Step 1-1: Arrangement for equipment in the pre- assembly hall.

. Ground outline for MST I/A and I/B and II: Lenght x Width = at the least 34 m x 21 m

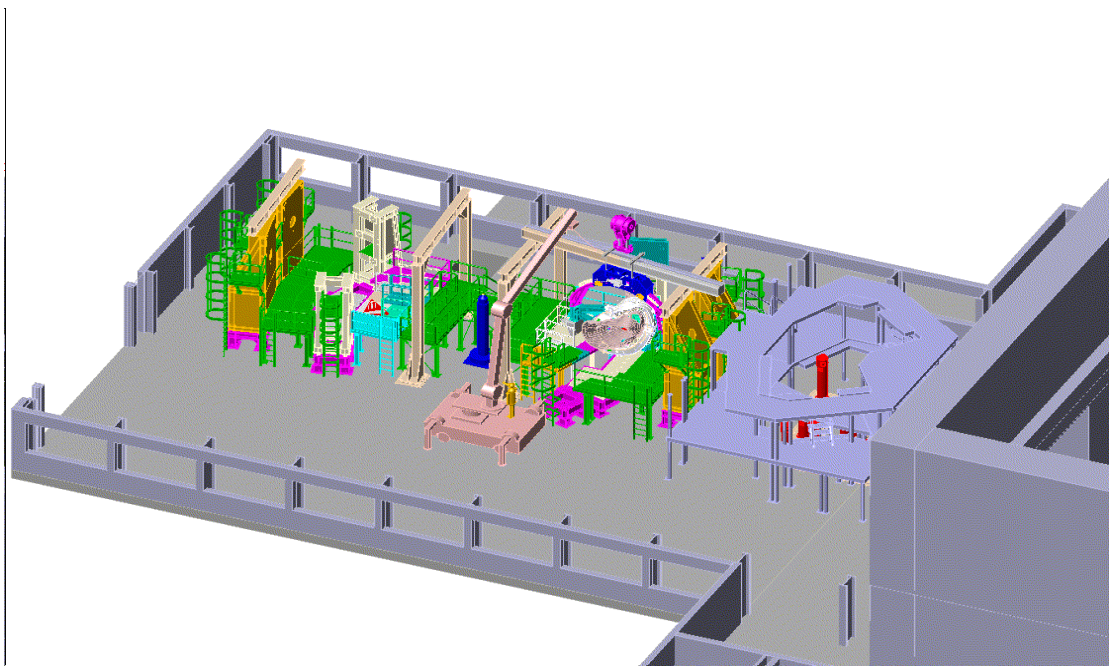


Figure 1: CAD- calculation of required space for mounting operation.

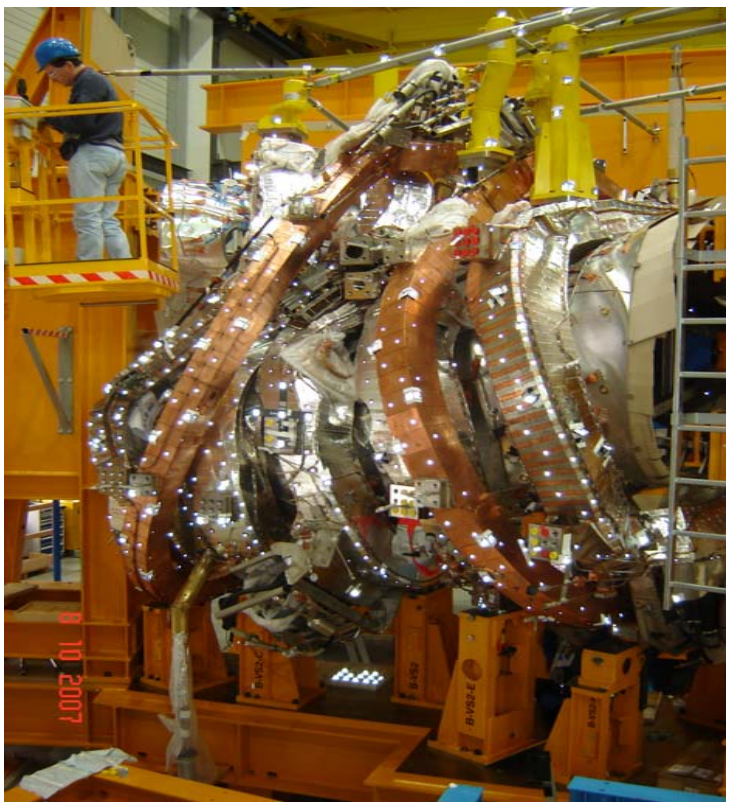


Figure 2: The mounting-stand I/B with the coilsystem.

STEP 1-2: CORRECT ASSEMBLY- SEQUENCE IN THE PRE-ASSEMBLY-HALL (HM)

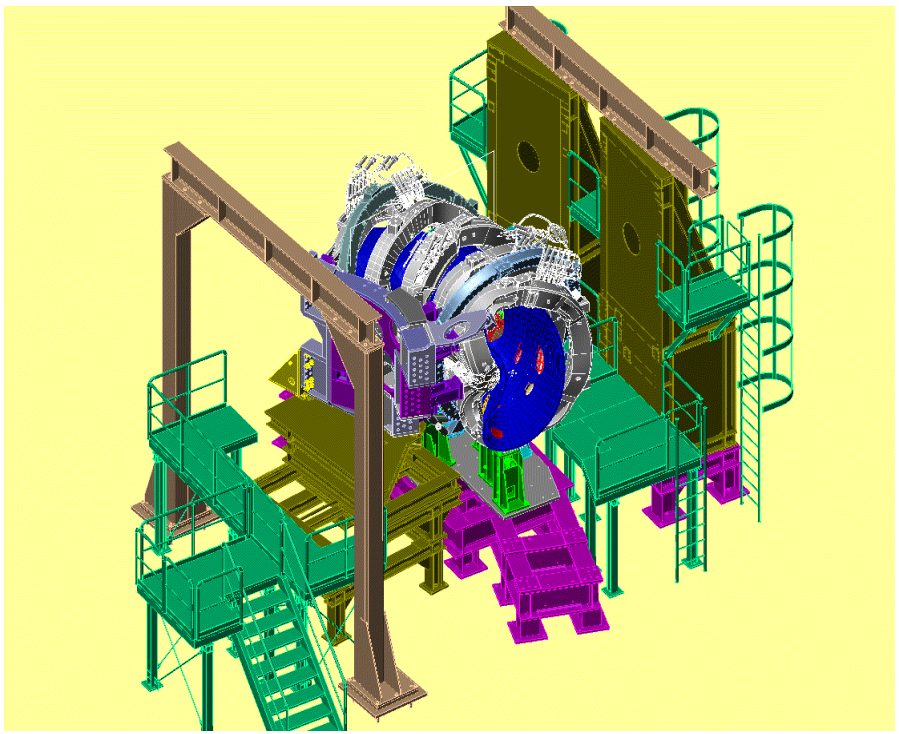


Figure 3: The half-module is disposed for transport process.

1. HS02 – Sector + Thermal insulation-panel 1
2. NPC3 (THREADING)/ NSE-CASTING (Presentation and Application in the LAB)+ SPRAYING+ NSE-Manufactoring
3. HS01- sector + Thermal insulation-panel 2
4. NPC 4 (THREADING)/ NSE-CASTING+ SPRAYING + NSE-Manufactoring
5. PLC B
6. Thermal insulation-panel 3
7. NPC 5 (THREADING) /NSE-CASTING + SPRAYING + NSE-Manufactoring
9. NPC2 (THREADING)/ NSE-CASTING + SPRAYING + NSE-Manufactoring
10. PLC A
11. Thermal insulation-panel 4
12. NPC 1 (THREADING)/ NSE-CASTING + SPRAYING + NSE-Manufactoring
13. Assembly Central ring half –module + CSE.
14. Assembly LSE and PSE (Measurement- Application).

Step 1-3: Transport and Handling operations in consideration with the 100 t- overhead crane in IPP.

- Hook height: 10,44 m
- Lifting capacity: max. 100 tons (upper limit: transport modul + cross beam brace)

Figure 4: Load- and motiontests with SAE-1 and non-planar coil NPS1 in the IPP (2004)

Figure 5: HS02- sector transport with a 150 kN- flatcar. The flatcar will be used for transport between neighbouring halls.

Figure 6: Modul-Traverse

Step 1-4: PV- Support for HM- Fixation in the MST I.

Figure 7: The cross beam for sector transport is constructed by DWE MAN.

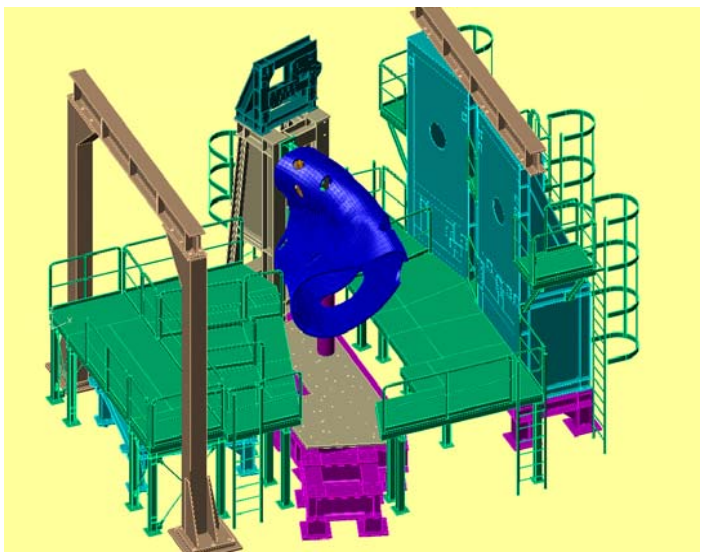


Figure 8: Transport vessel- sector HS02 inclusive 1st panel of thermal insulation with 1000 kN overhead crane in stand I/B. The weight of HS02-sector is 2,5 t. Fixing HS02 sector with a bearing flange and support pillar.

Figure 9: Real flange scenario between HS01-sector and a mechanical structure in stand I/B.

Step 1-5: Different structures for the Coil- Assembly in MST I

Figure 9: Interaction SAE-2, NPC4- Lifttraverse and headover crane (2003). SAE-2-motion training with a blue test item (mass 6000 kg)

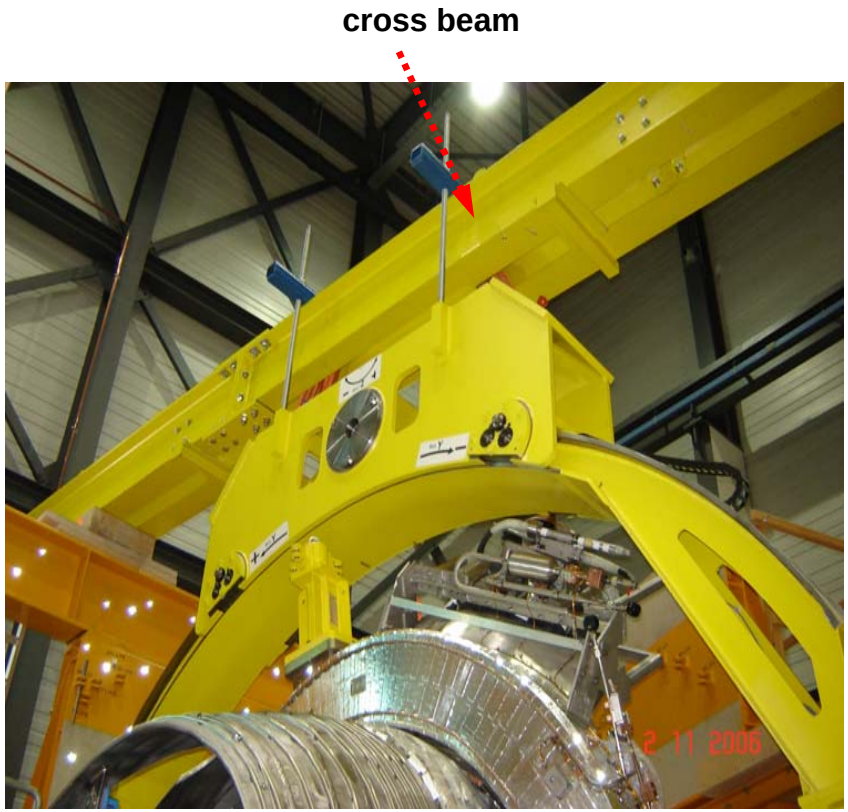


Figure 10: SAE-1 parking test without NPC3. The cross beam for coilparking is constructed by IMG, Rostock. Interaction between SAE-1, mobil crane, operating platform and headover crane.

Step 1-6: Coil- Assembly NPS4 and NPS5 for HM.

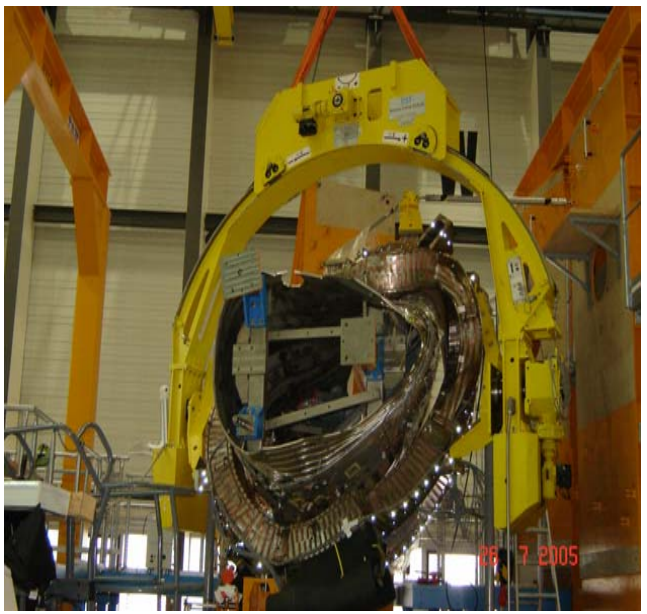


Figure 11: Assembly heat insulation-sector 2 at plasma vessel. Crane handling NPC4 with SAE-1 and NPC4 -Fixing in the final position.

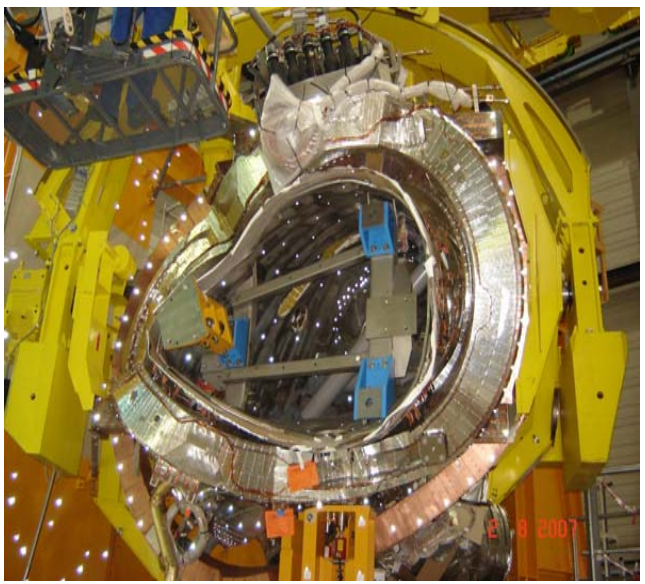


Figure 12: Threading NPS 5 with SAE-1 in the endposition.

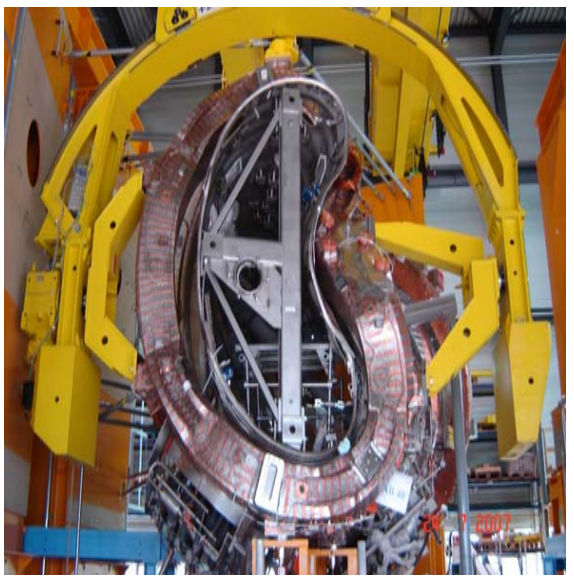


Figure 13: Fixing NPC1 in the end position (stand I/B).

Step 1-7: Assembly of the Central- Ring- structure for the HM.

Figure 14: Assembly of the CSE for the connecting the coilsystem with central ring with bolts.

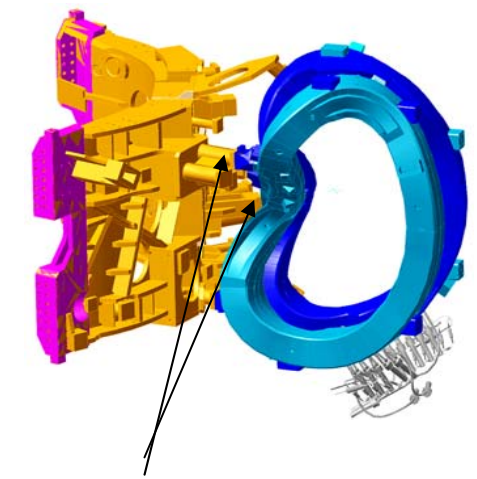


Figure 15: Set up test for the central ring- semi- module onto linear sliding frame. The weight for central ring- semi-modul is 7,2 tons.

Step 1-8: Assembly of the LSE and PSE for the coilsystem

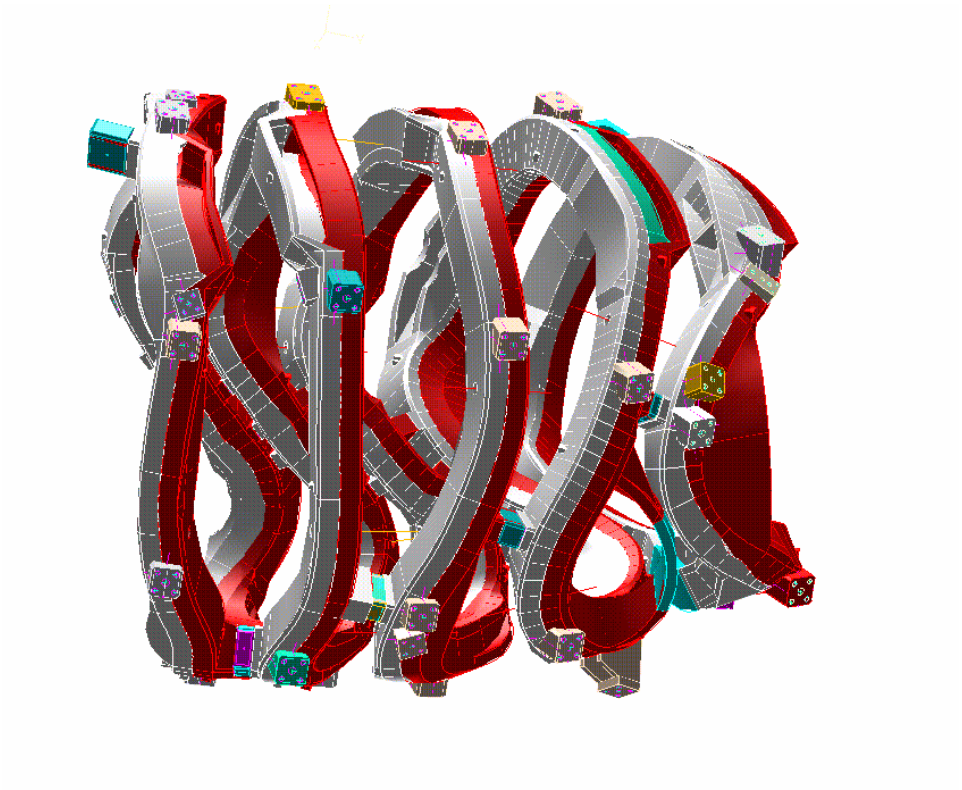


Figure 16: We need 4 lateral supports per half-module. This are also welding joints.

Step 2-1: HM- Transportprocess. Fixation the PV in coilsystem.

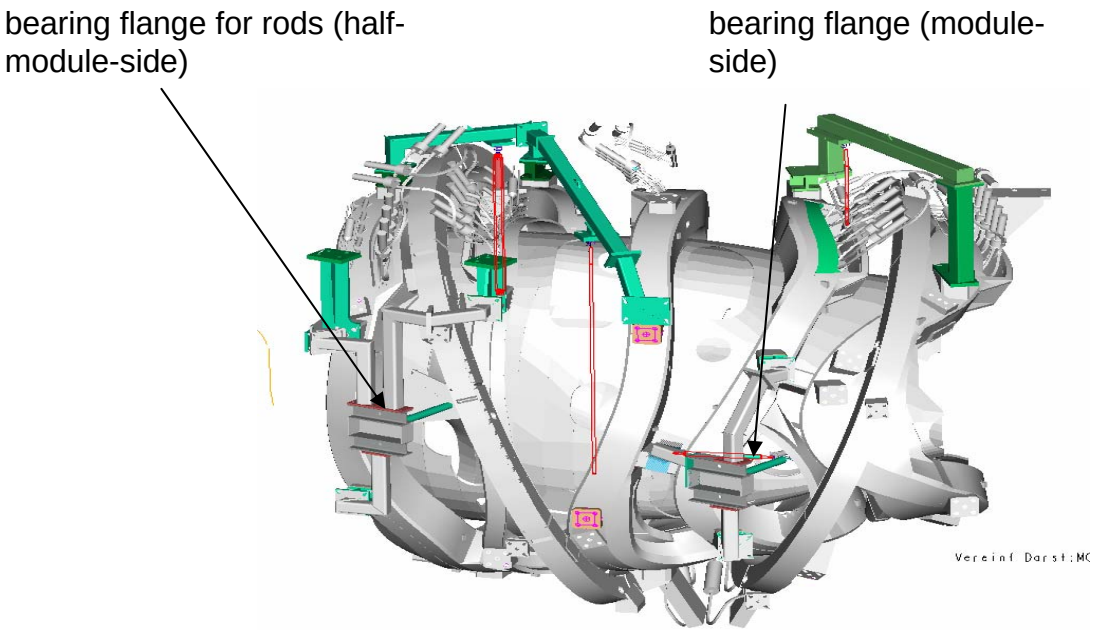


Figure 17: Installation rod-link-system and suspension elements at the non-planar coils NPC 1,2,3,4,5 for plasma- vessel transport.

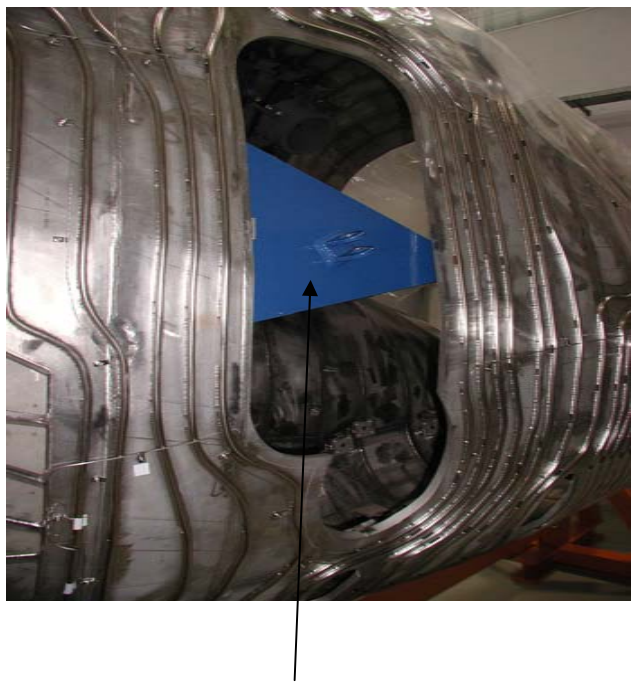
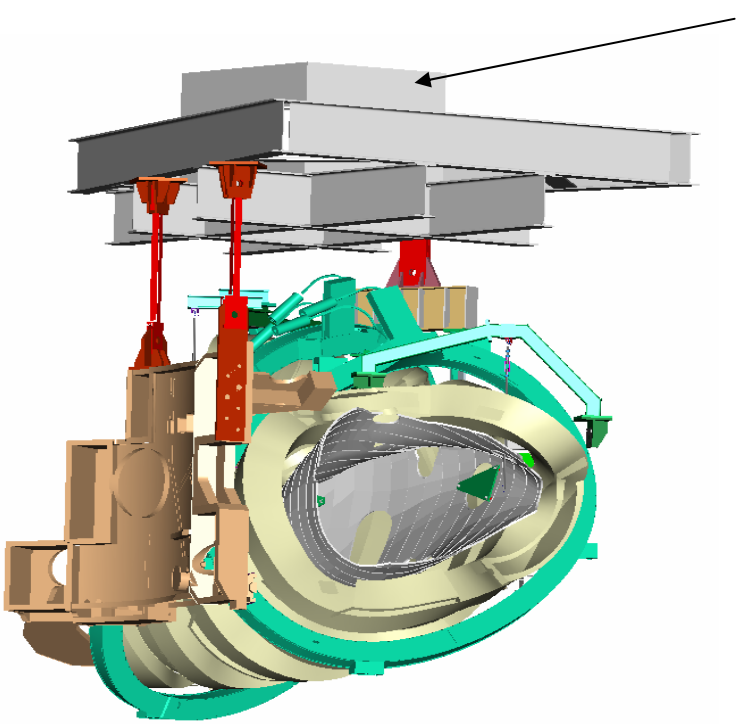


Figure 18: Plasma vessel sector 51HS02. Bearing flange solution (half-module- side) with fixation-point in a port at plasma vessel.

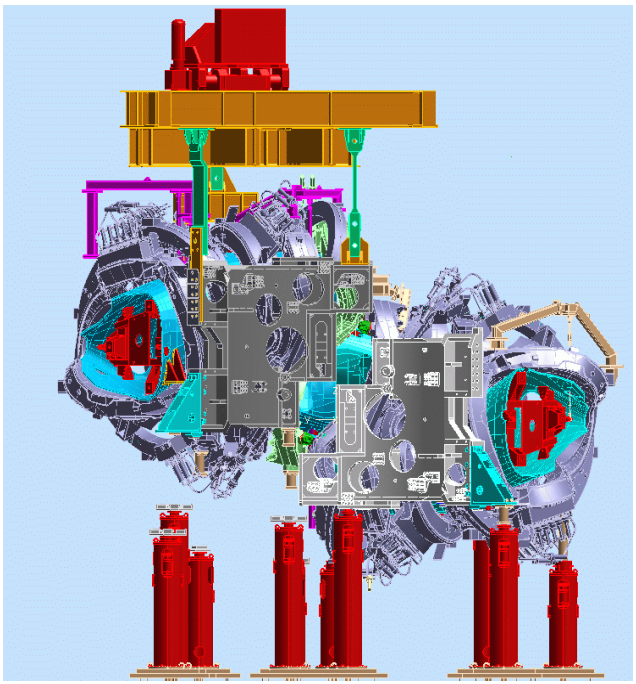
Step 2-2: Transport process for HM with the modul- traverse



Linear sliding frame in two directions. The moving range is 400 mm (Correction of deviations for centre gravity)

Figure 18: Transport process half-module 5.1 (500 kN) with load carrying equipment and overhead crane.

Step 2-3: Modul joining – process in the MST II



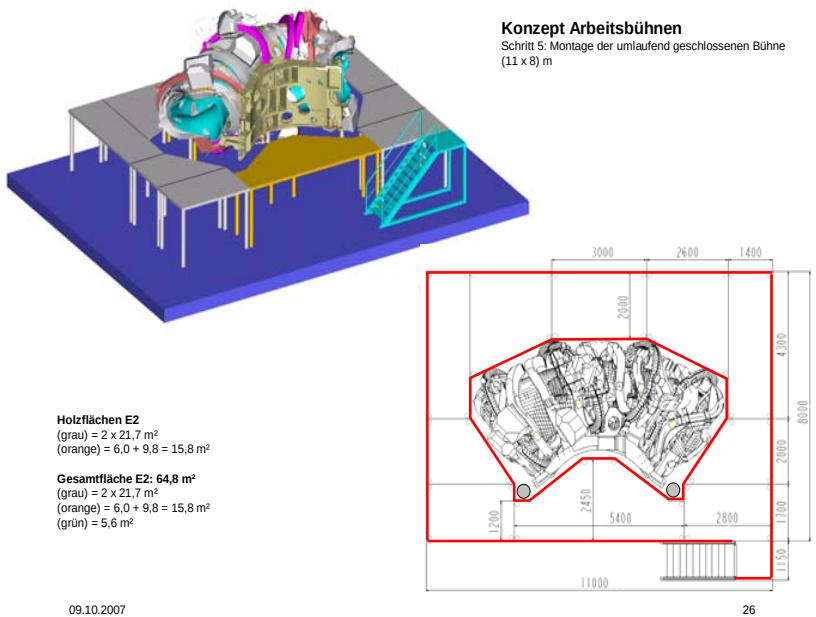


Figure 19: Operating platform for bolted connection between two semi- central rings.