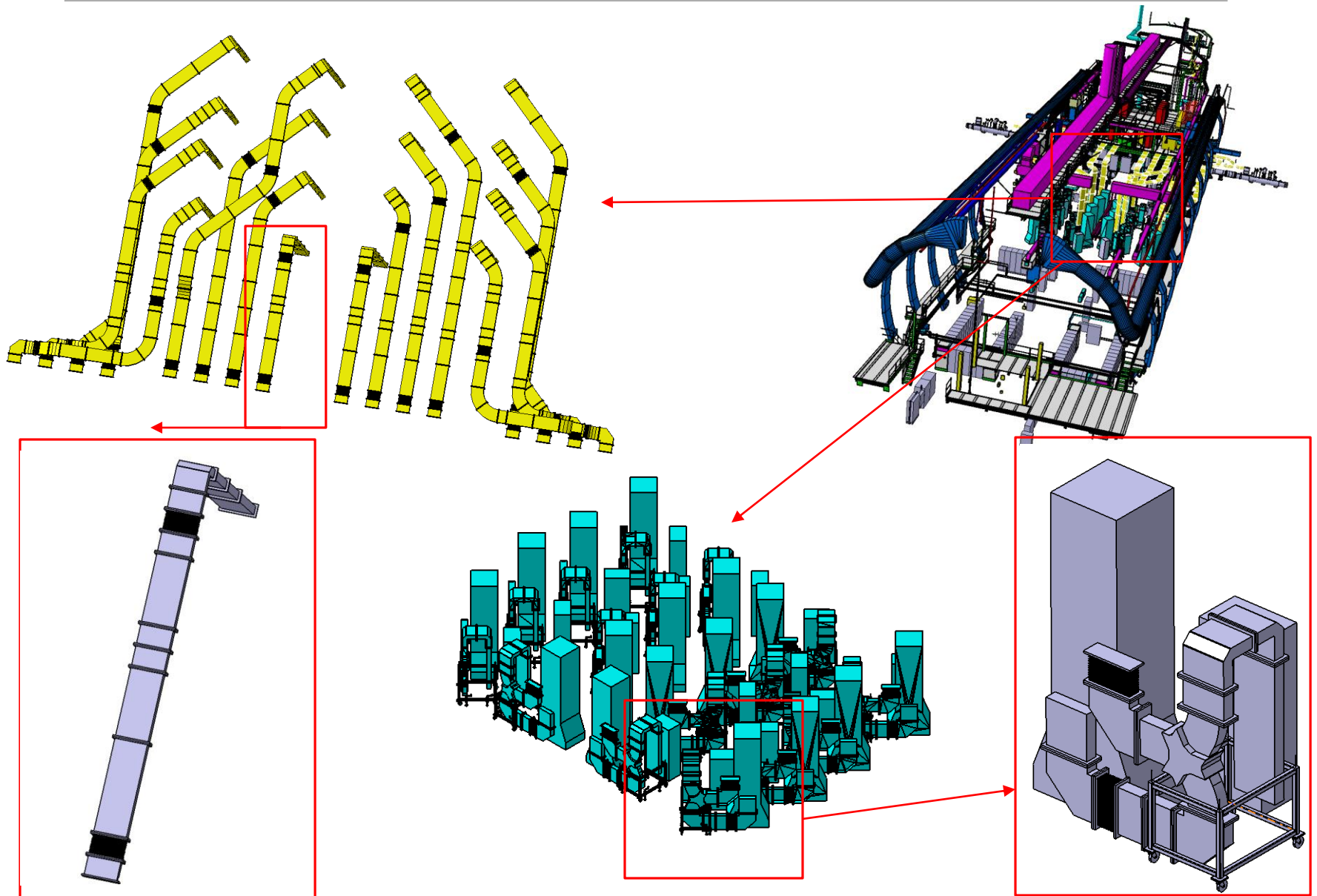
Wrong Circle



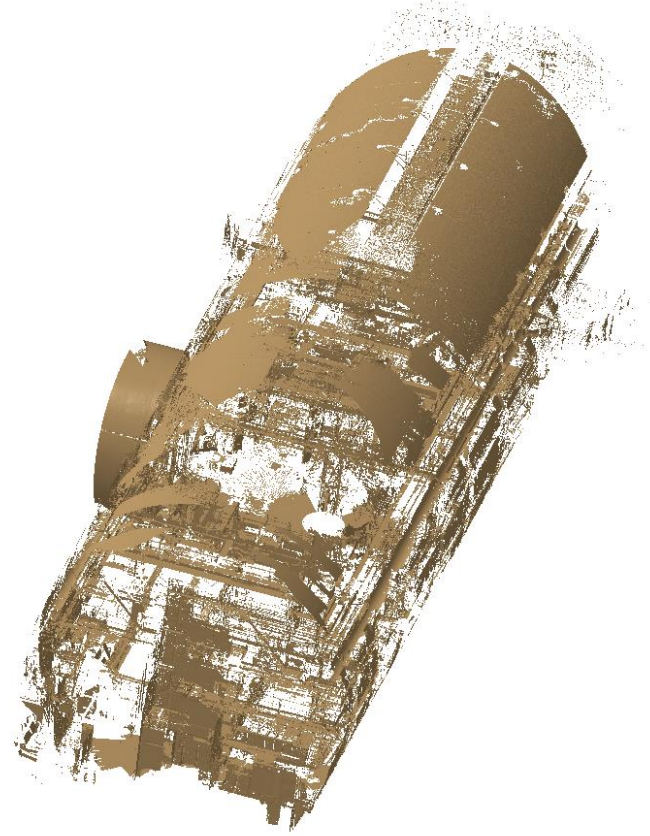
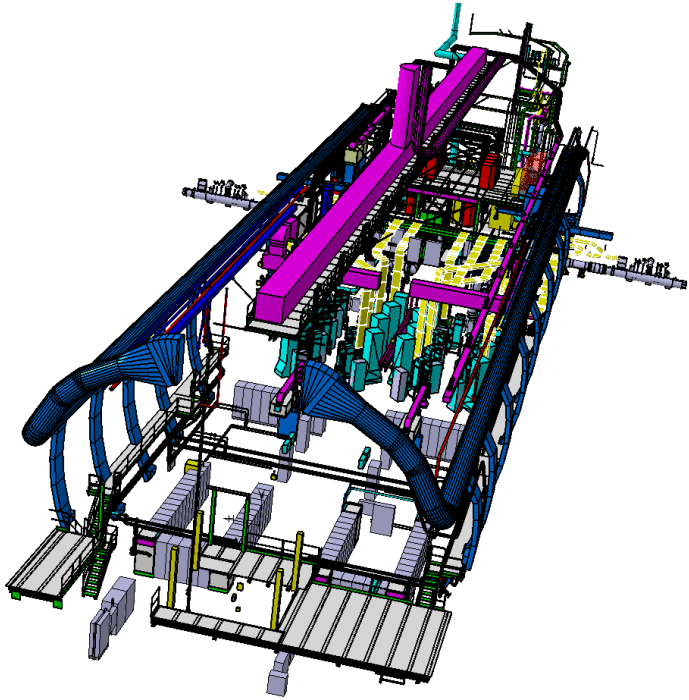
Turning place radius was smaller than opening circle radius



Pipes And Kleystron

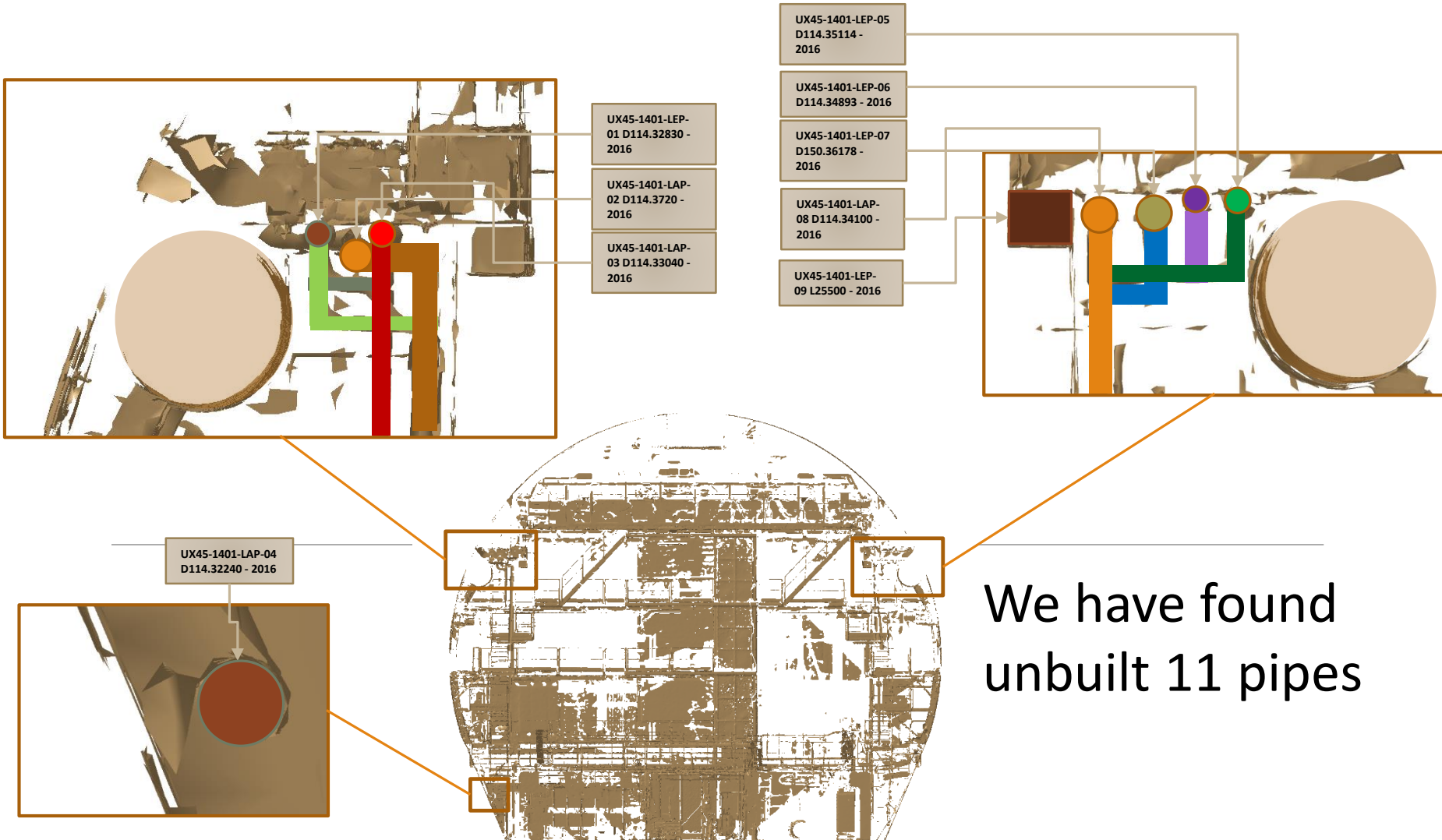


The Third phase

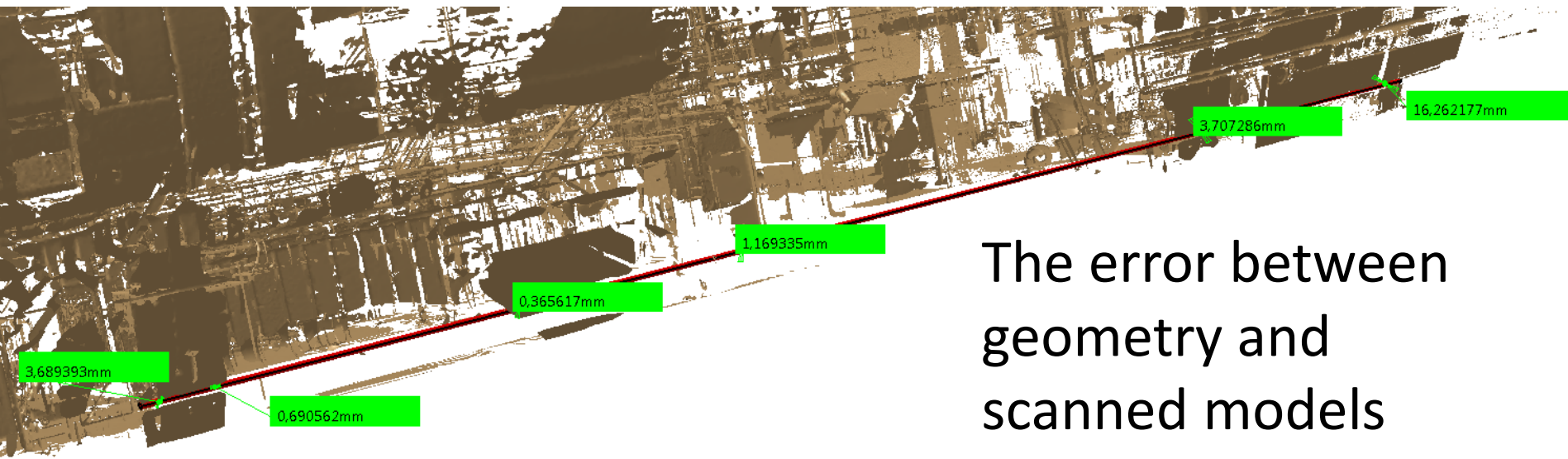
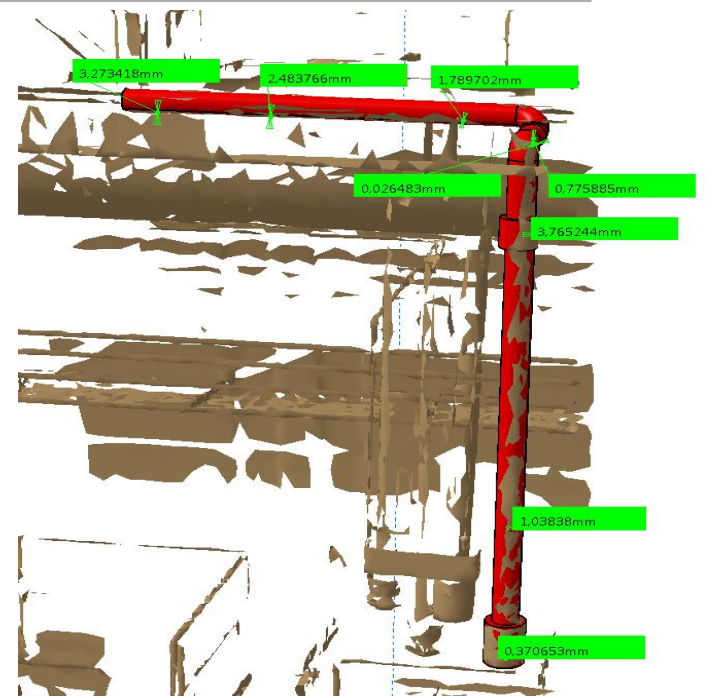
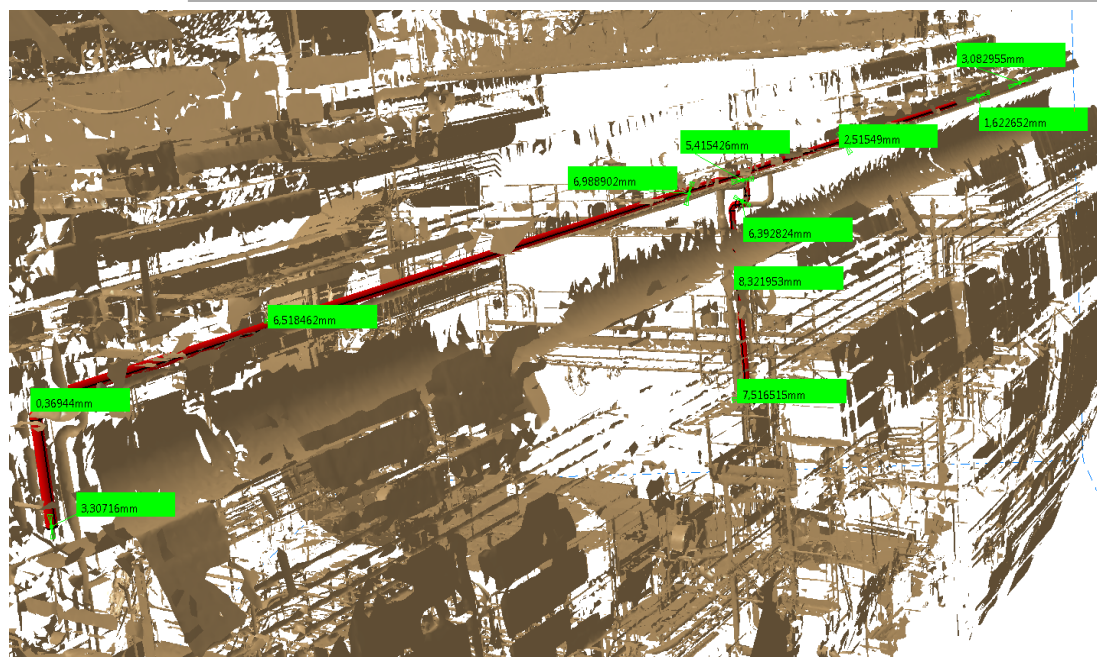


Scan model of Point 4

Miles



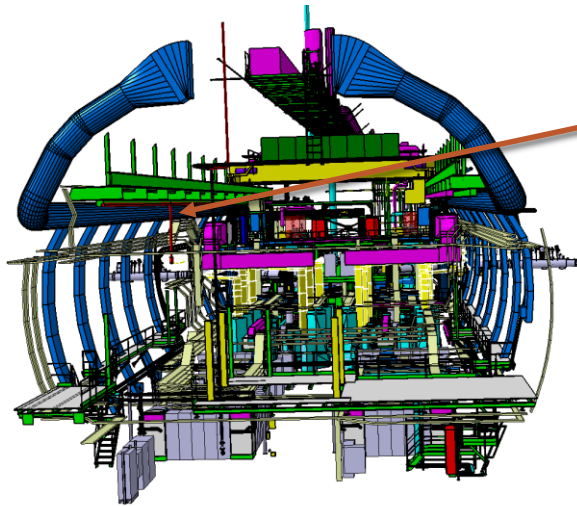
Different



The error between geometry and scanned models

Different

UX45-1401-LAP-08 D114.34100- 2016



∅114

34100mm

∅114

3335mm

320mm

∅230

∅260

2065mm

∅160

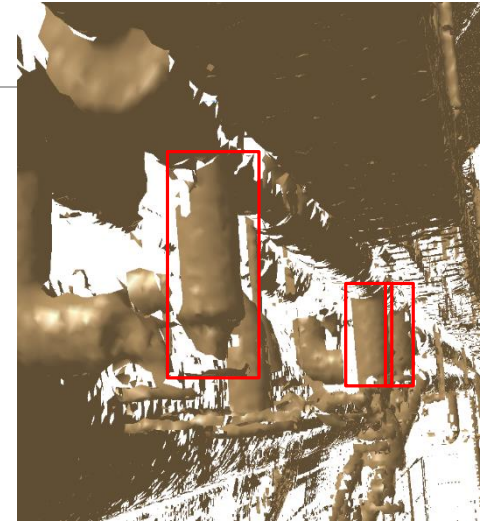
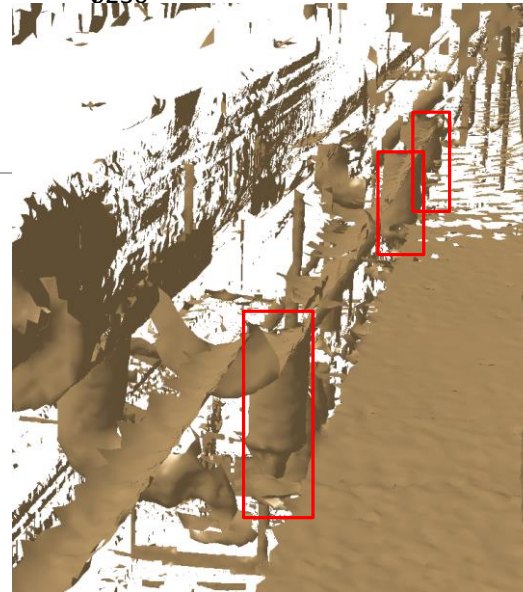
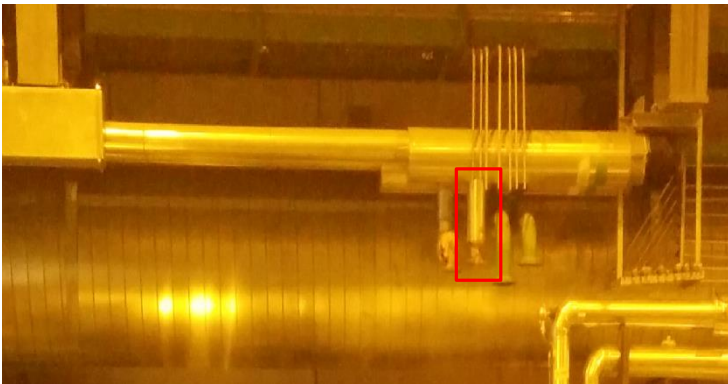
430mm

70mm

∅80

30mm

∅160



Different between scanned models and pictures

Thank you for your attention
