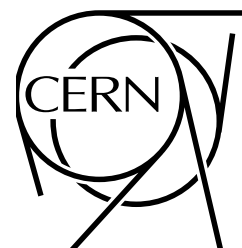


LBNF – DSS Integration & Scope

Dimitar MLADENOV & The entire CERN Team

FS Integration/Installation Planning

Kartause Ittingen, 02-04 January 2020

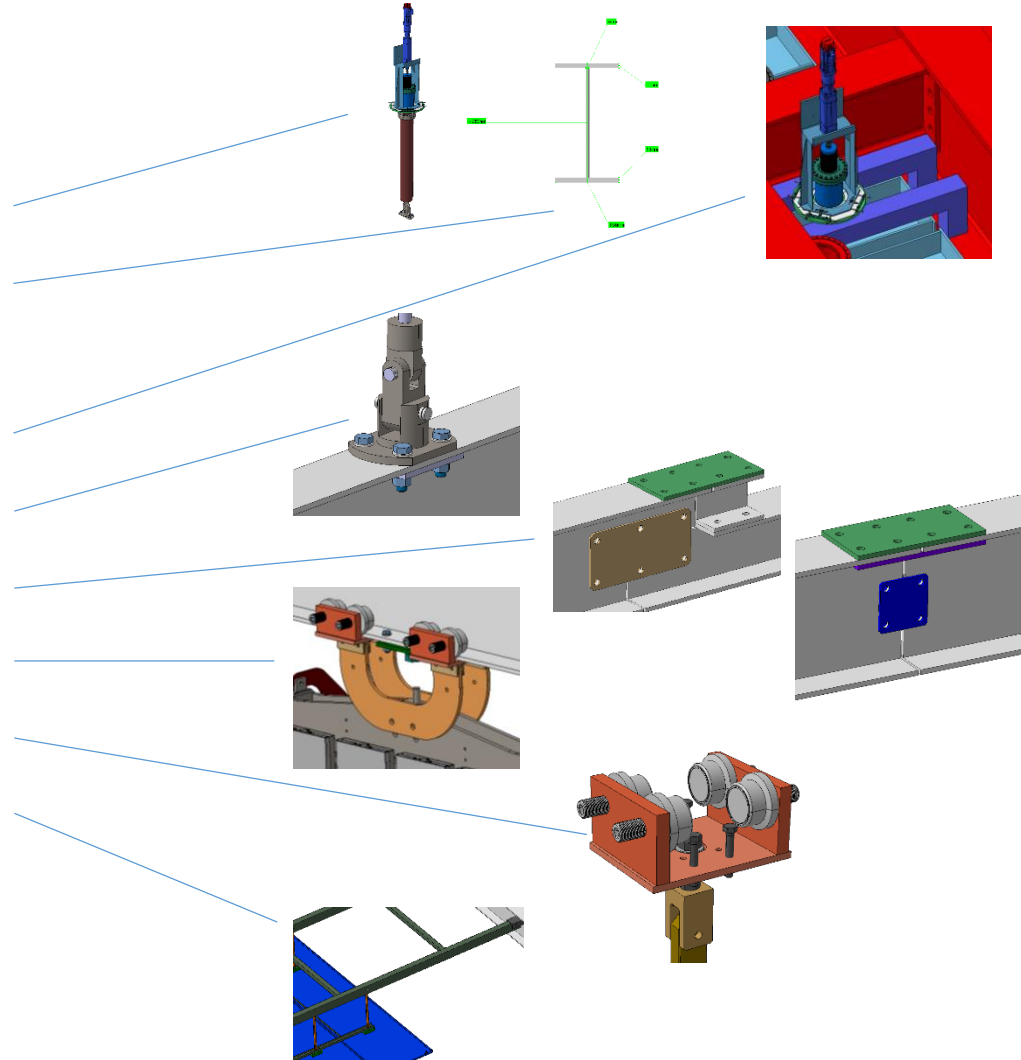


Outline

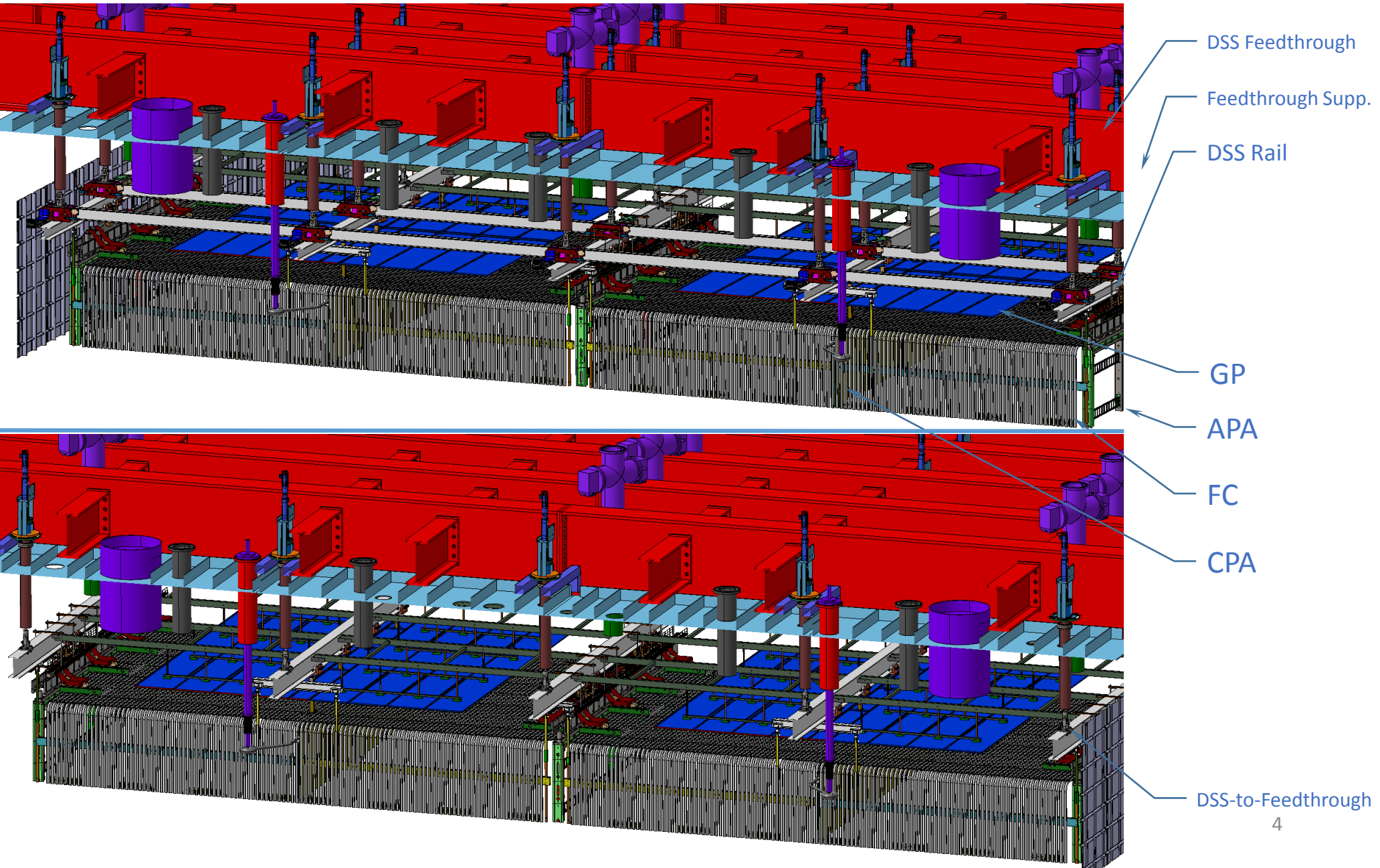
- Design Updates to the structural elements
- Design Updates to the Interfaces
- Installation and operation scenario updates
- To be decided:
 - Clear definition of interfaces responsibilities
 - Clear definition of main elements responsibility
 - Clear definition of the word “*responsibility*”

List of the updates

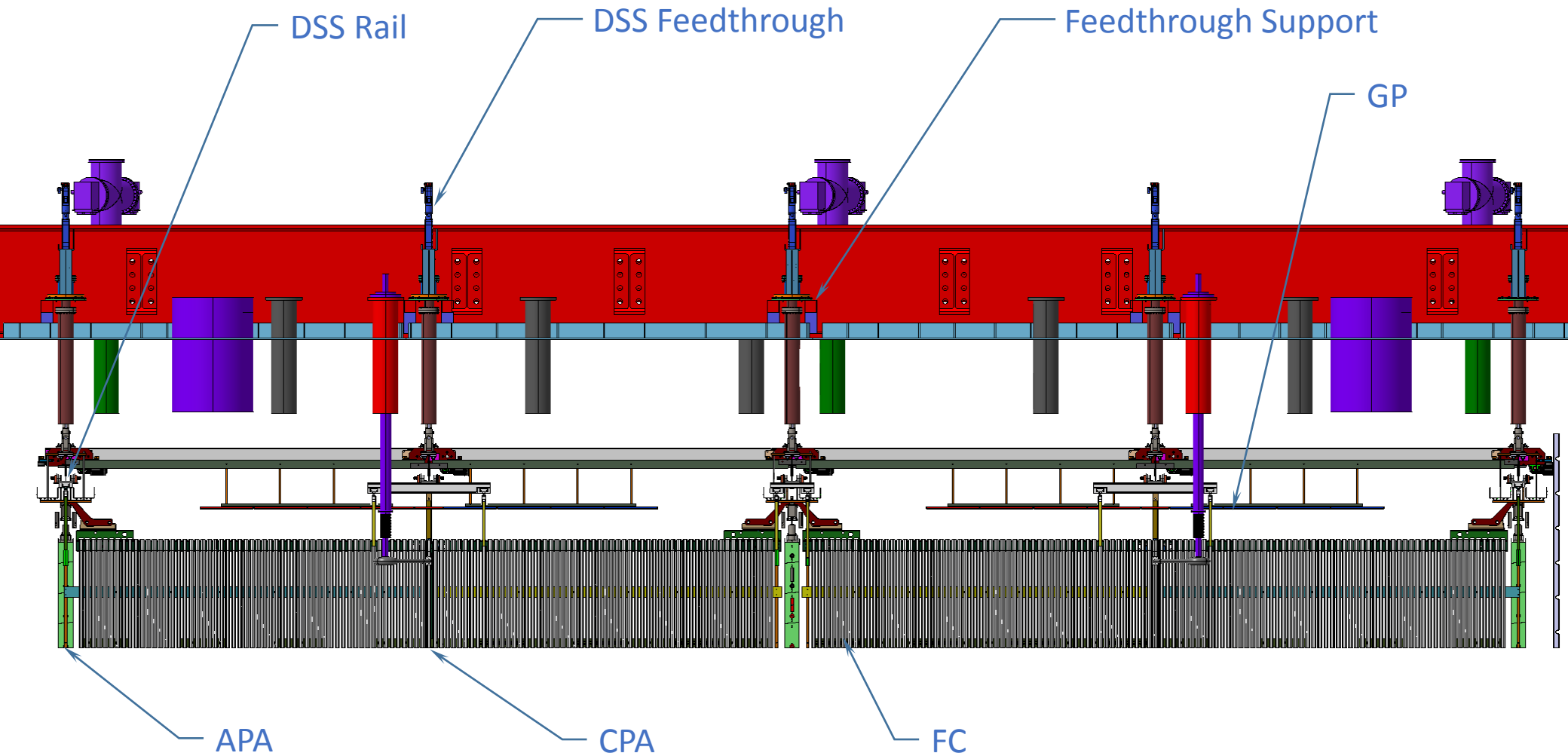
- Feedthrough
- DSS Rail
- Interfaces:
 - Feedthrough-to-roof
 - Feedthrough-to-DSS
 - DSS-to-DSS
 - DSS-to-Yoke
 - DSS-to-CPA
 - DSS-to-GP



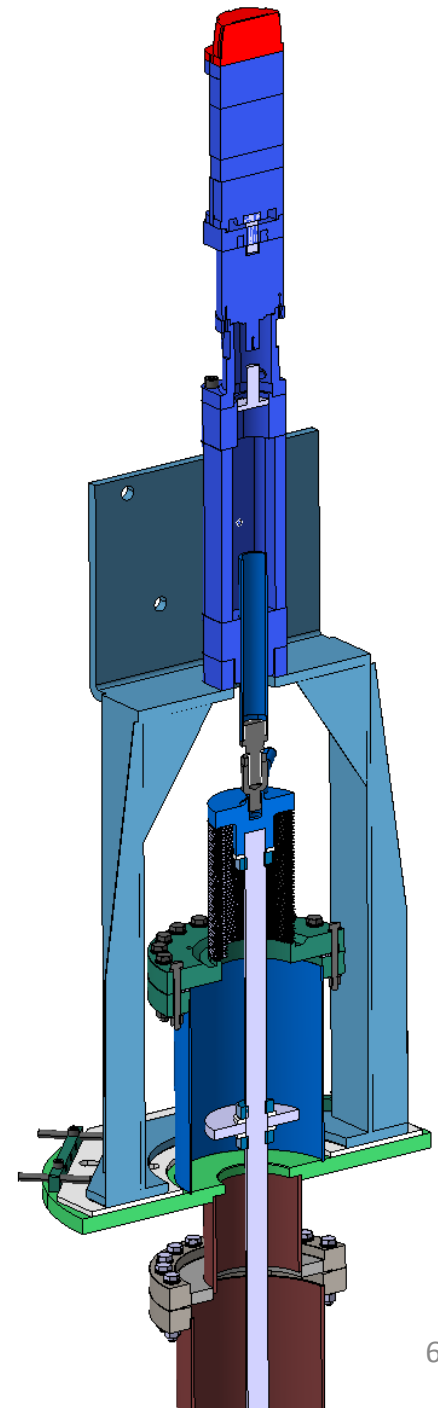
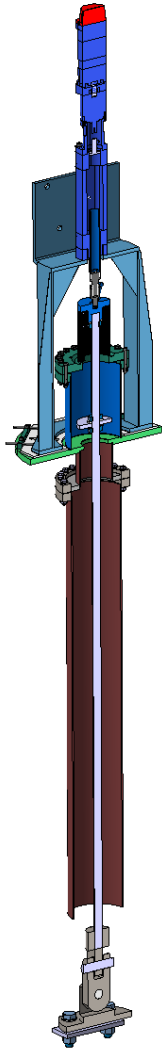
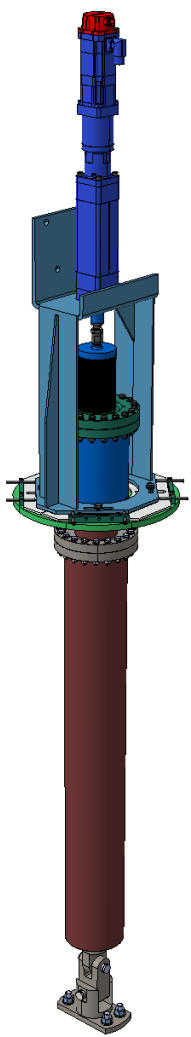
DSS



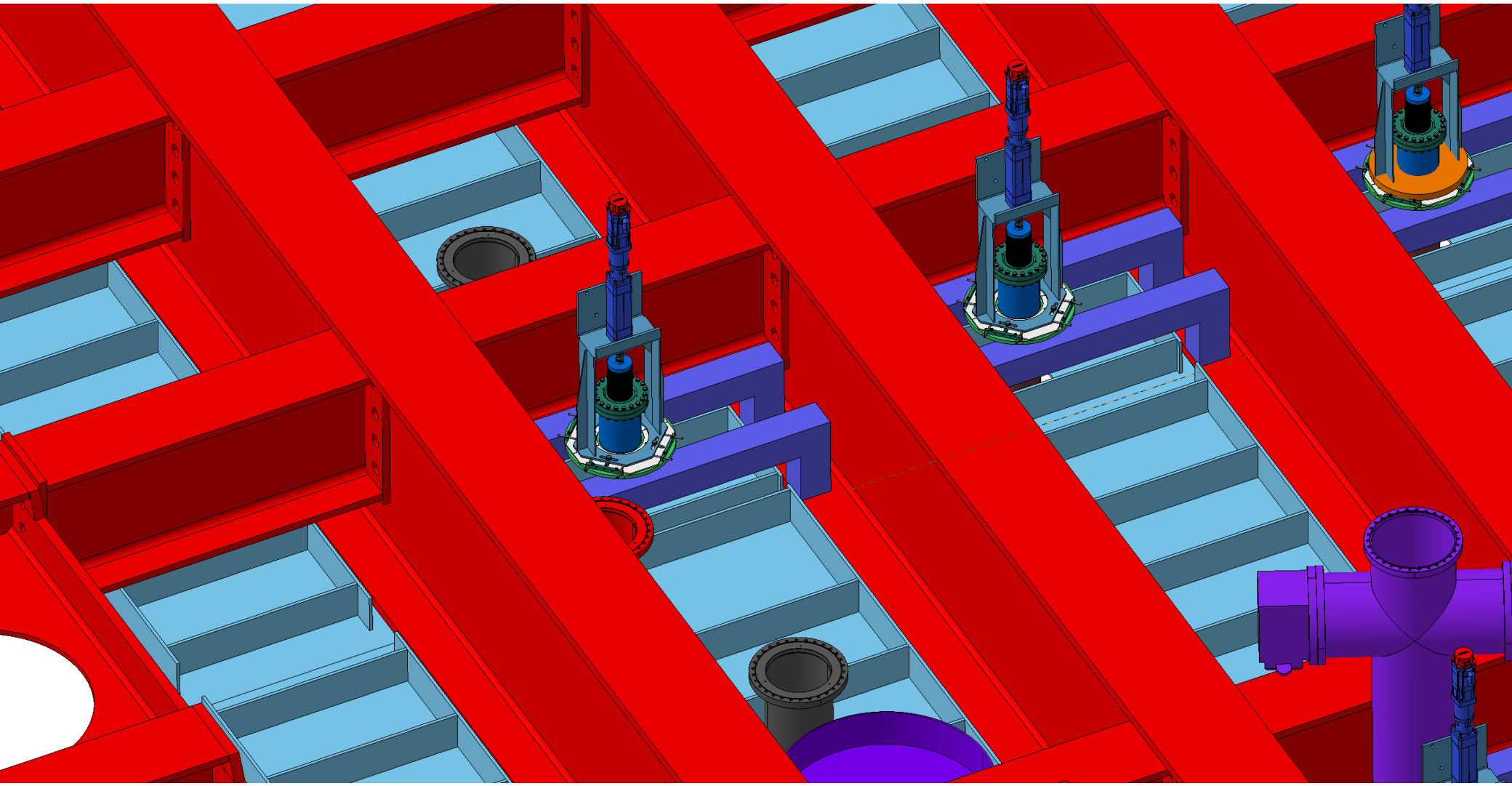
DSS



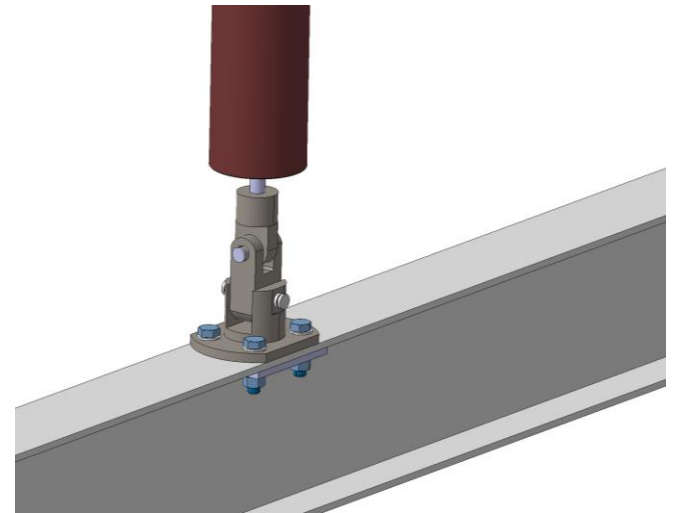
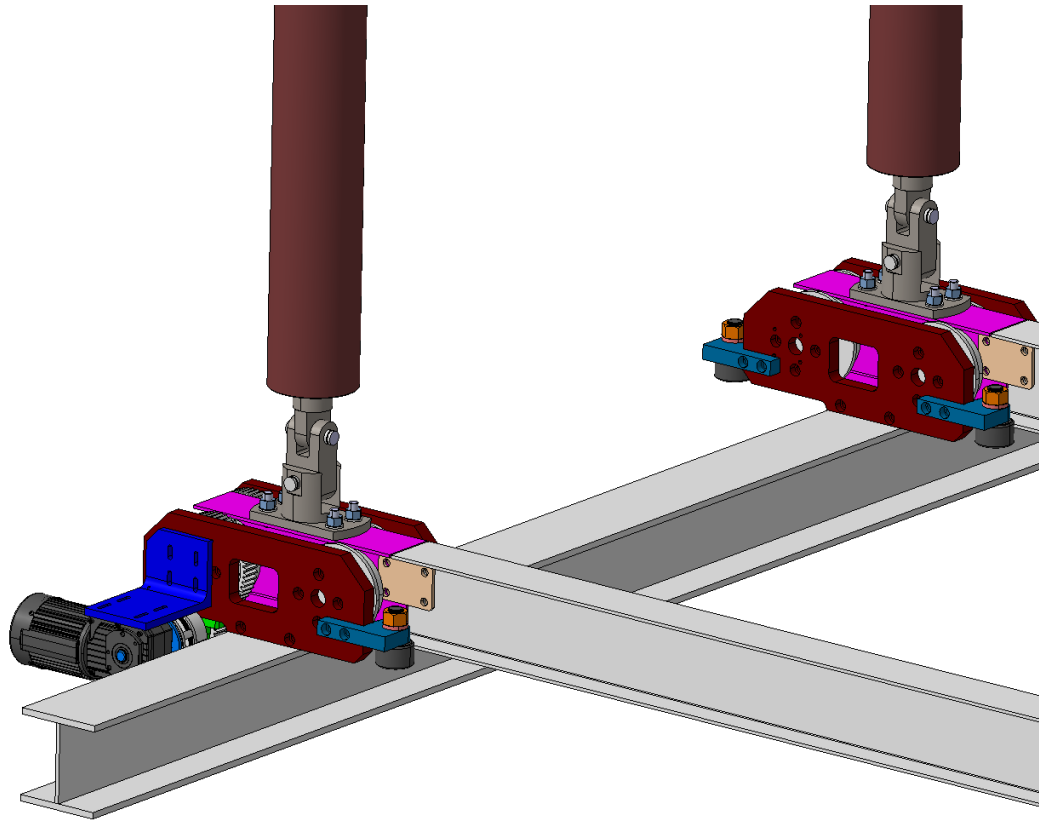
The Feedthrough



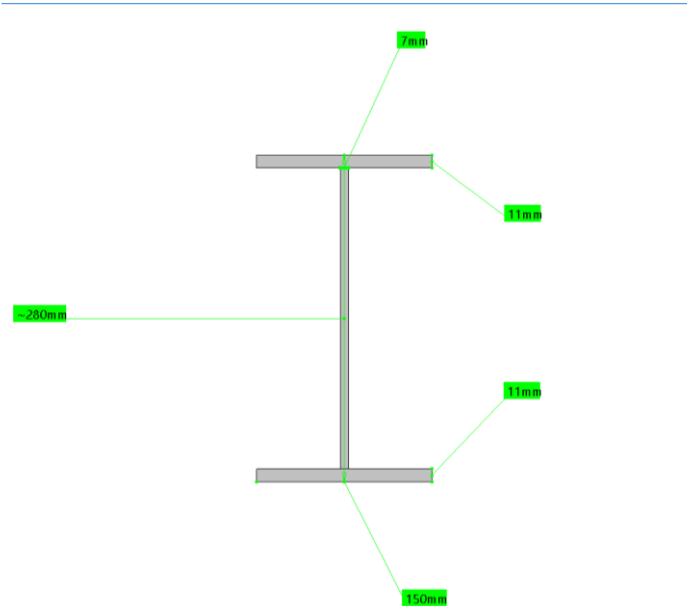
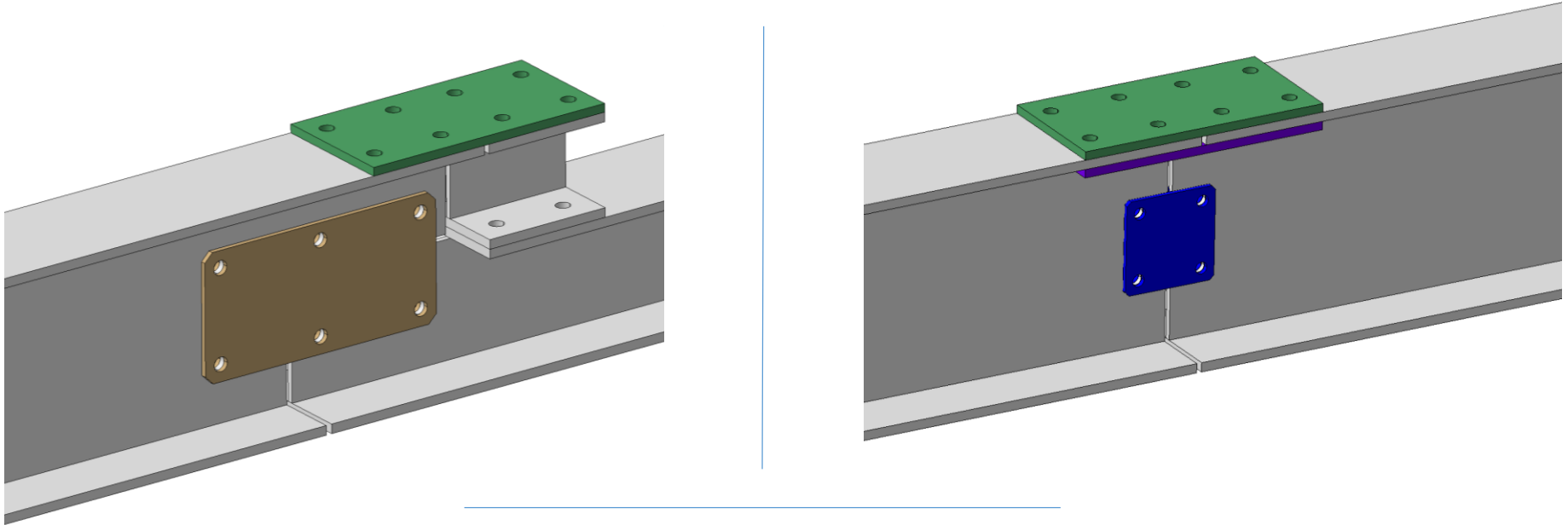
Feedthrough – to – Roof



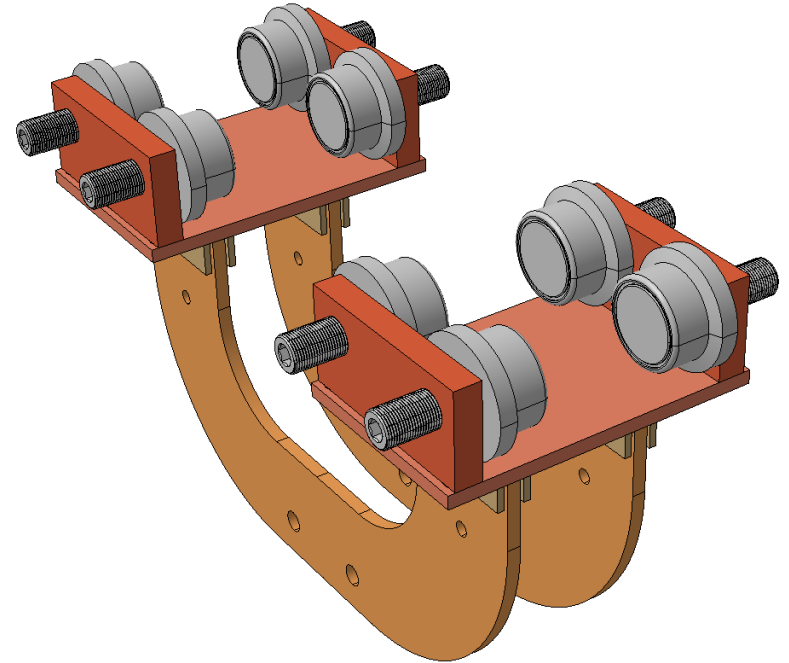
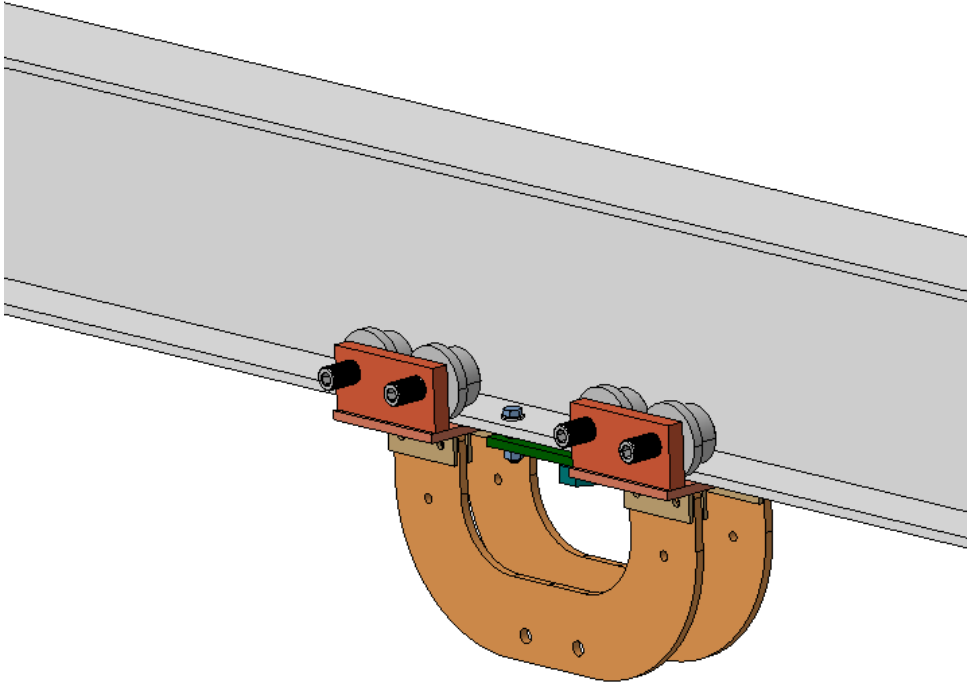
Feedthrough – to – DSS



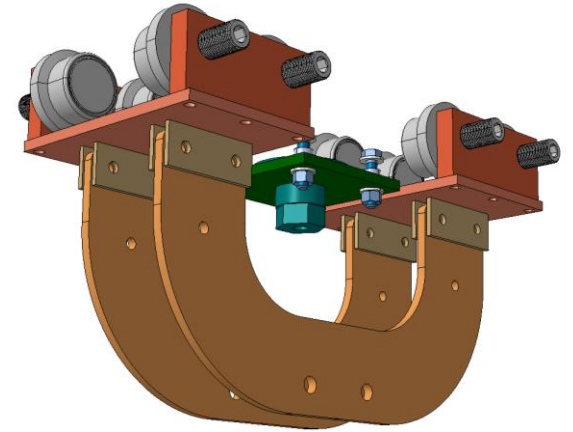
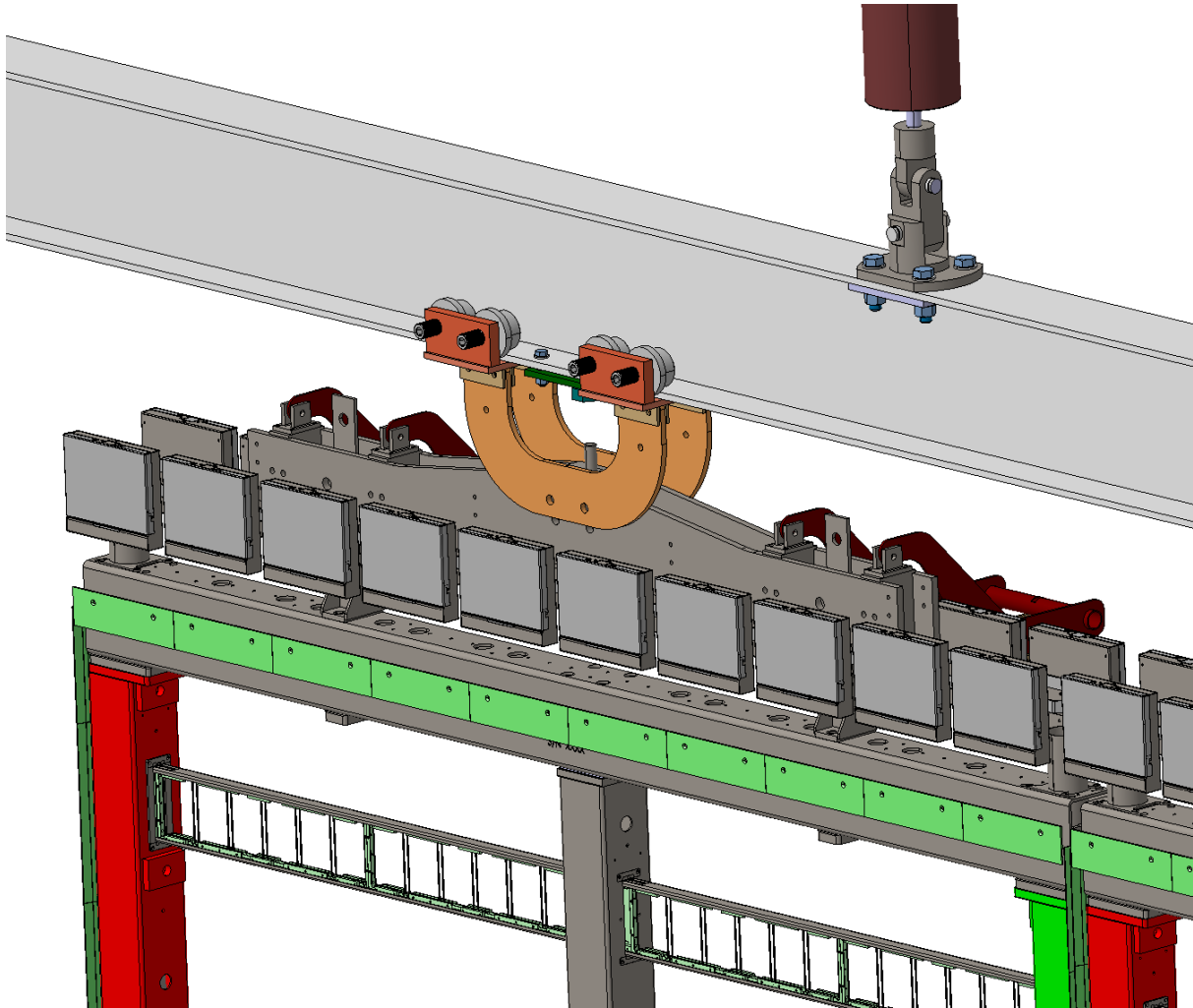
DSS – to – DSS



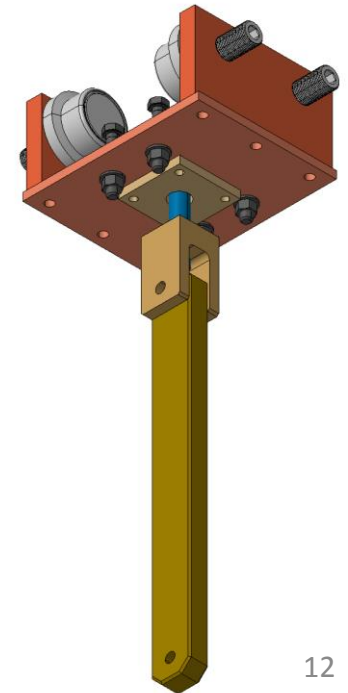
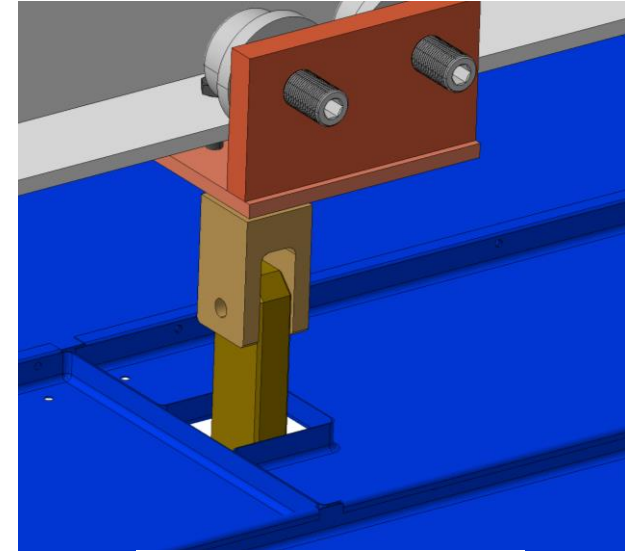
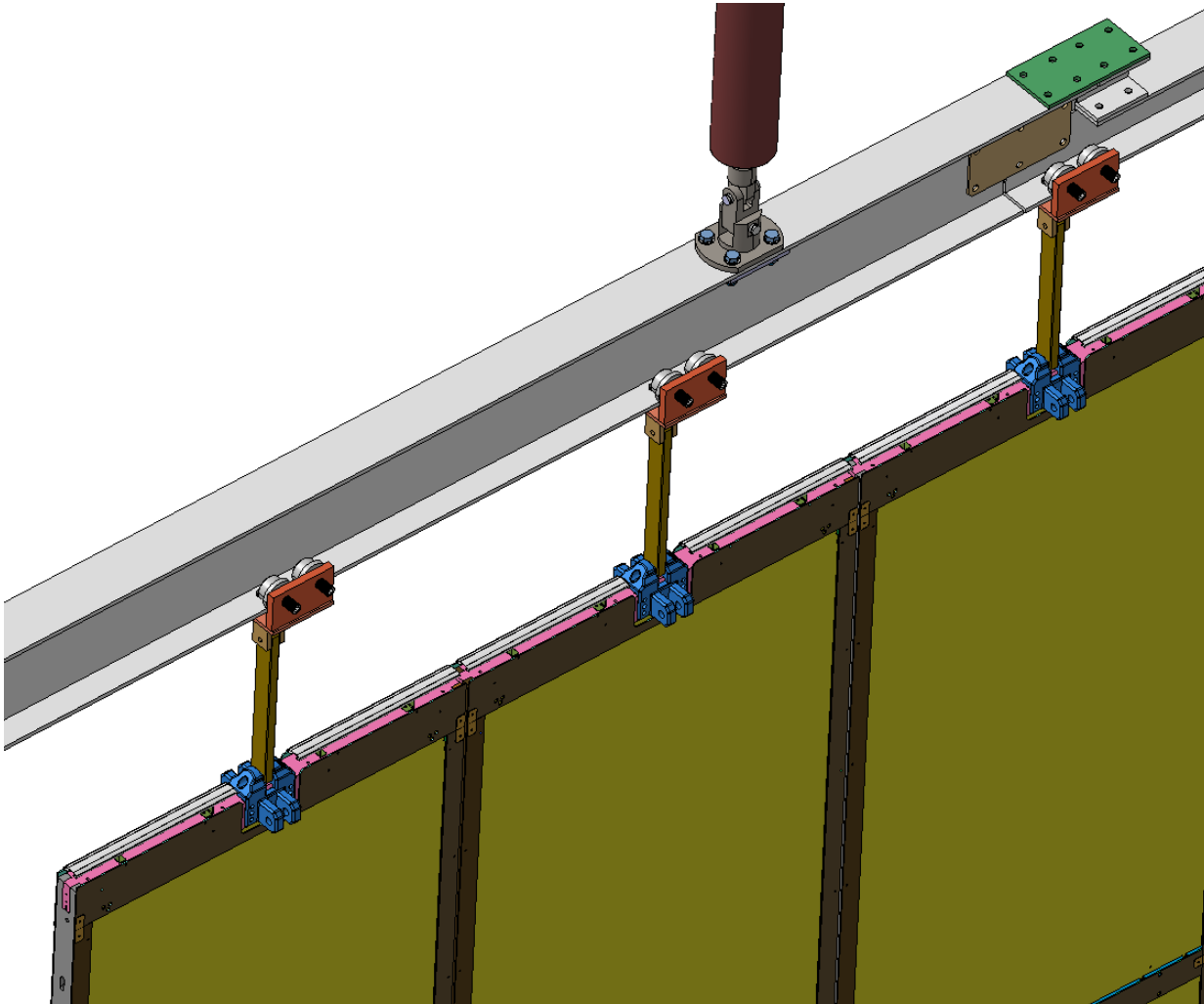
DSS – to – Yoke (APA Trolley)



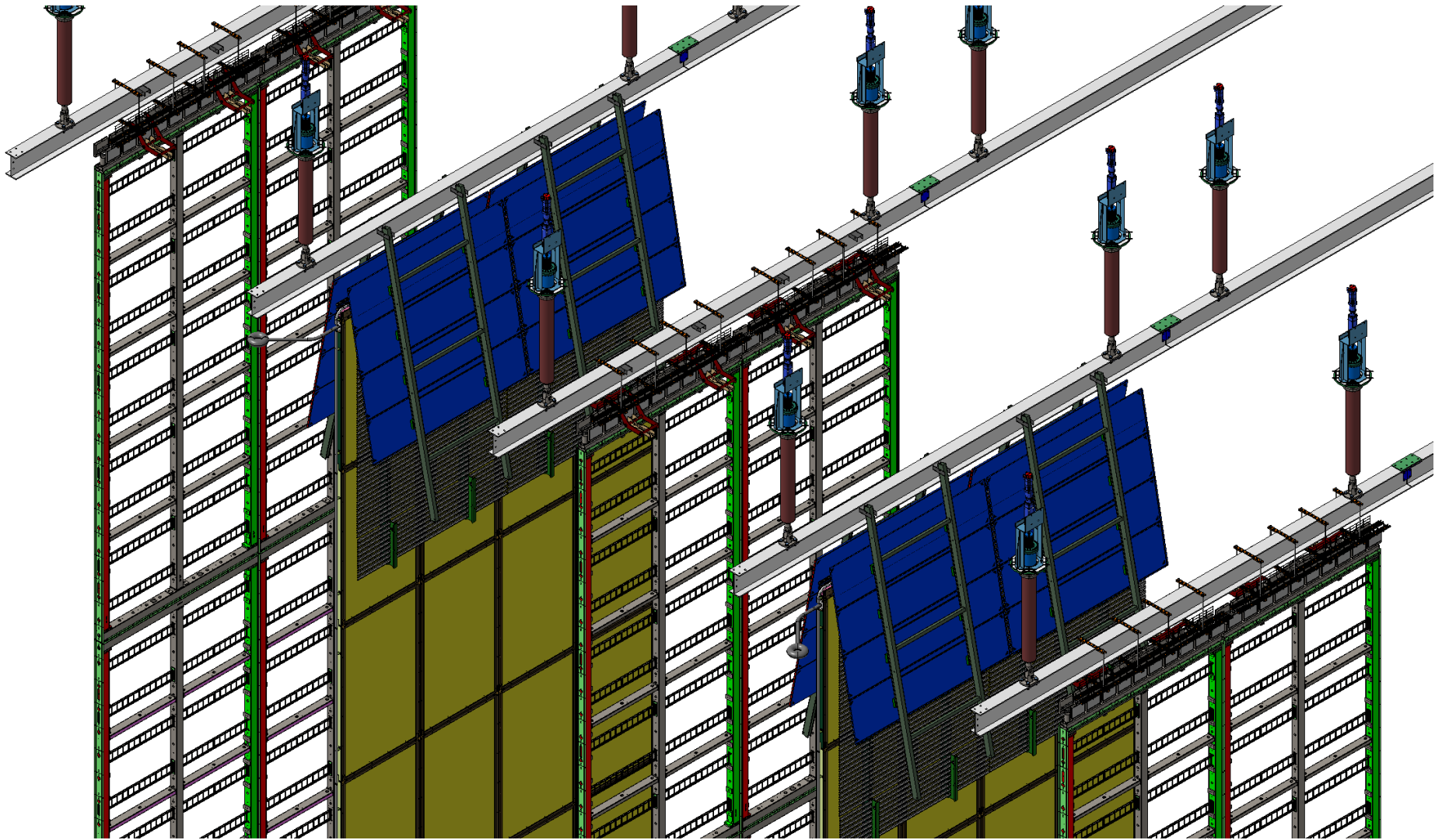
DSS – to – Yoke (APA Trolley)



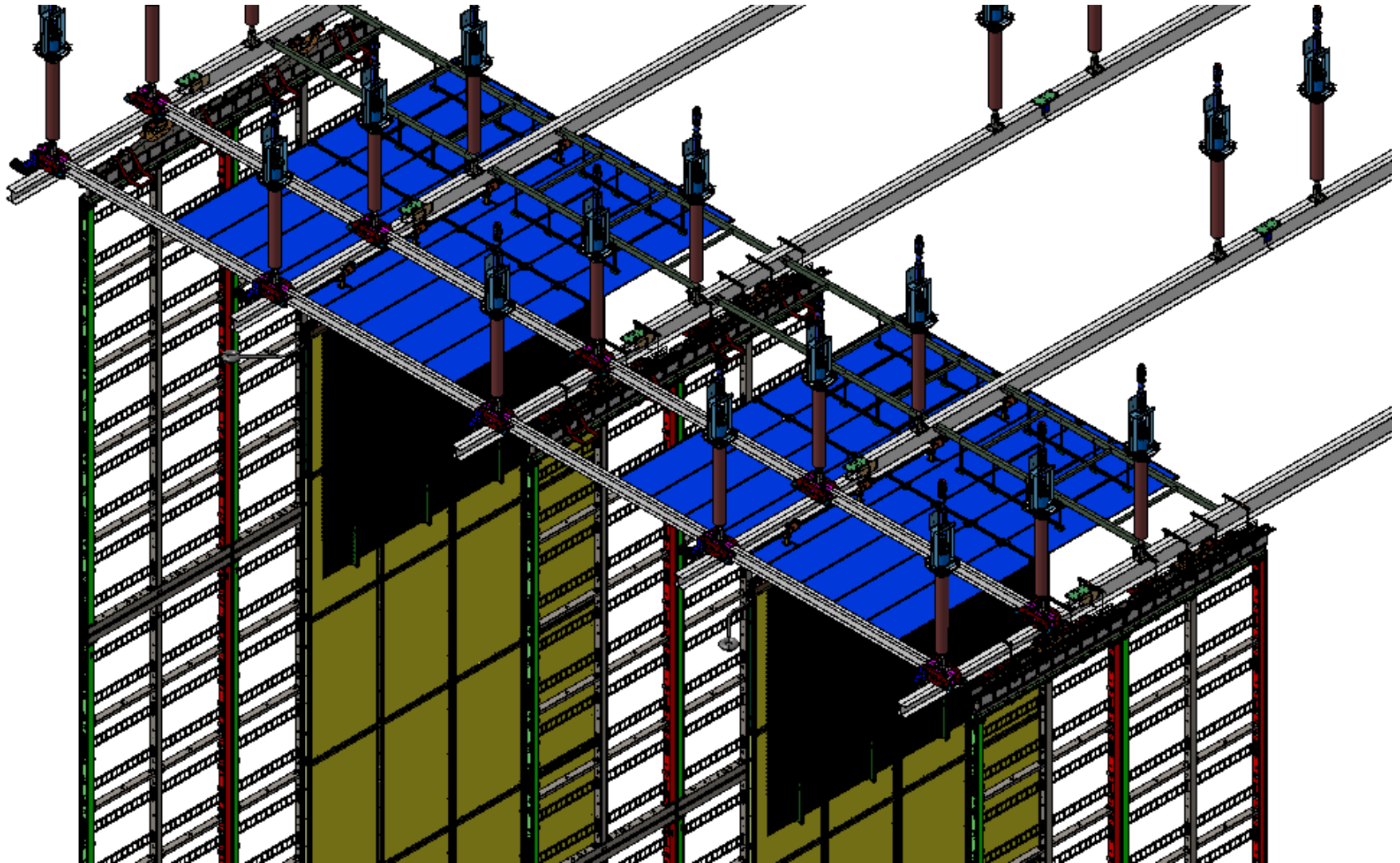
DSS – to – CPA (CPA Trolley)



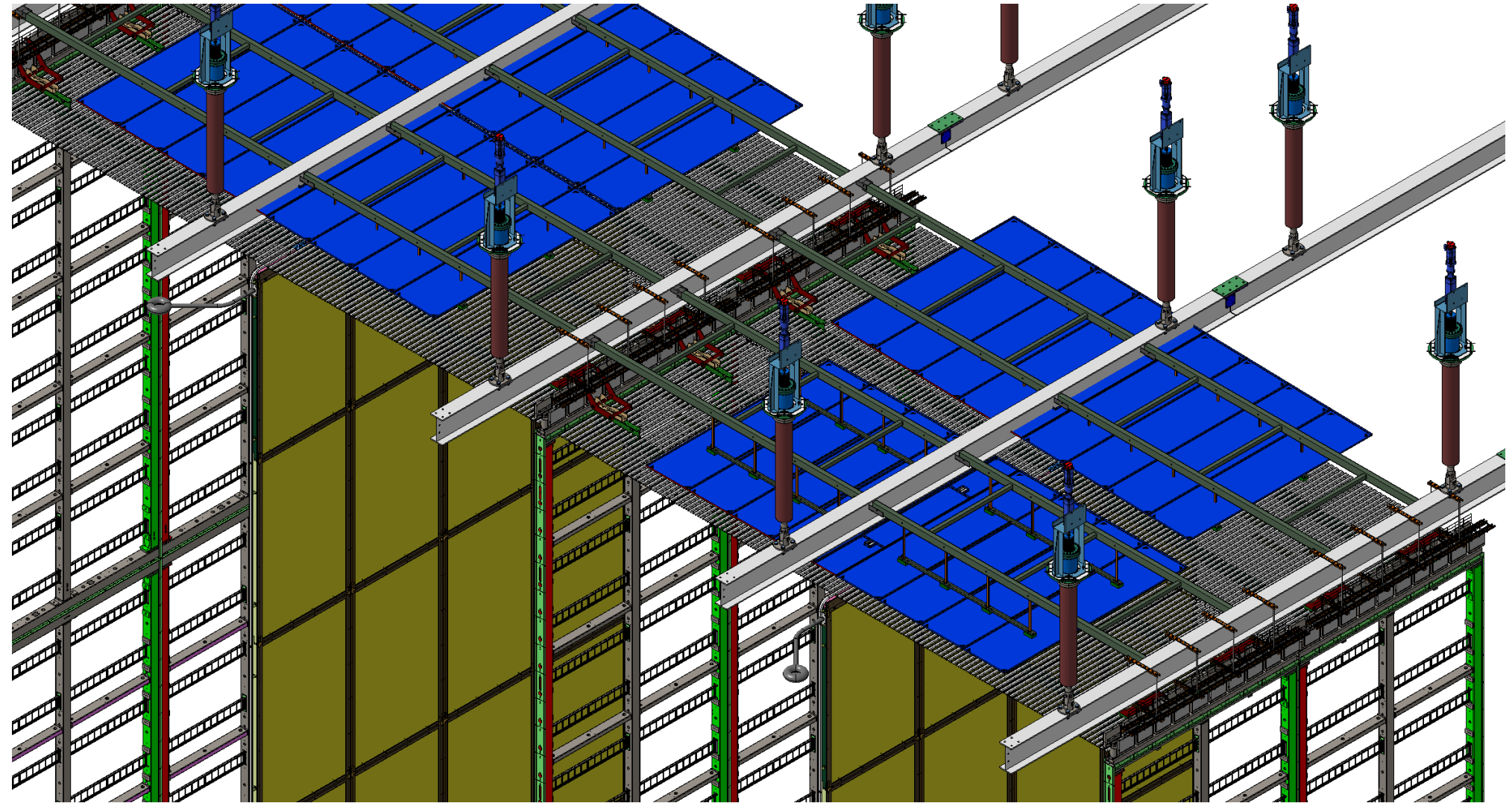
DSS – to – GP



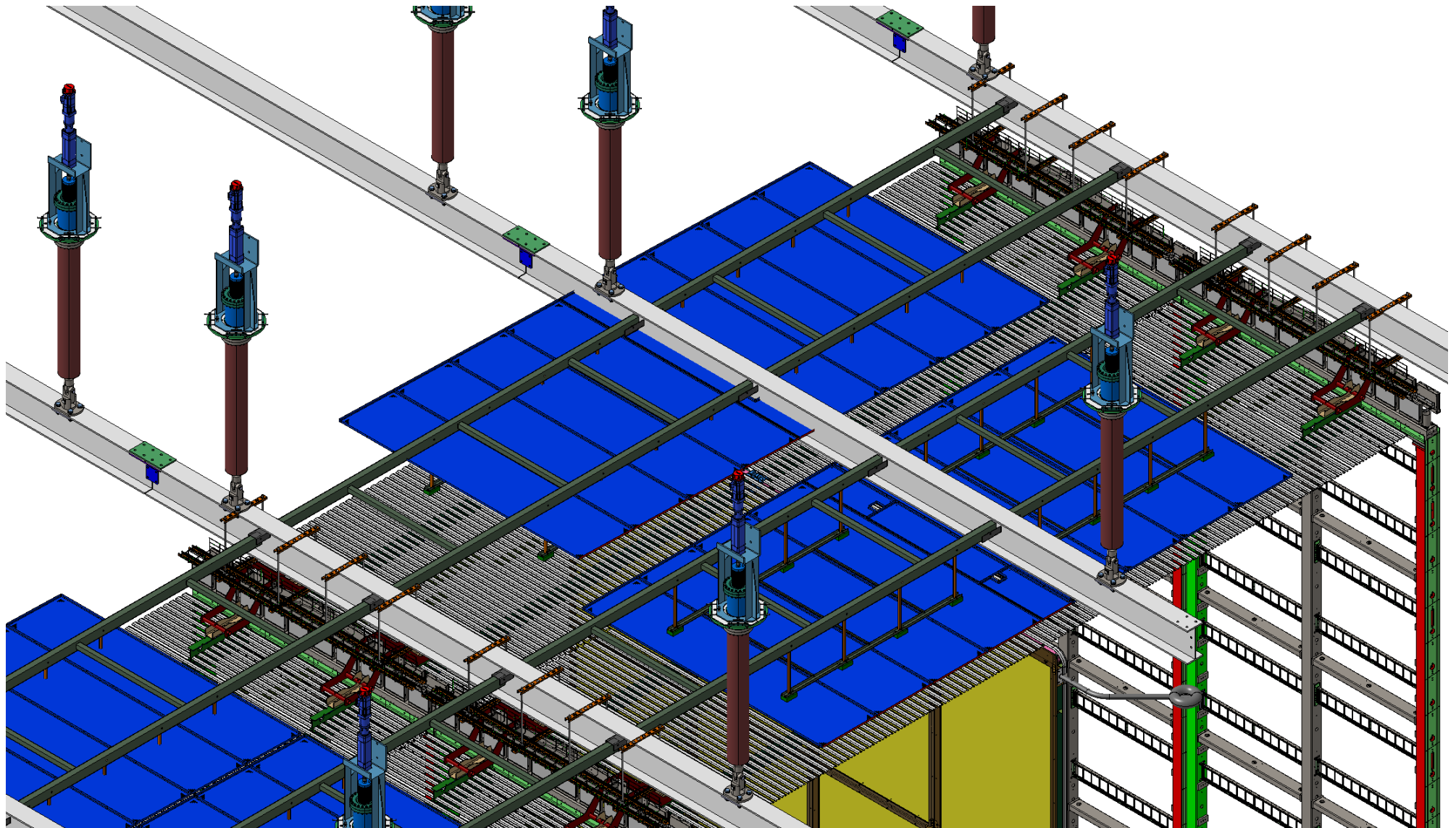
DSS – to – GP



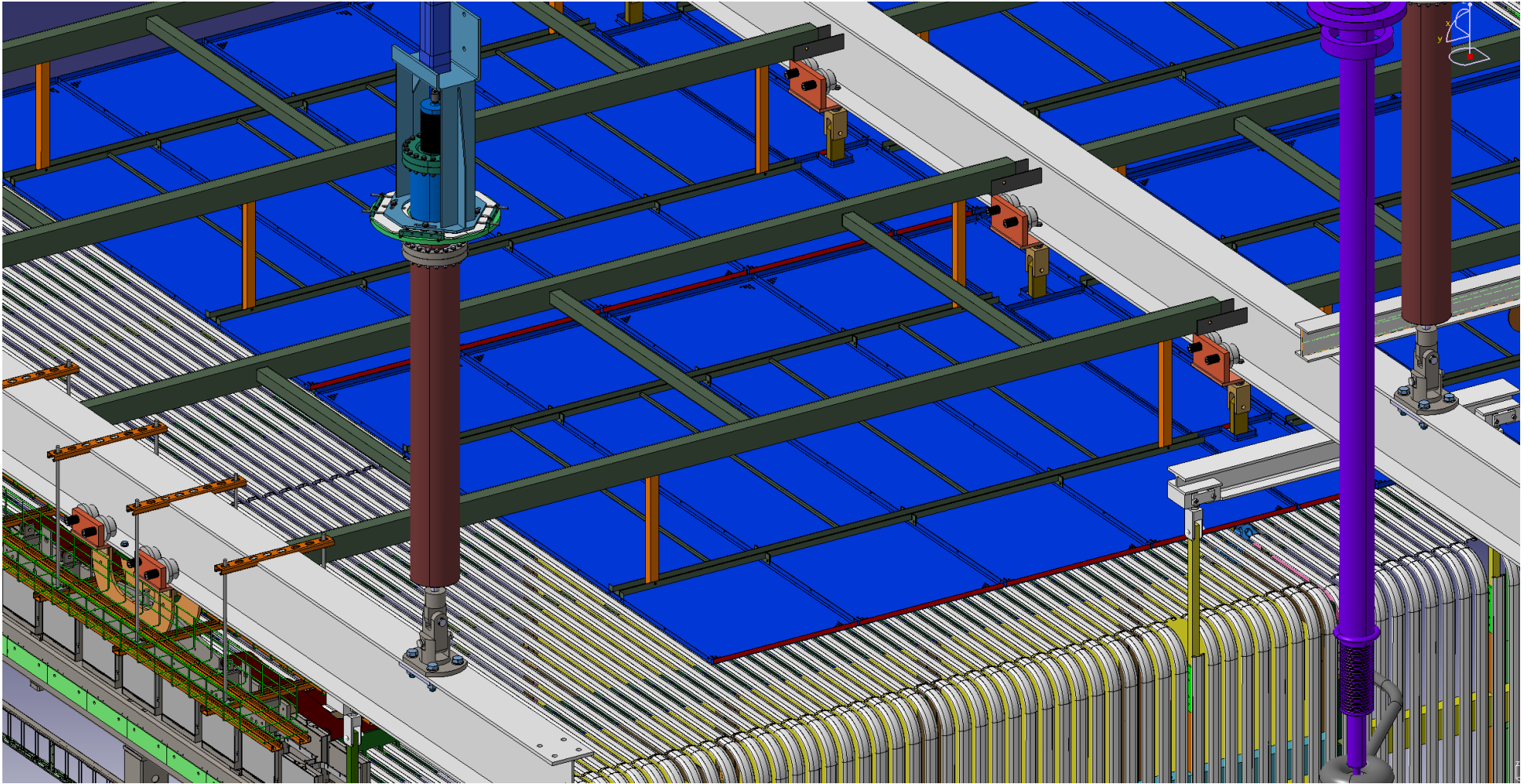
DSS – to – GP



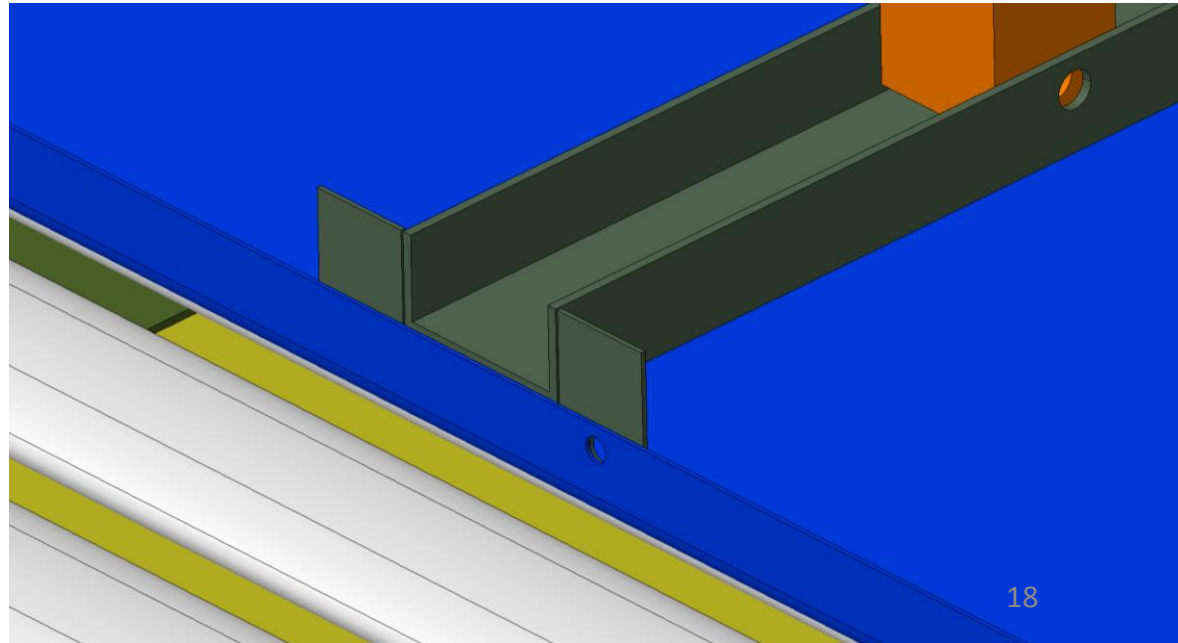
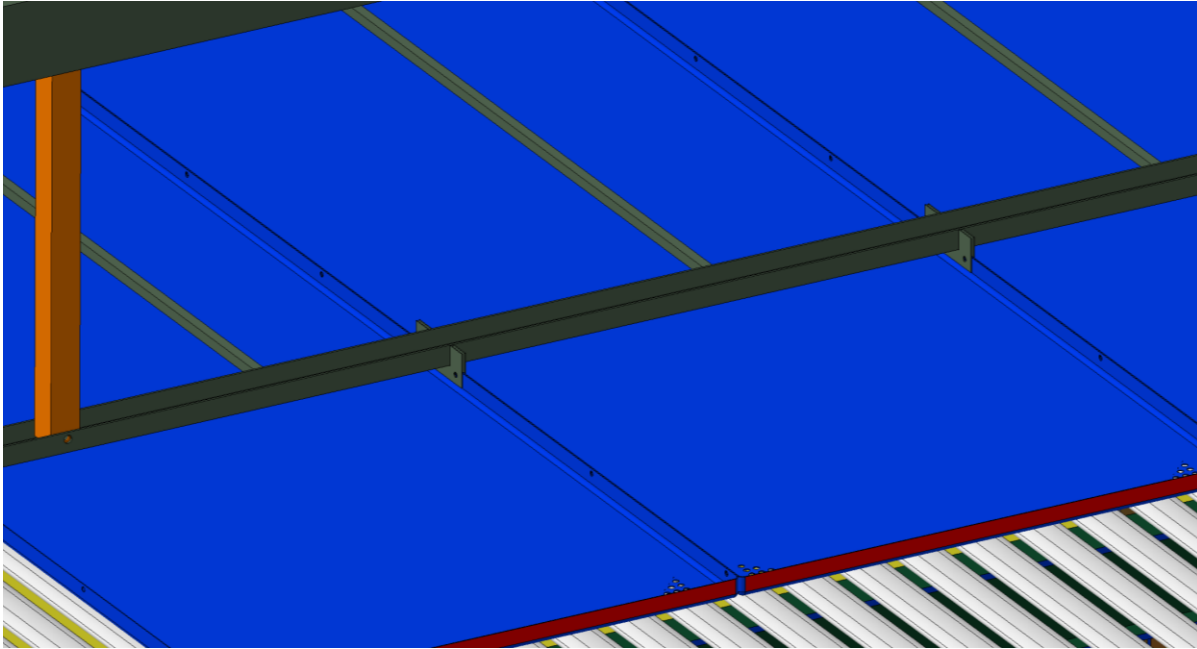
DSS – to – GP



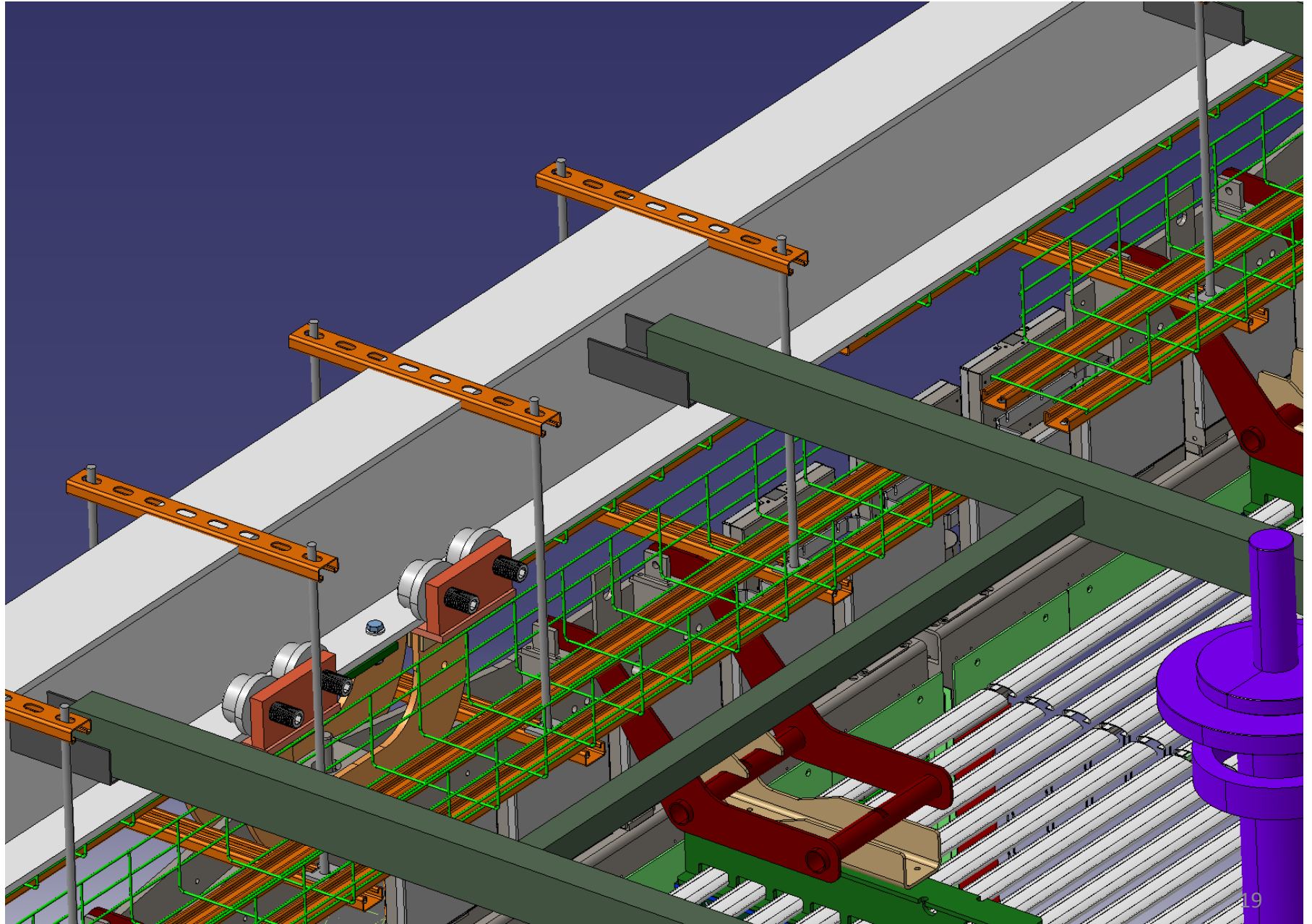
DSS – to – GP



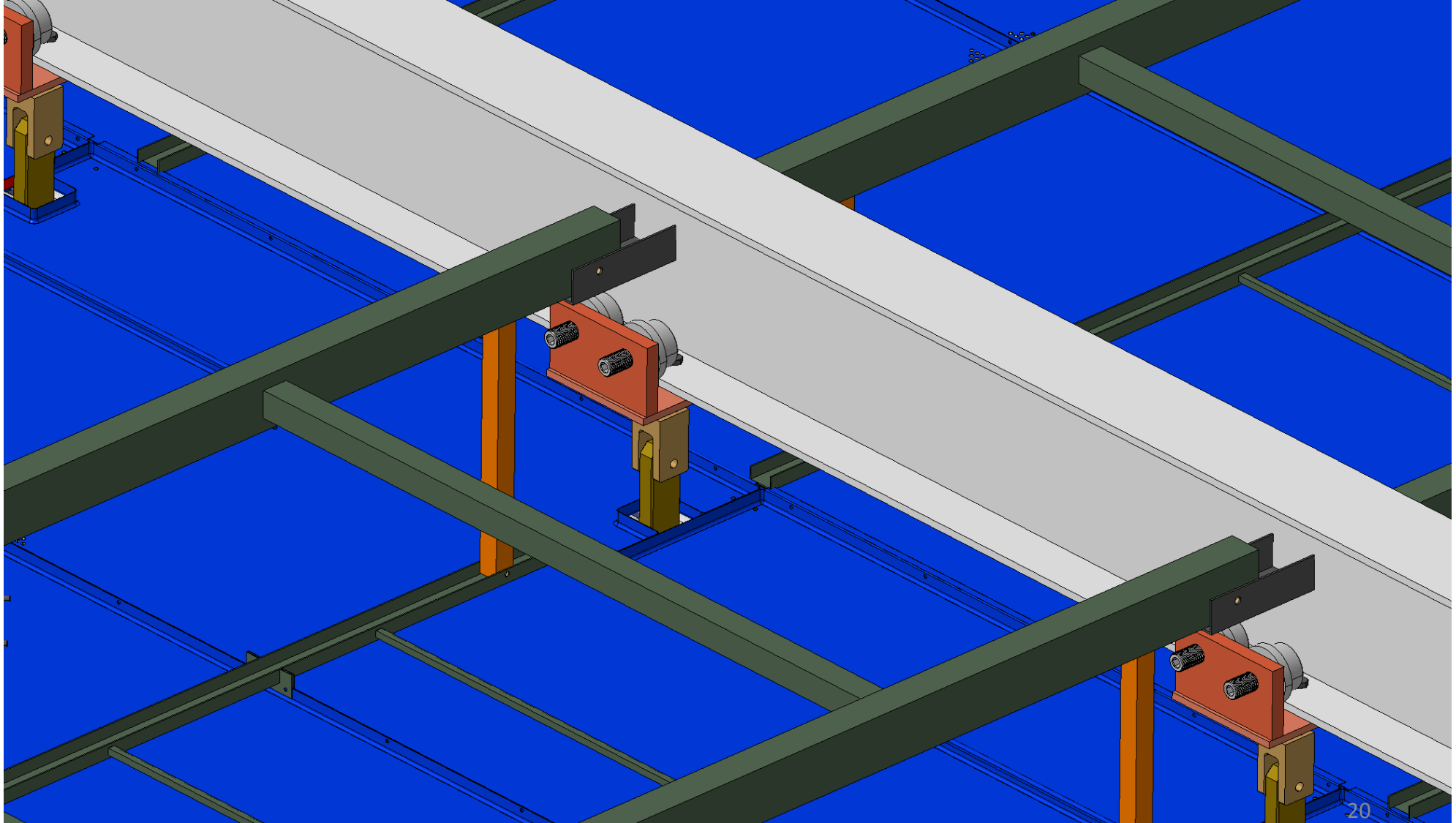
DSS – to – GP



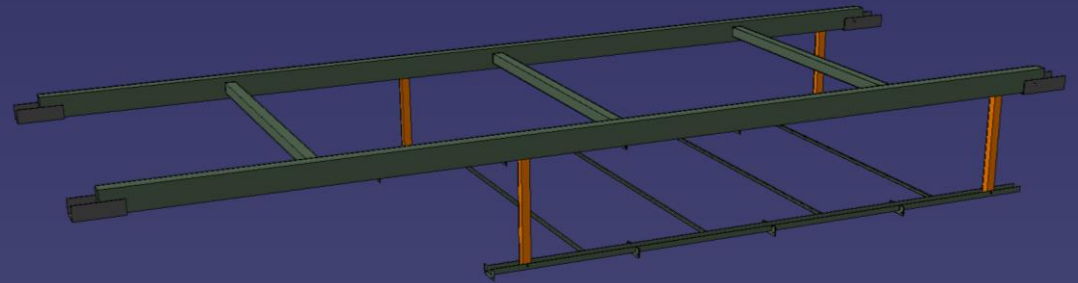
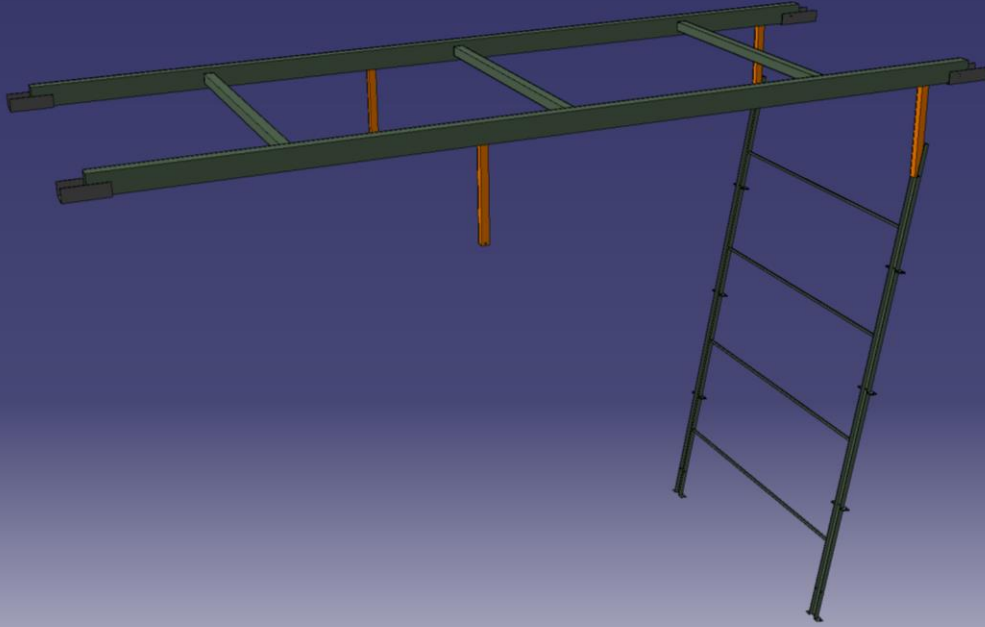
DSS – to – GP



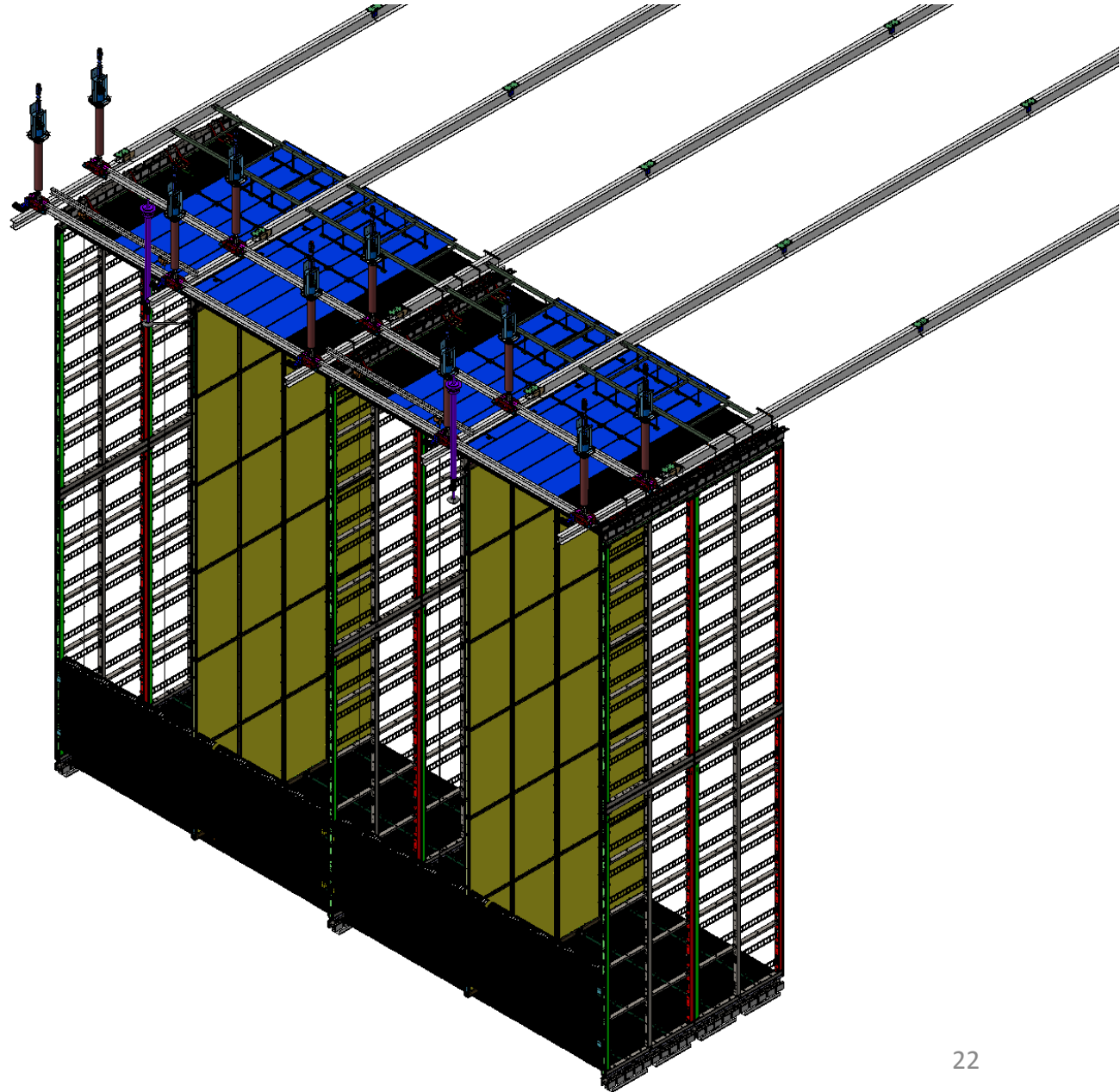
DSS – to – GP



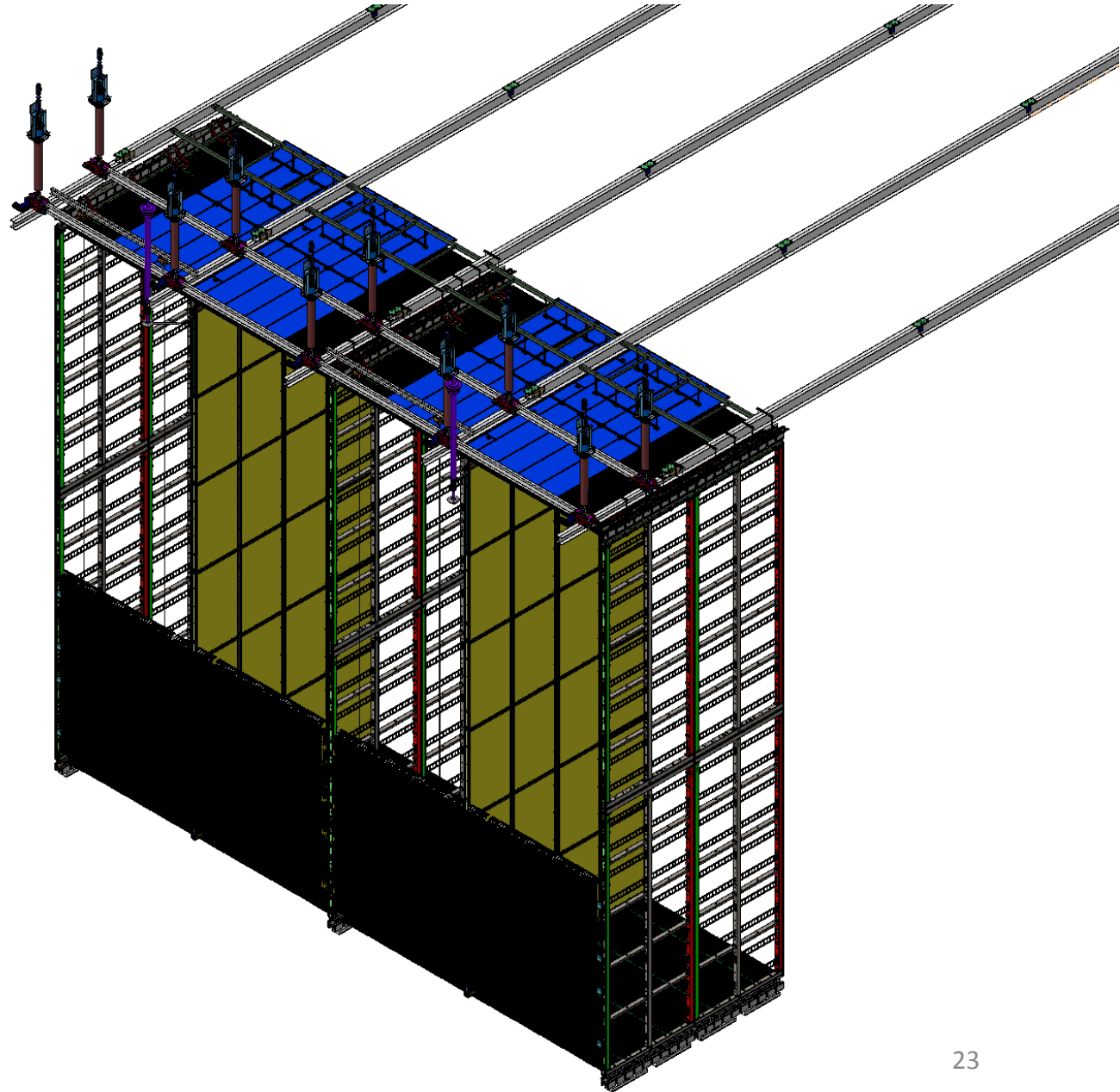
DSS – to – GP



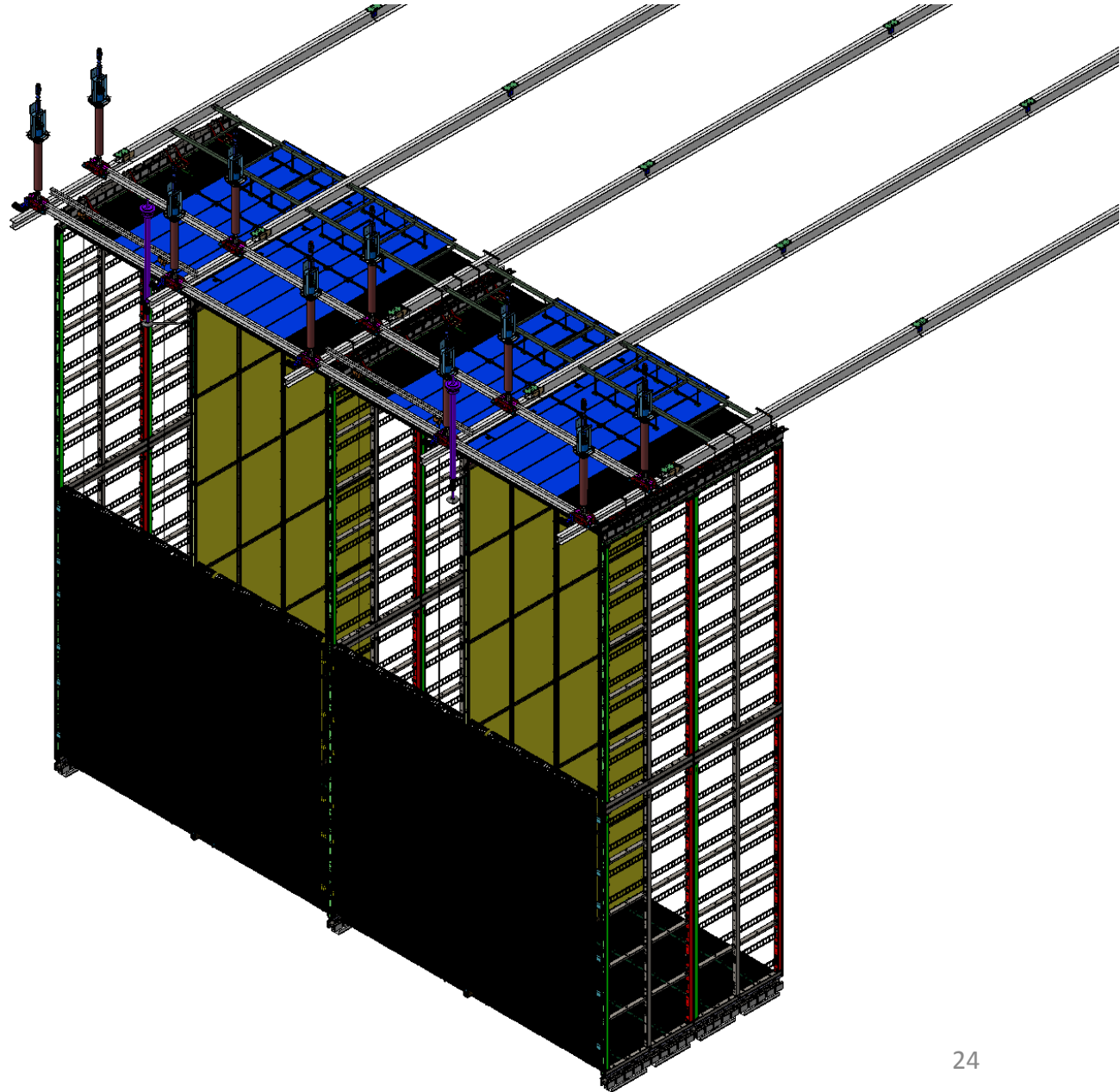
End Wall – Installation



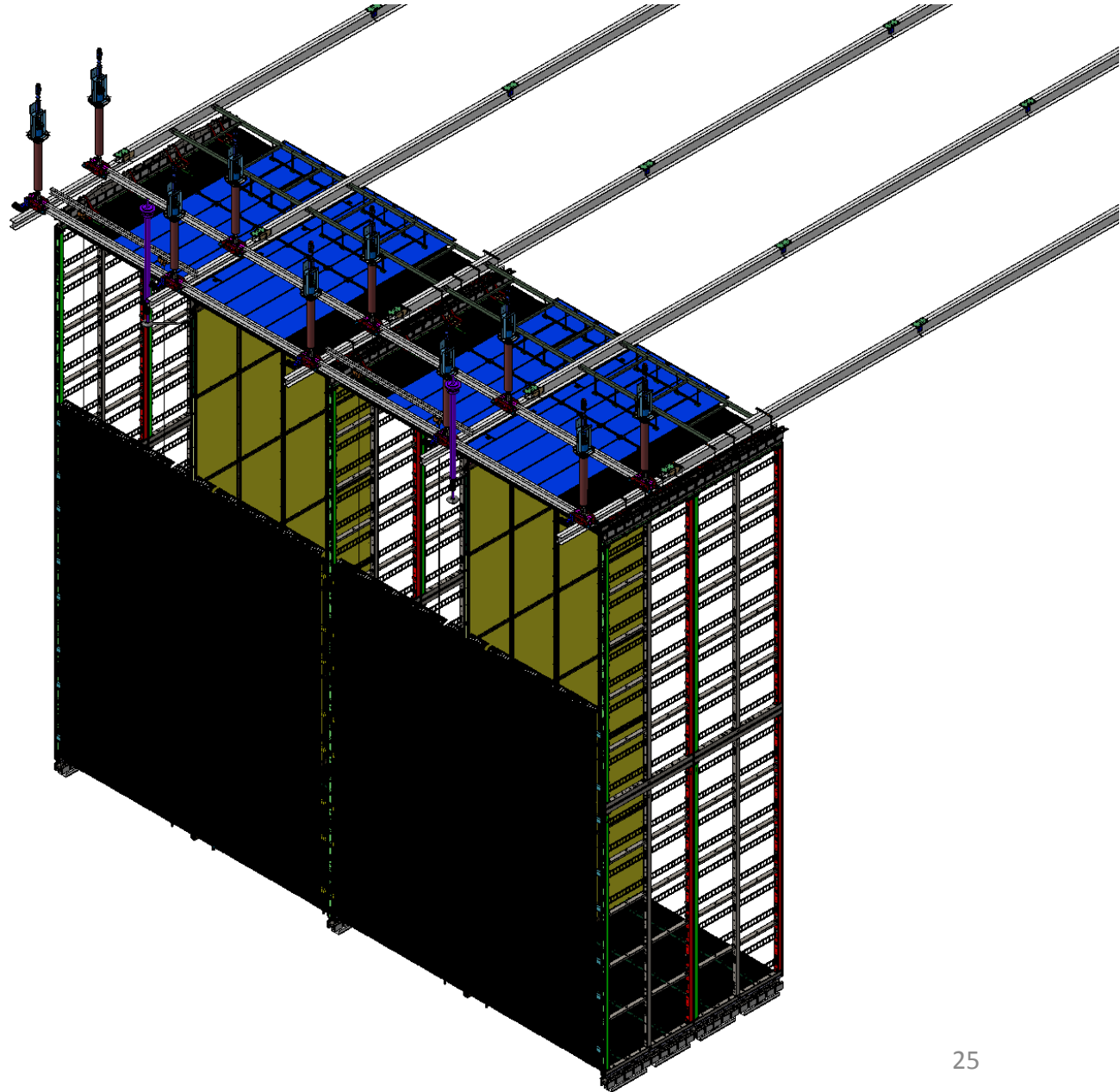
End Wall – Installation



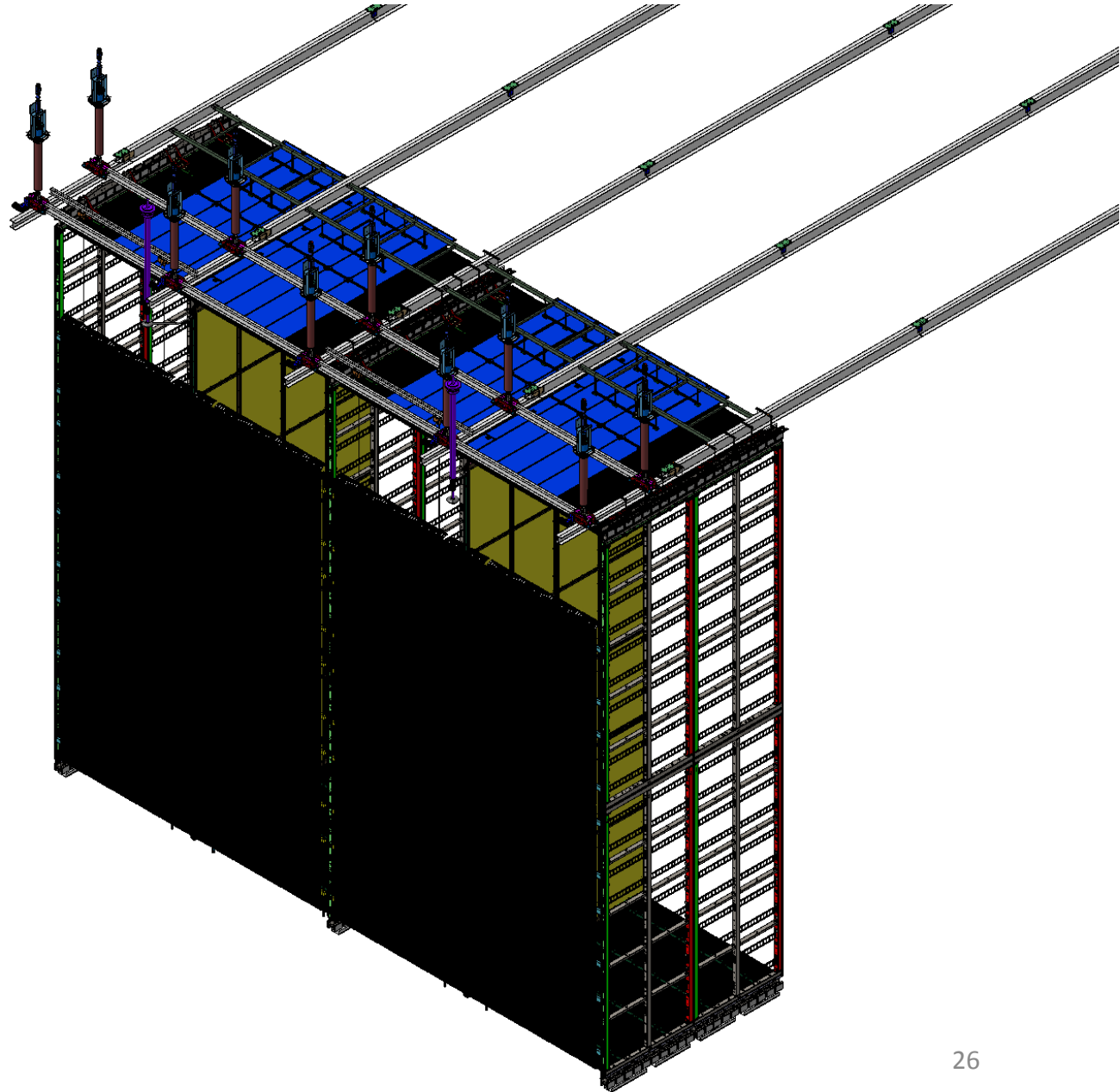
End Wall – Installation



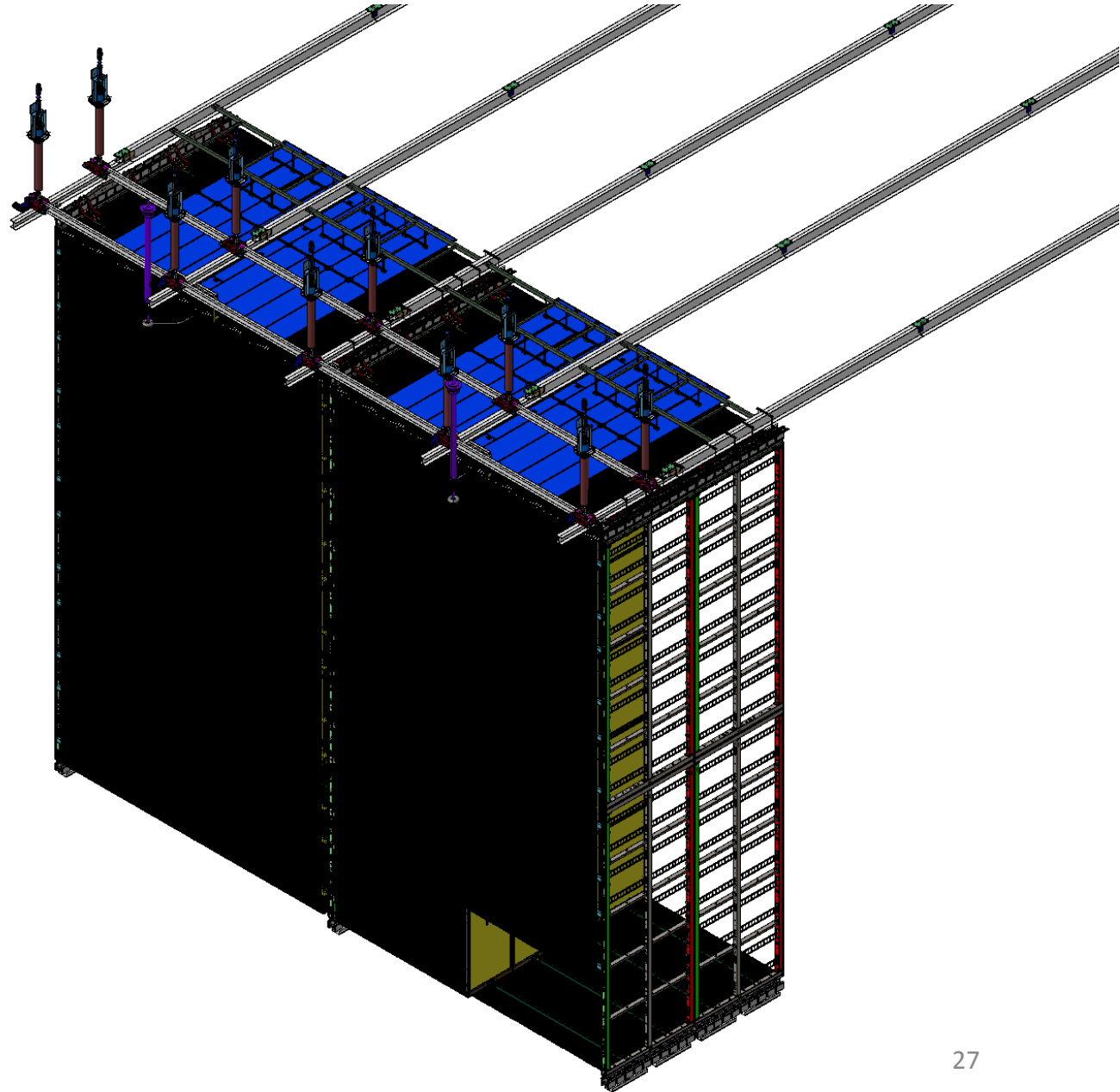
End Wall – Installation



End Wall – Installation



End Wall – Installation



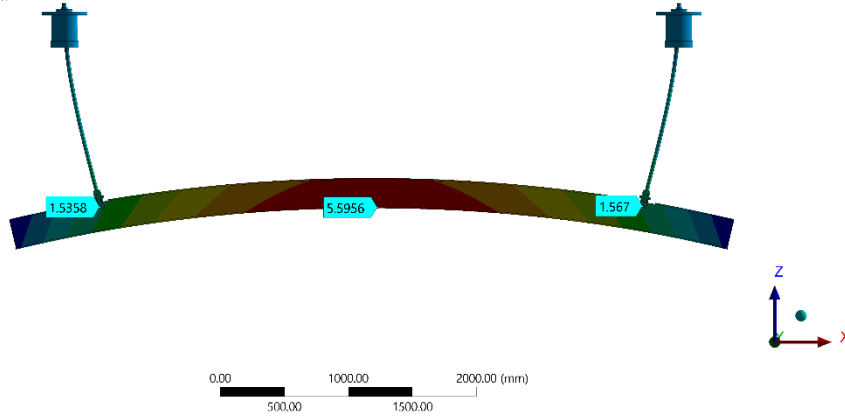
Thank you!

DSS Rail - Deformations

D: Static Structural

Directional Deformation
Type: Directional Deformation(Z Axis)
Unit: mm
Global Coordinate System
Time: 1
18/11/2019 16:55

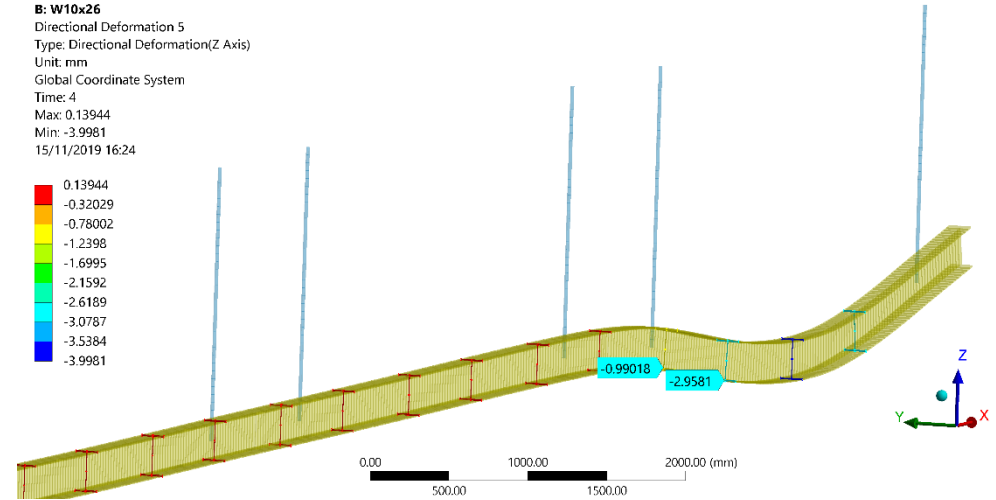
5.5973 Max
4.8155
4.0338
3.252
2.4703
1.6885
0.90677
0.12502
-0.65673
-1.4385 Min



B: W10x26

Directional Deformation 5
Type: Directional Deformation(Z Axis)
Unit: mm
Global Coordinate System
Time: 4
Max: 0.13944
Min: -3.9981
15/11/2019 16:24

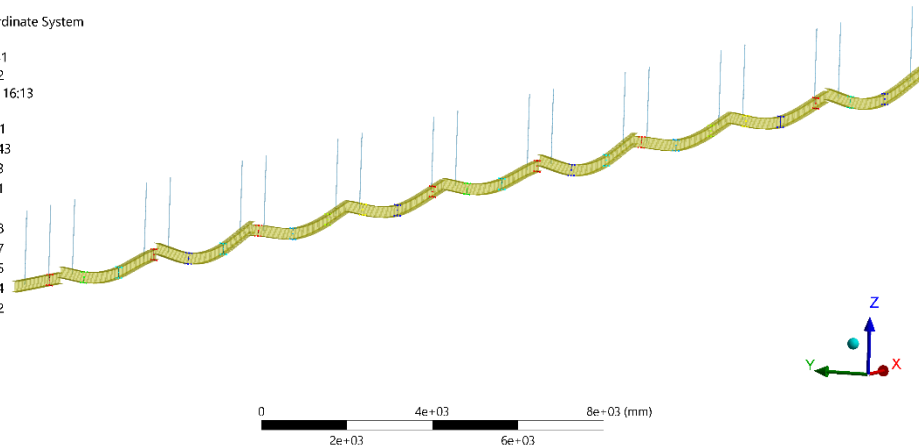
0.13944
-0.32029
-0.78002
-1.2398
-1.6995
-2.1592
-2.6189
-3.0787
-3.5384
-3.9981



B: W10x26

Vertical Deformation, APAs@Final Position
Type: Directional Deformation(Z Axis)
Unit: mm
Global Coordinate System
Time: 62
Max: 0.15641
Min: -5.3952
15/11/2019 16:13

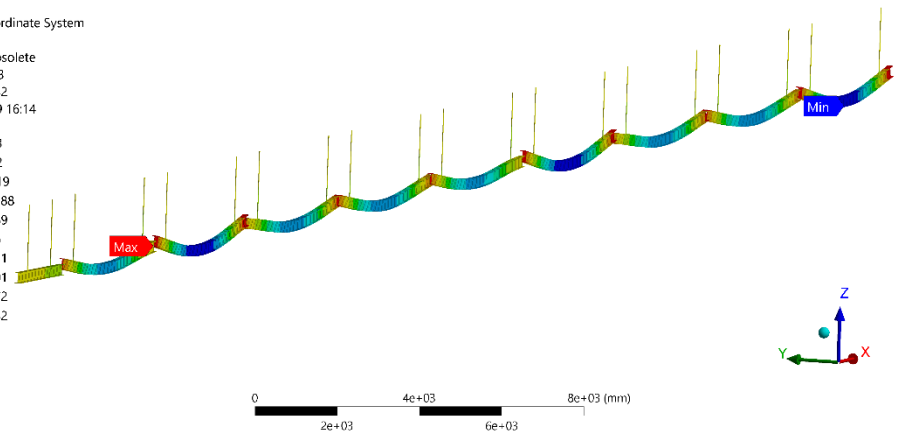
0.15641
-0.46043
-1.0773
-1.6941
-2.311
-2.9278
-3.5447
-4.1615
-4.7784
-5.3952



B: W10x26

Directional Deformation
Type: Directional Deformation(Z Axis)
Unit: mm
Global Coordinate System
Time: 62
Custom Obsolete
Max: 2.5093
Min: -5.9242
15/11/2019 16:14

2.5093
1.5722
0.63519
-0.30188
-1.2389
-2.176
-3.1131
-4.0501
-4.9872
-5.9242



DSS Rail - Deformations

2mm
rail misalignment

