

MBHDP301b 11T hybrid magnet

*Intermediate results - Thermal cycle n°1 &
powering tests*

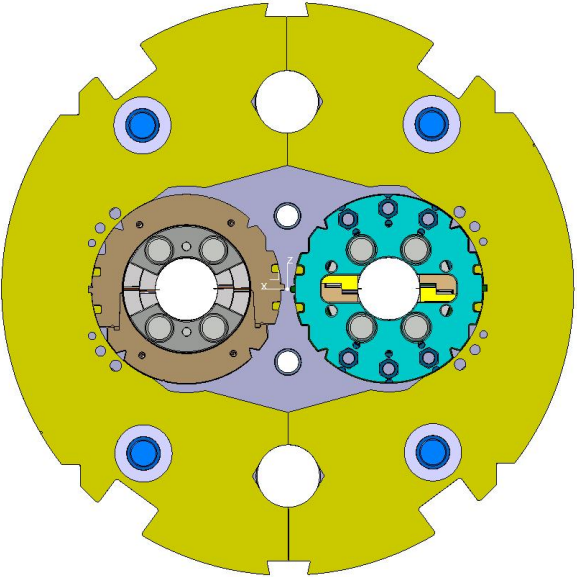
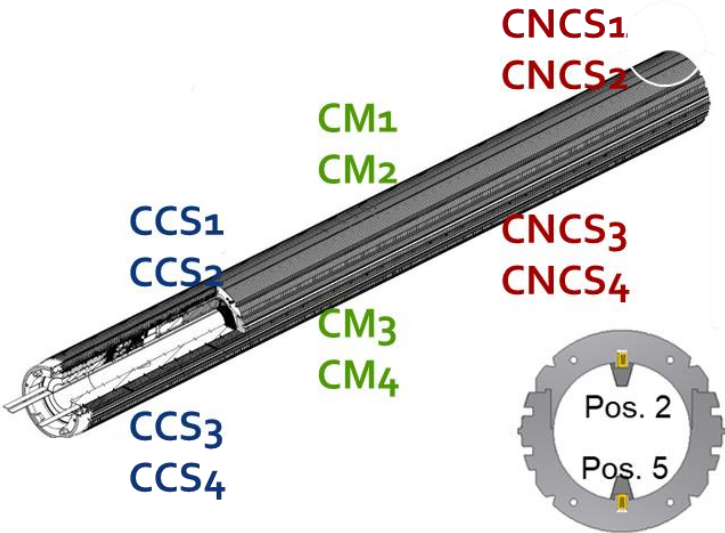
S. Mugnier on behalf of Mechanical Measurement Lab of EN-MME

EDMS #2711698

Instrumentation overview

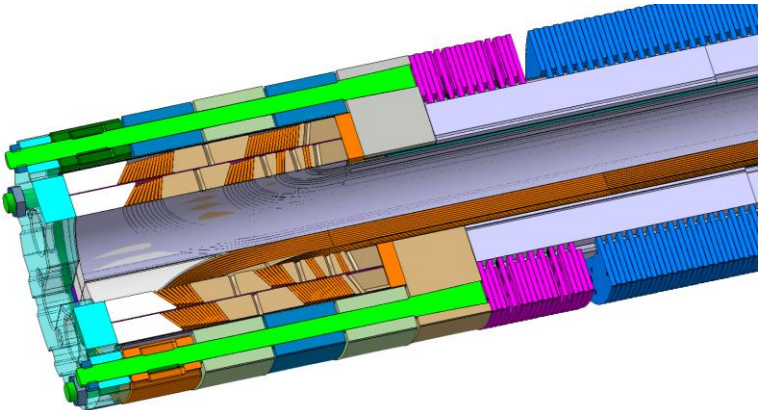
SP301

- 12 instrumented collars
 - 8 Bullet gauges

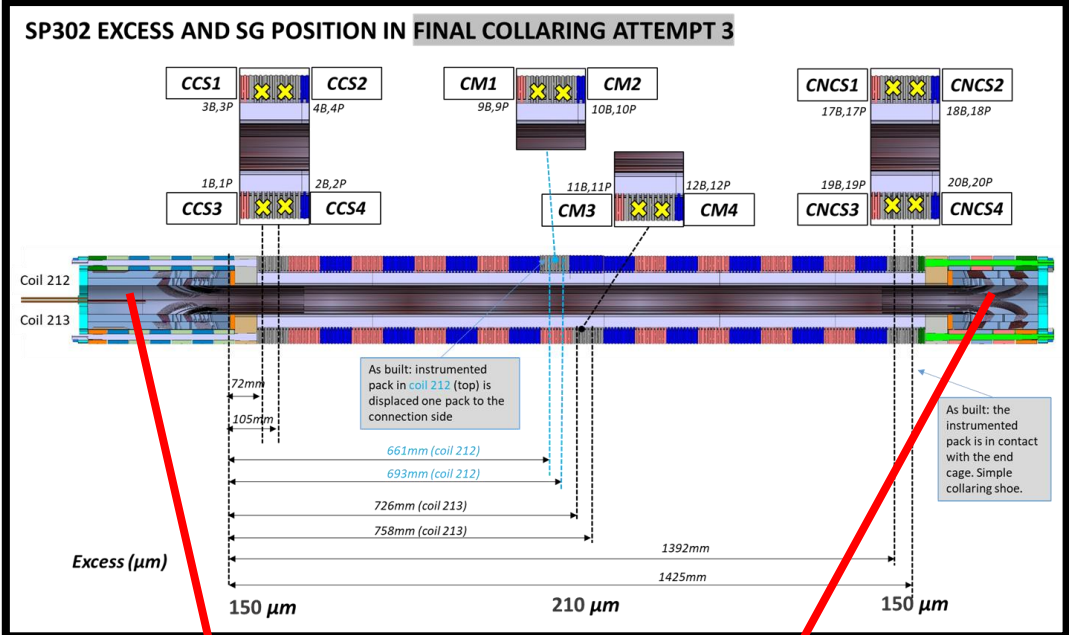
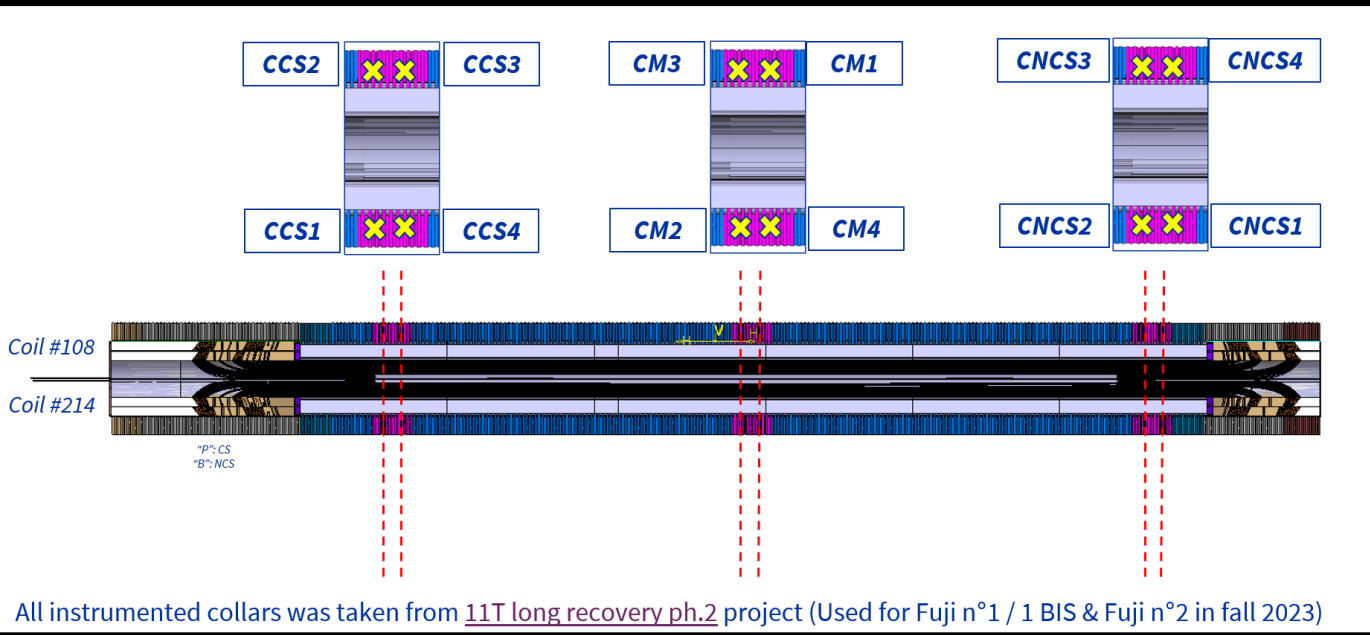


SP302

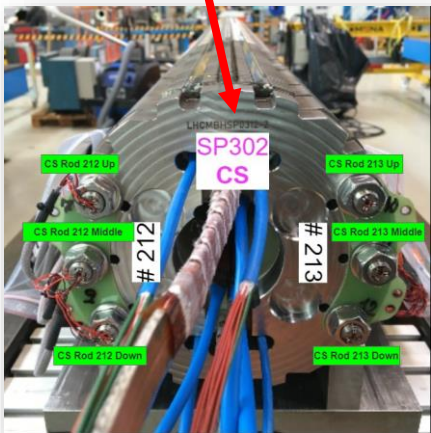
- 12 instrumented collars
 - 8 Bullet gauges
 - 12 Tie rods (End cage)



Instrumentation overview

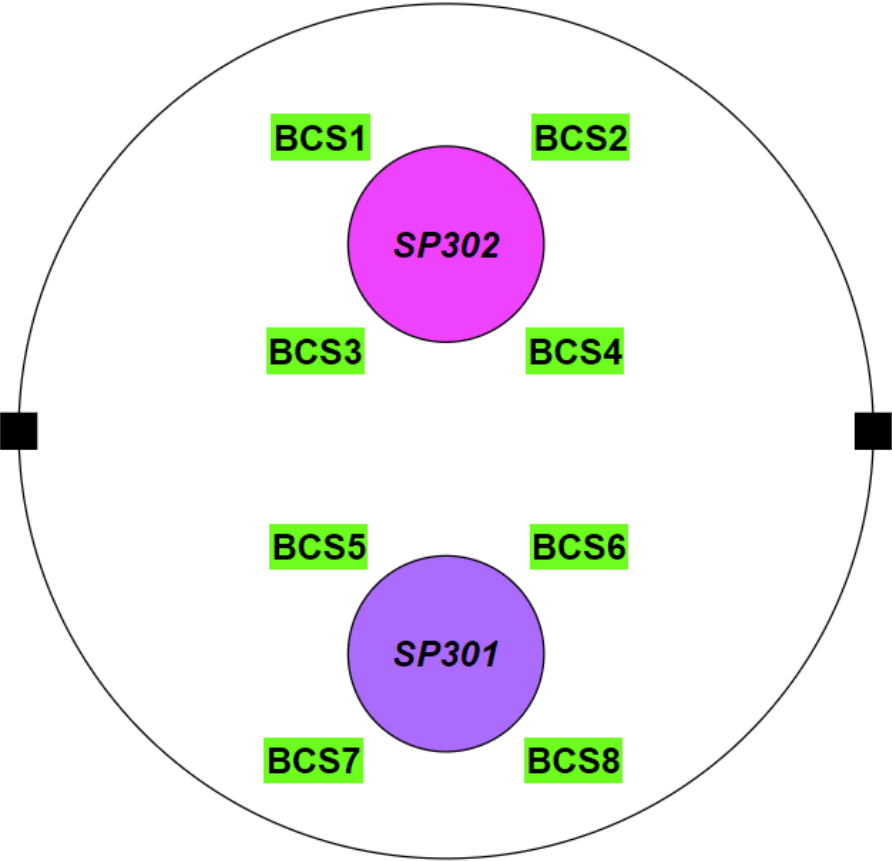


SP301 without end-cage

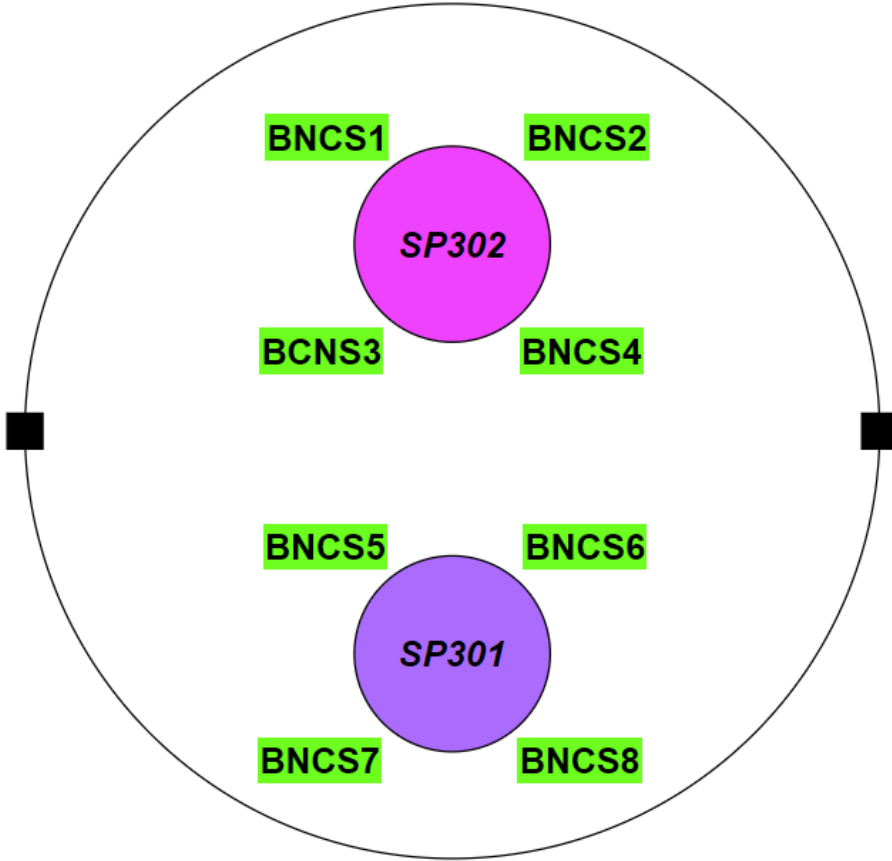


Instrumentation overview

MBHDP301b Bullets gauges
Connection side View

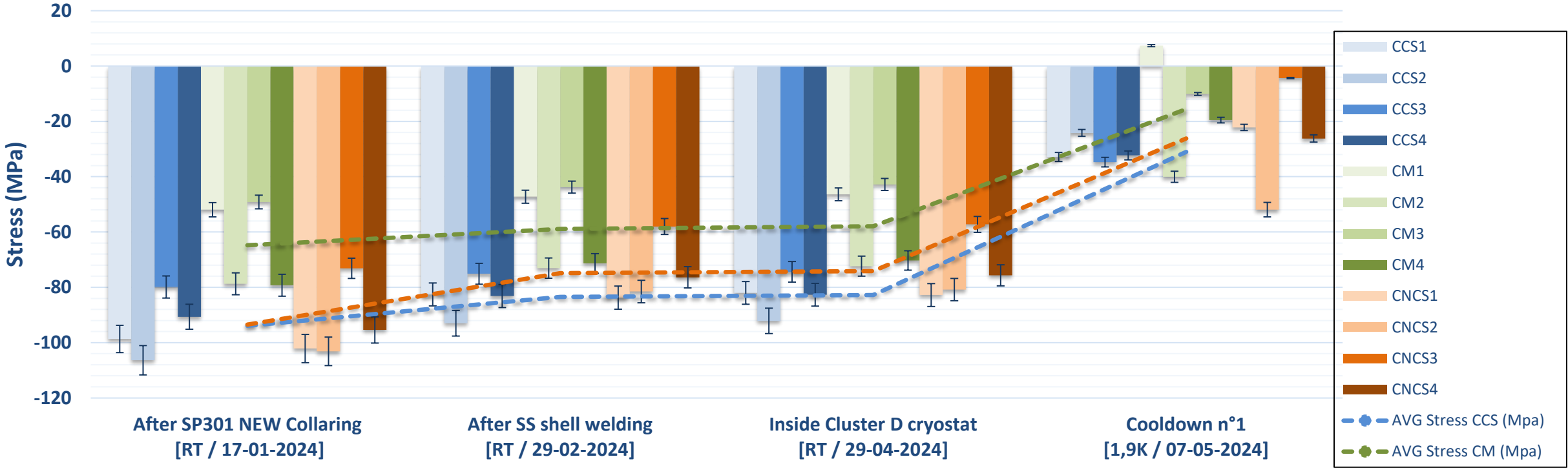


MBHDP301b Bullets gauges
Non connection side View



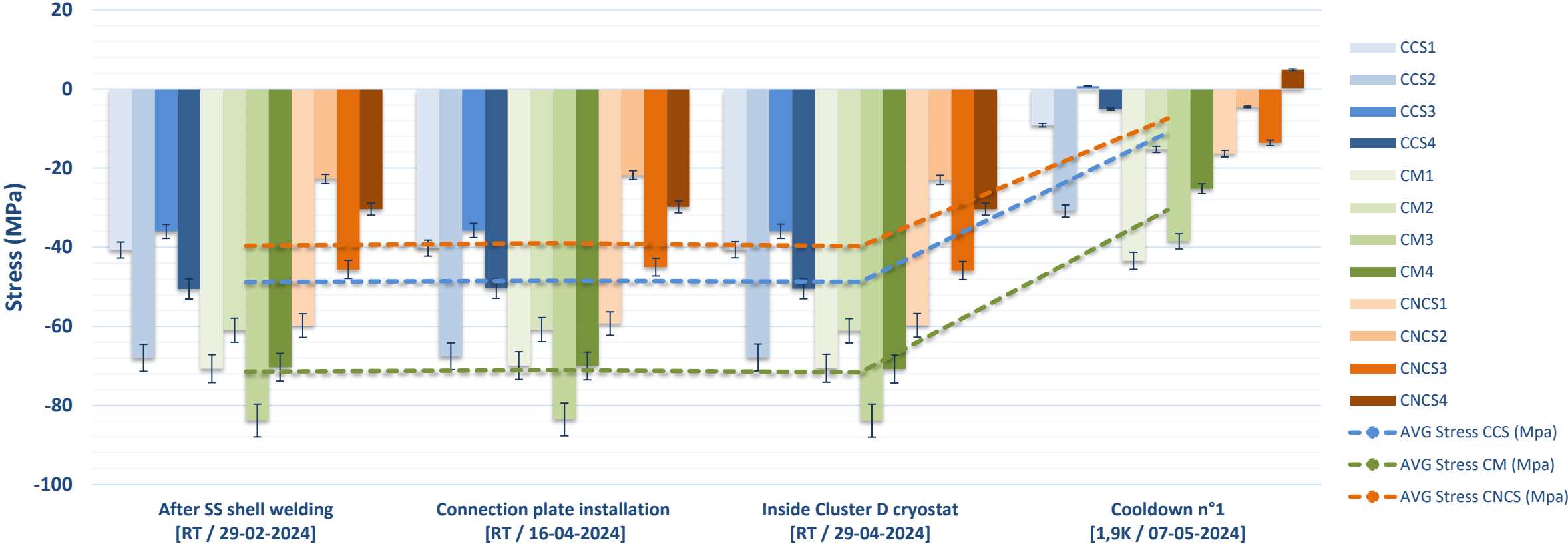
SP301 collars compression stress

MBHDP301b - Collars MBHSP301 - Compression Stress

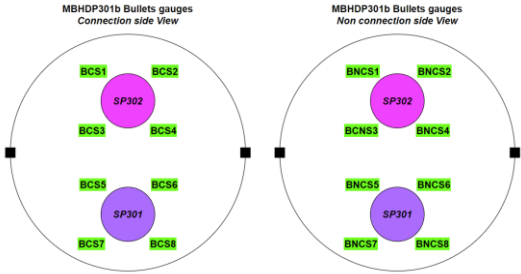


SP302 collars compression stress

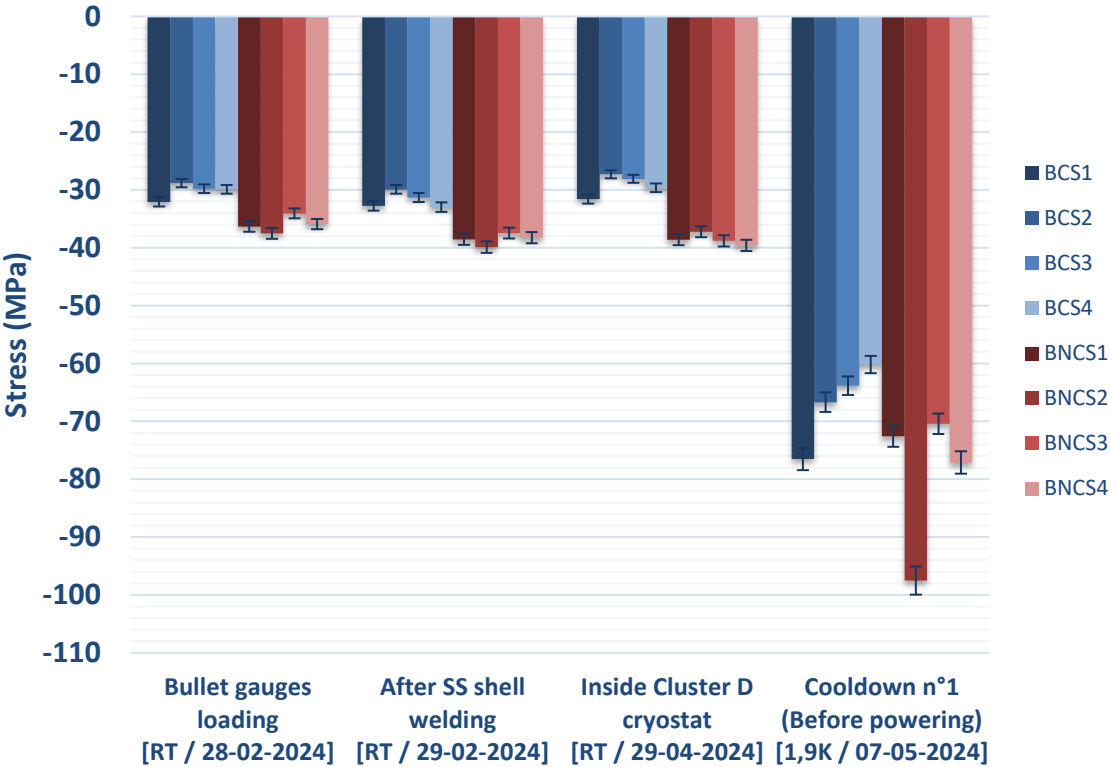
MBHDP301b - Collars MBHSP302 - Compression Stress



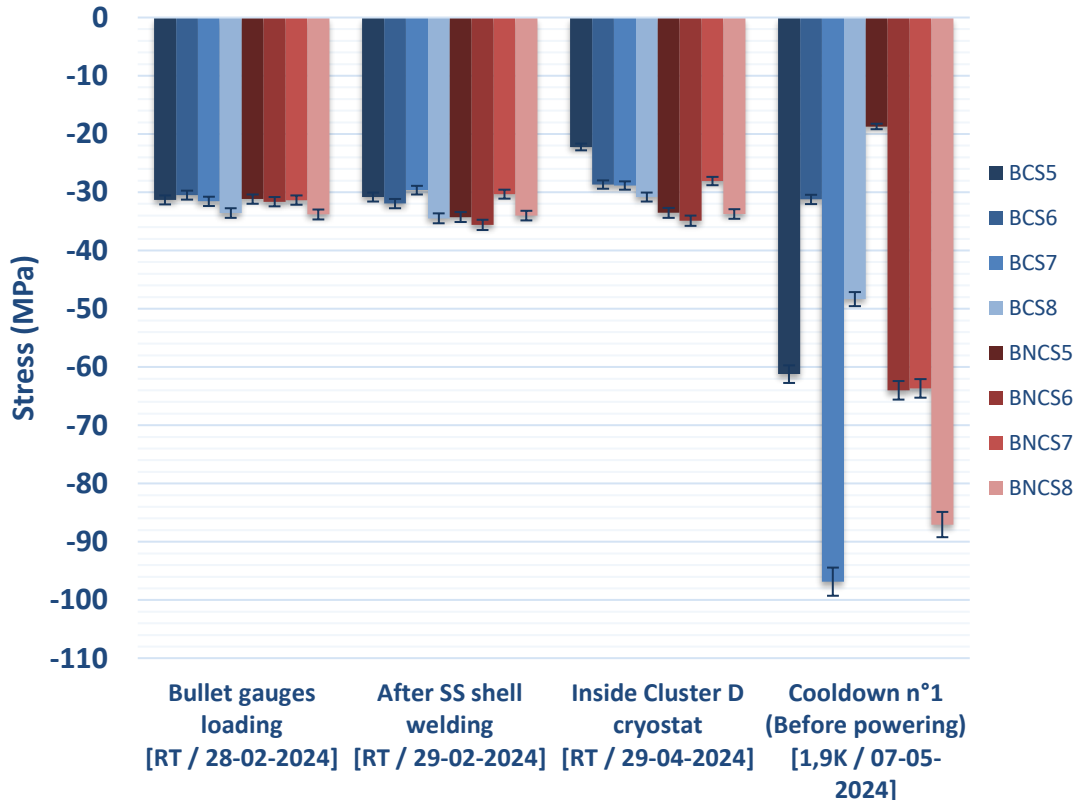
SP301 End plates longitudinal stress



MBHDP301b - End Plates bullets MBHSP302 -
Longitudinal Stress

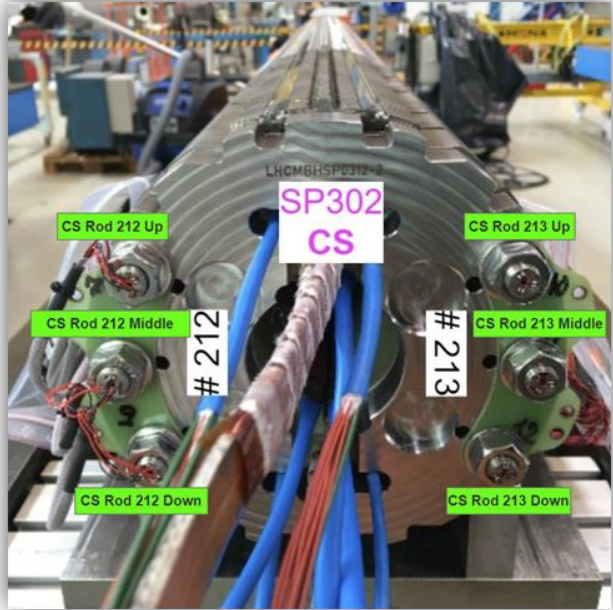
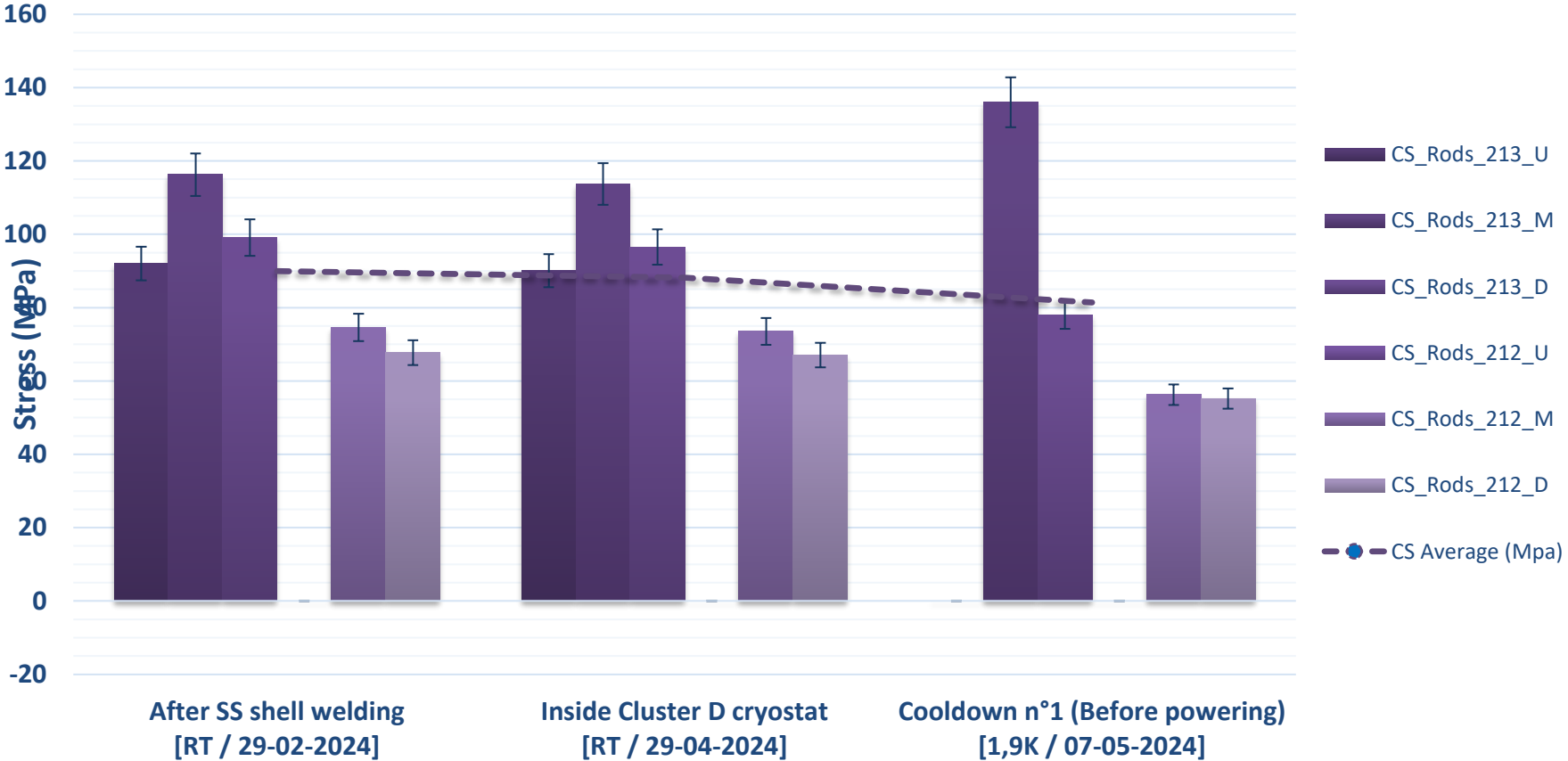


MBHDP301b - End Plates bullets MBHSP301 -
Longitudinal Stress



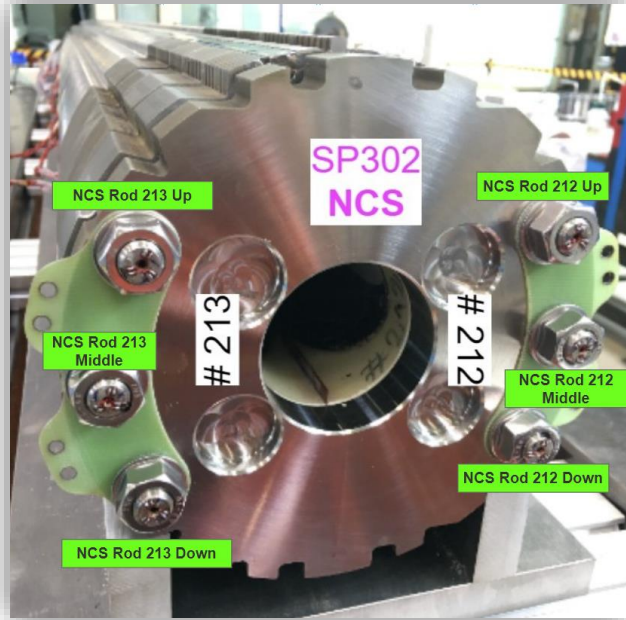
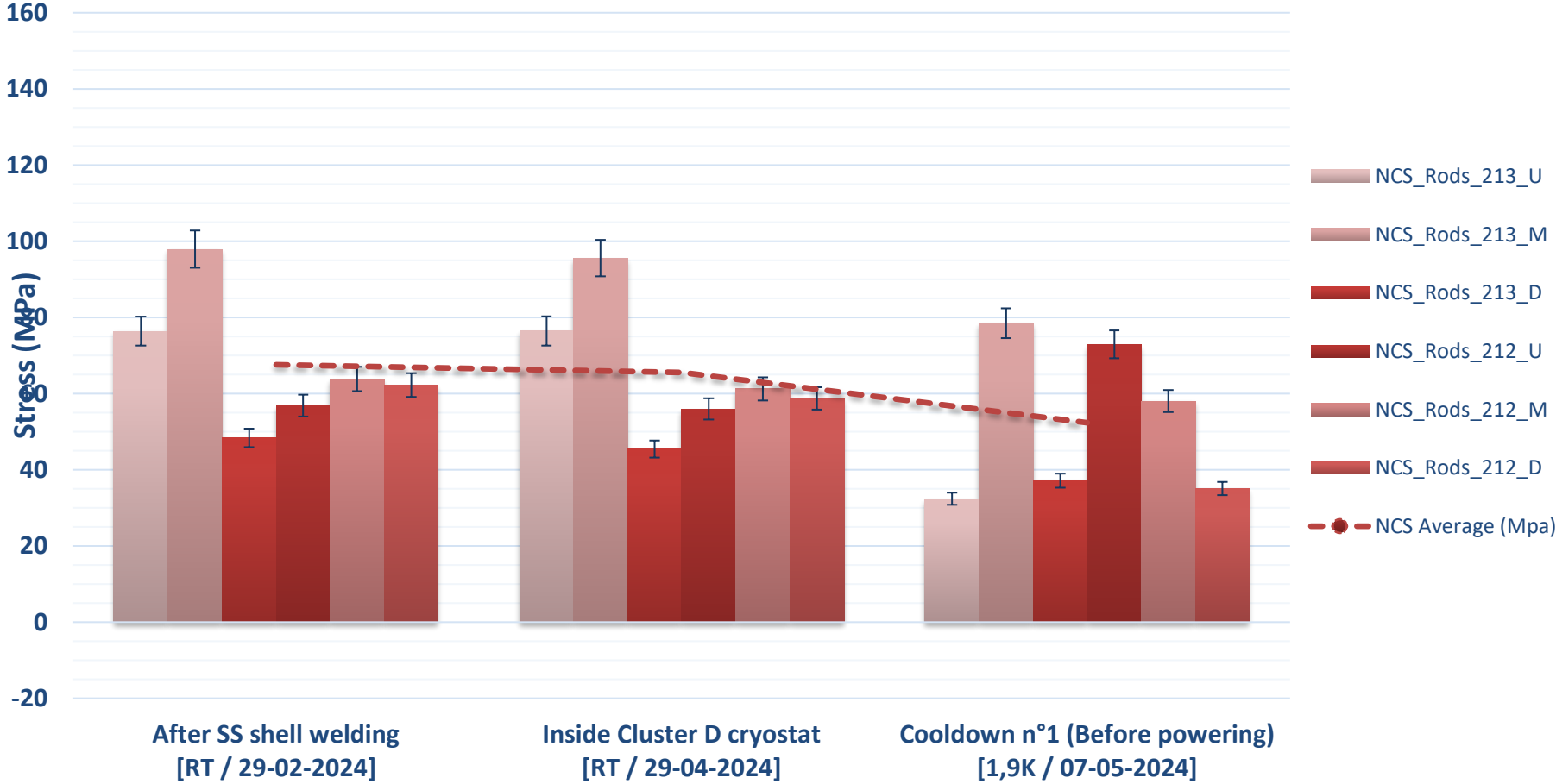
SP302 End cage tie rods stress

Tie rods MBHSP302 (End cage) - Connection Side Longitudinal Stress



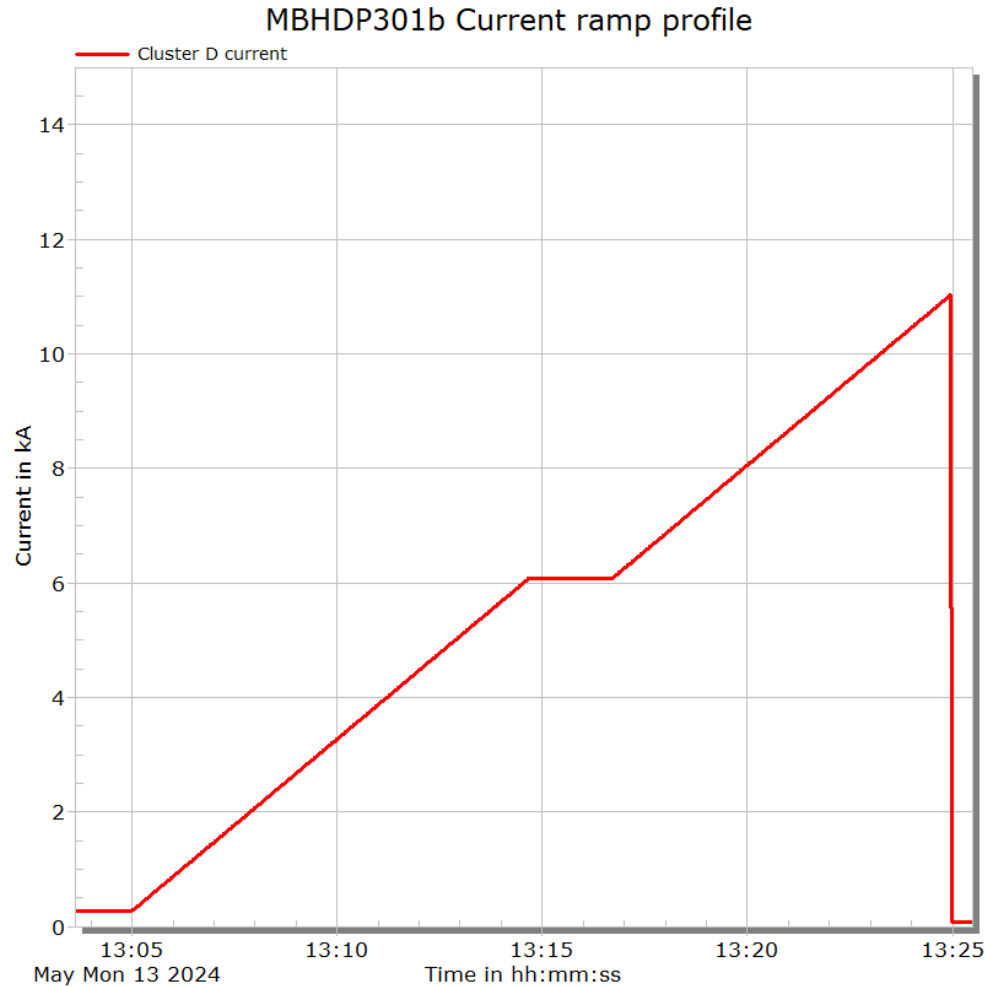
SP302 End cage tie rods stress

Tie rods MBHSP302 (End cage) - Non Connection Side Longitudinal Stress



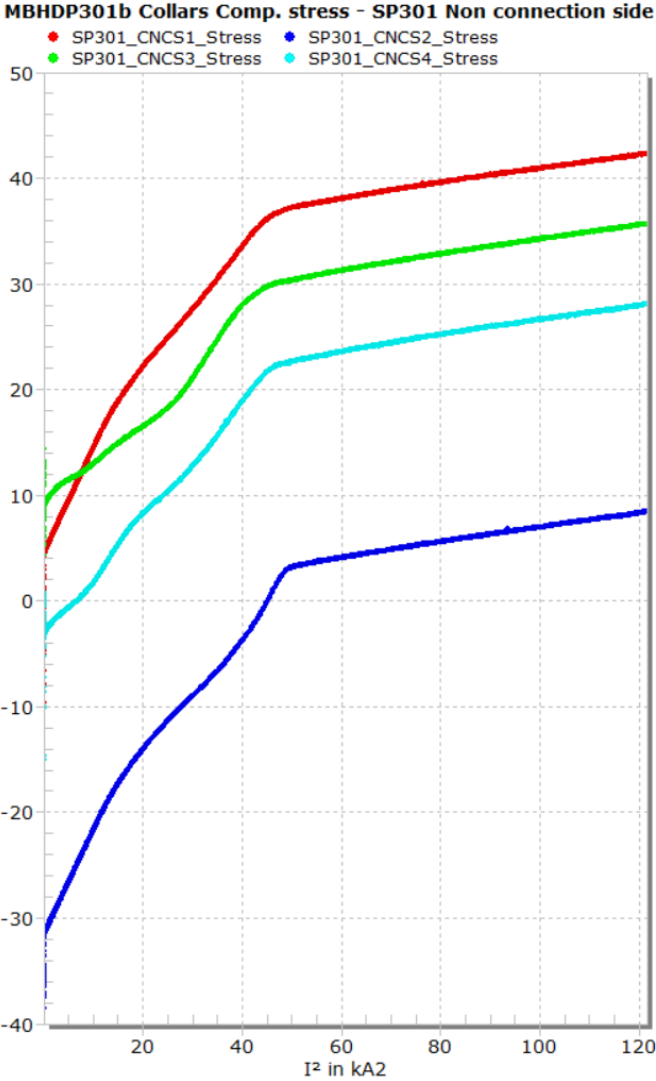
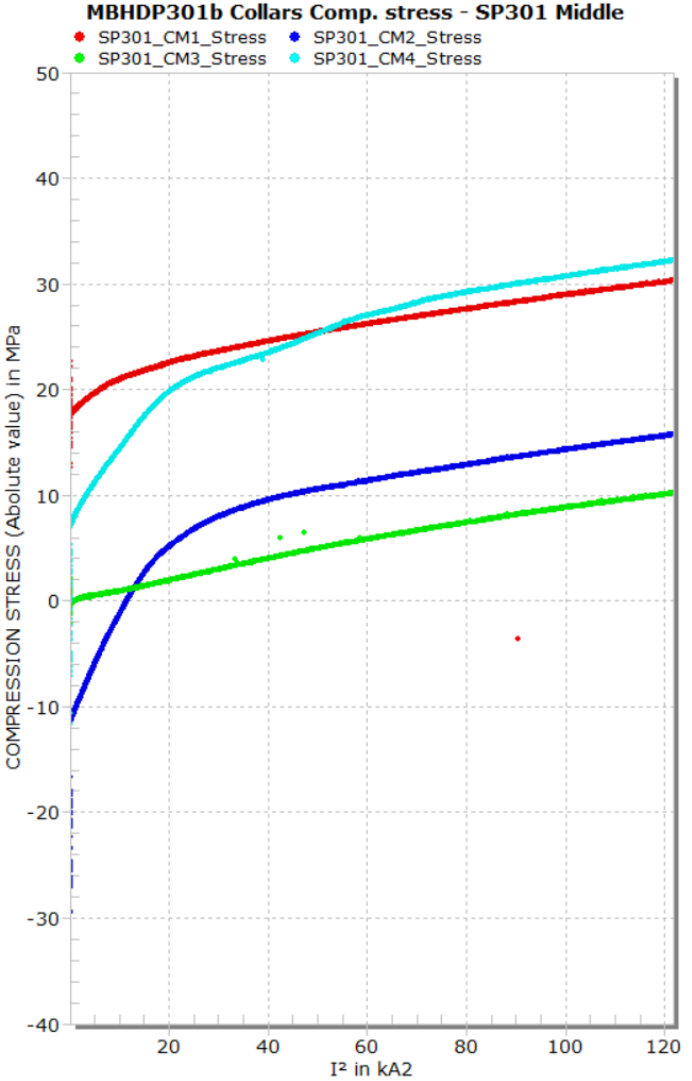
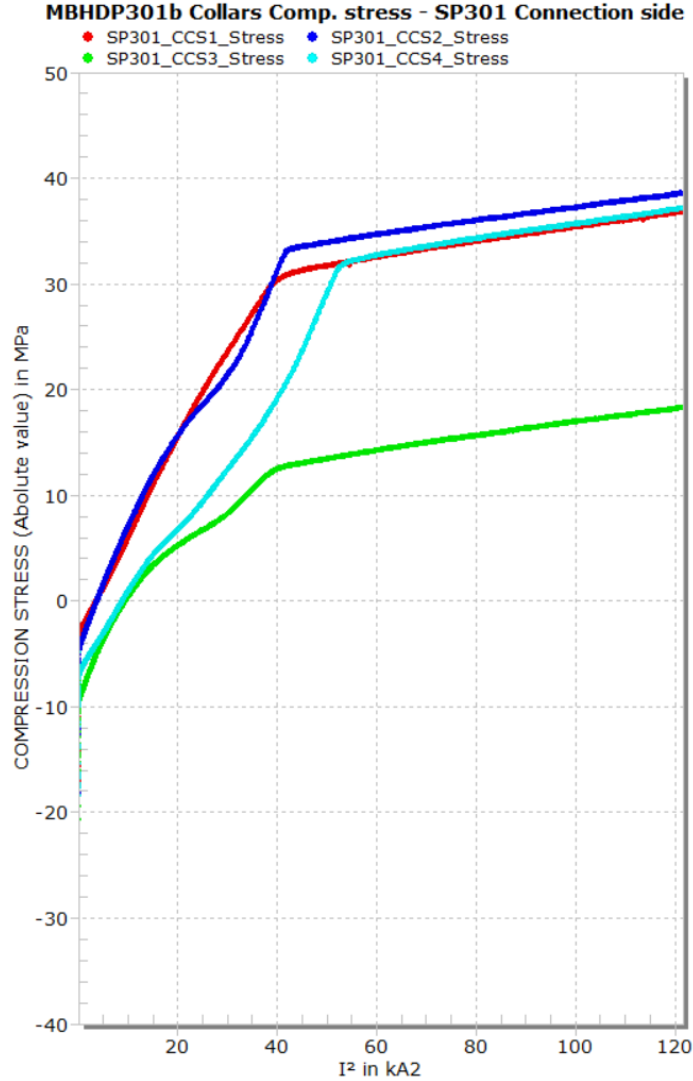
MBHSP301 aperture

SP301 Powering test

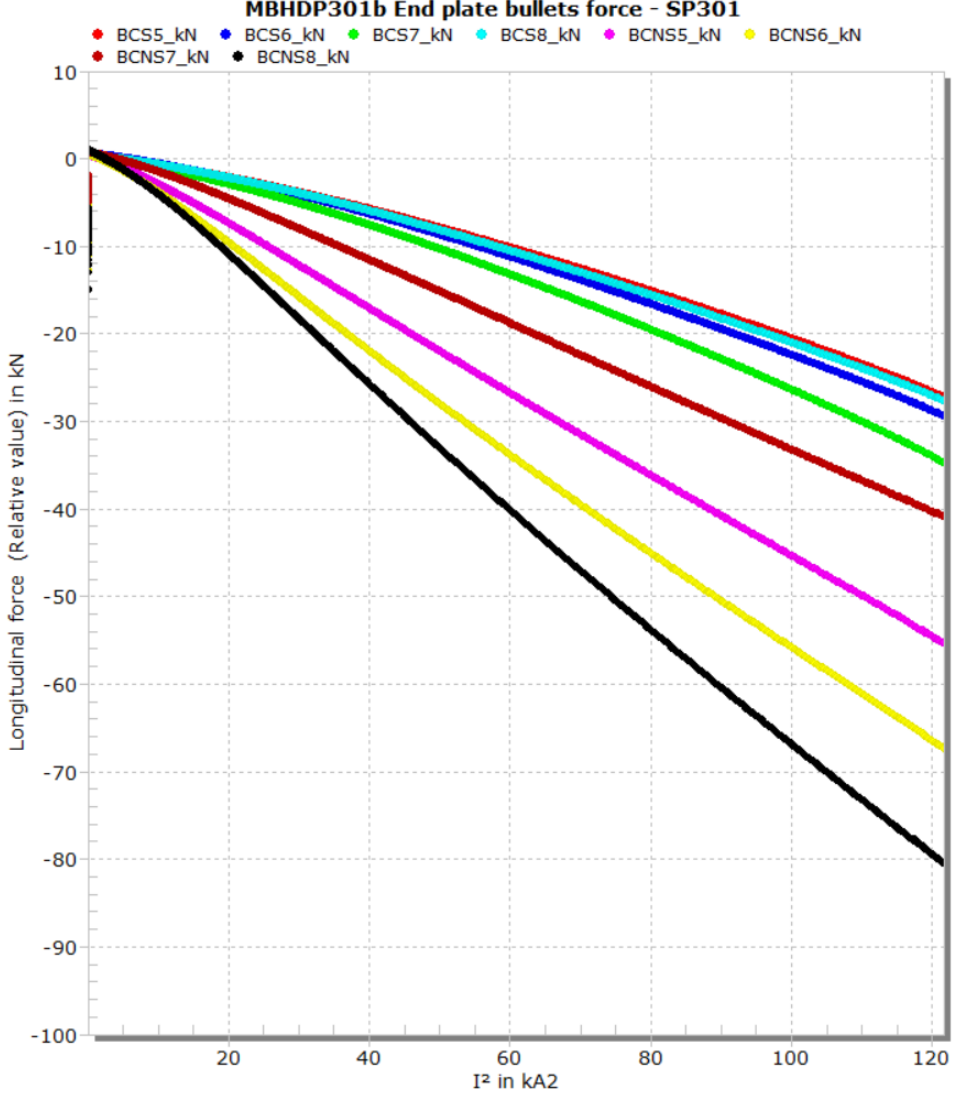
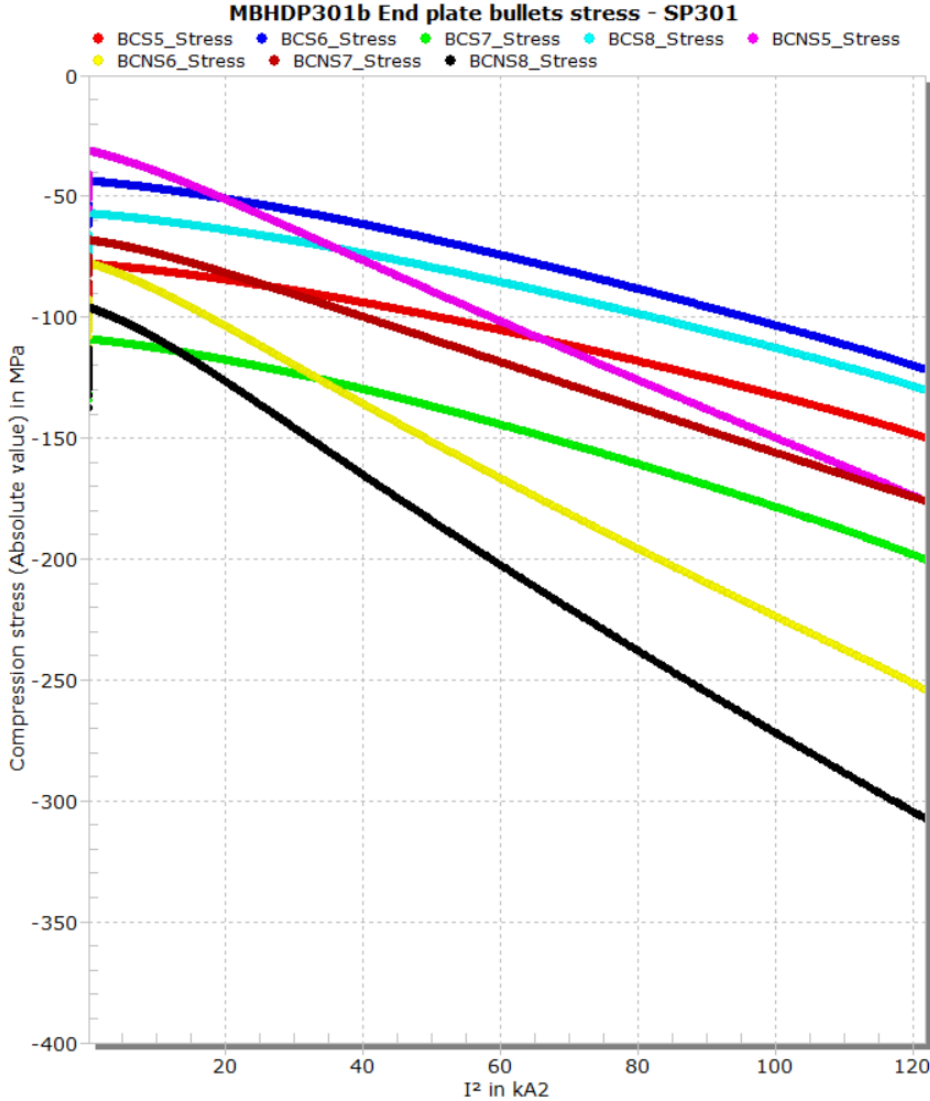


SM18 Event	13/05/2024 at 13h21
I_{\max}	10,947 kA
Aperture powered	SP301
Magnet temperature	1,9 K

SP301 collars compression stress

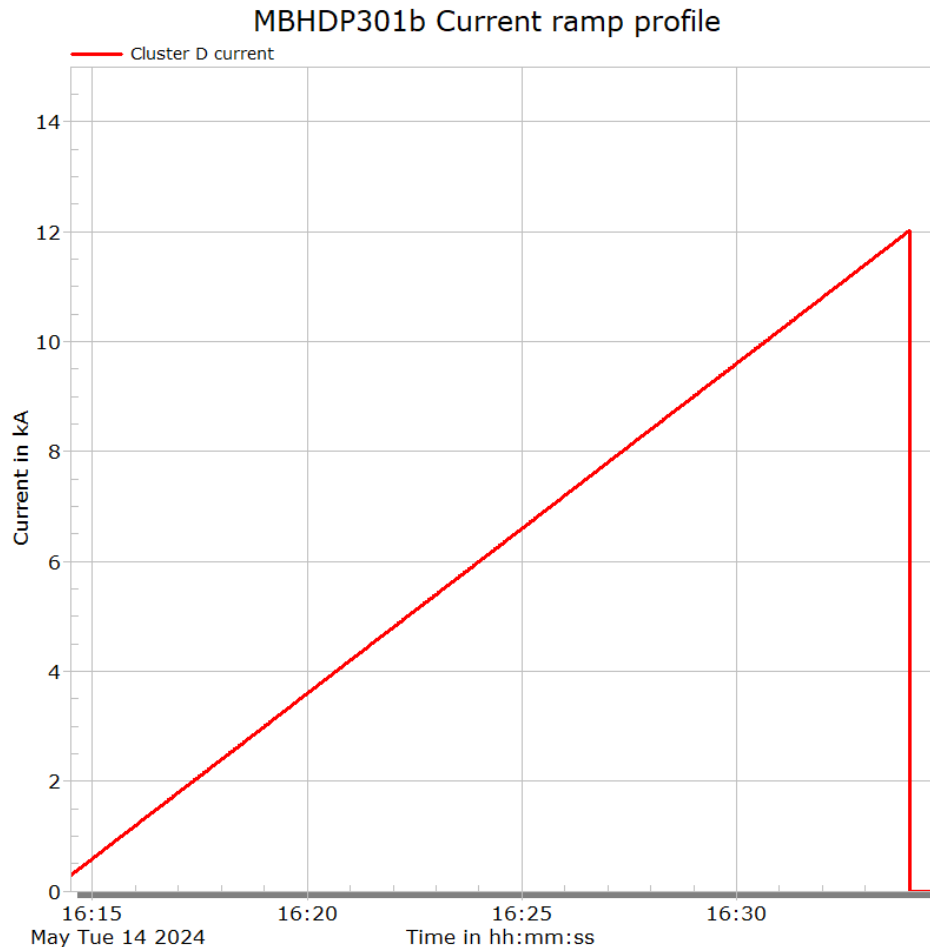


SP301 End plates bullets longitudinal stress & force



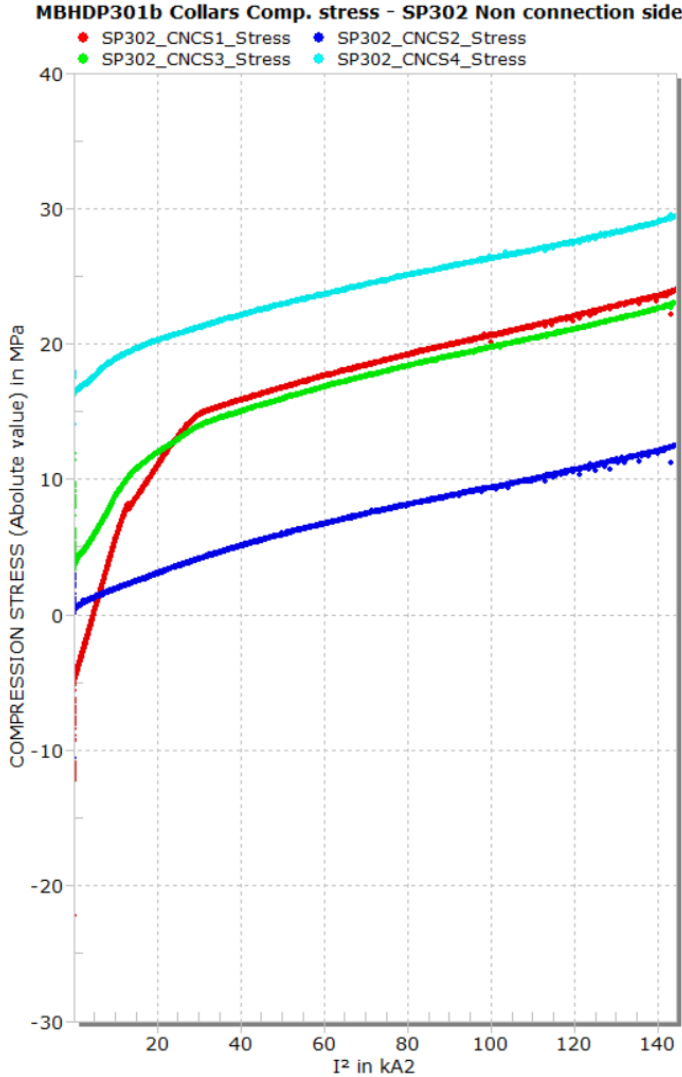
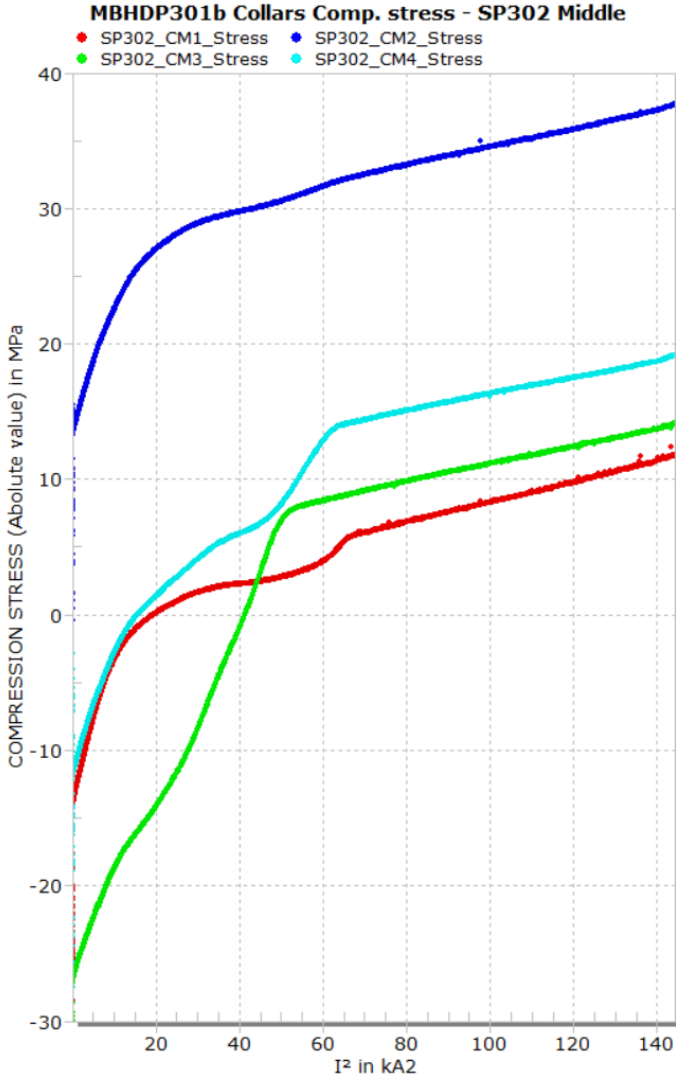
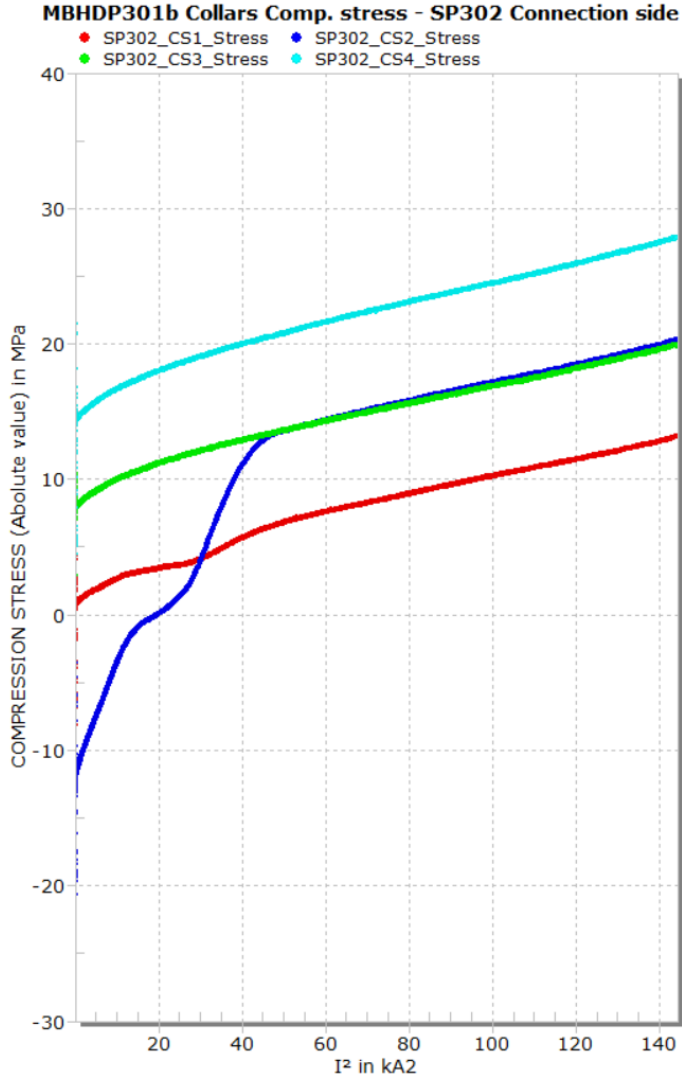
MBHSP302 aperture

SP302 Powering test

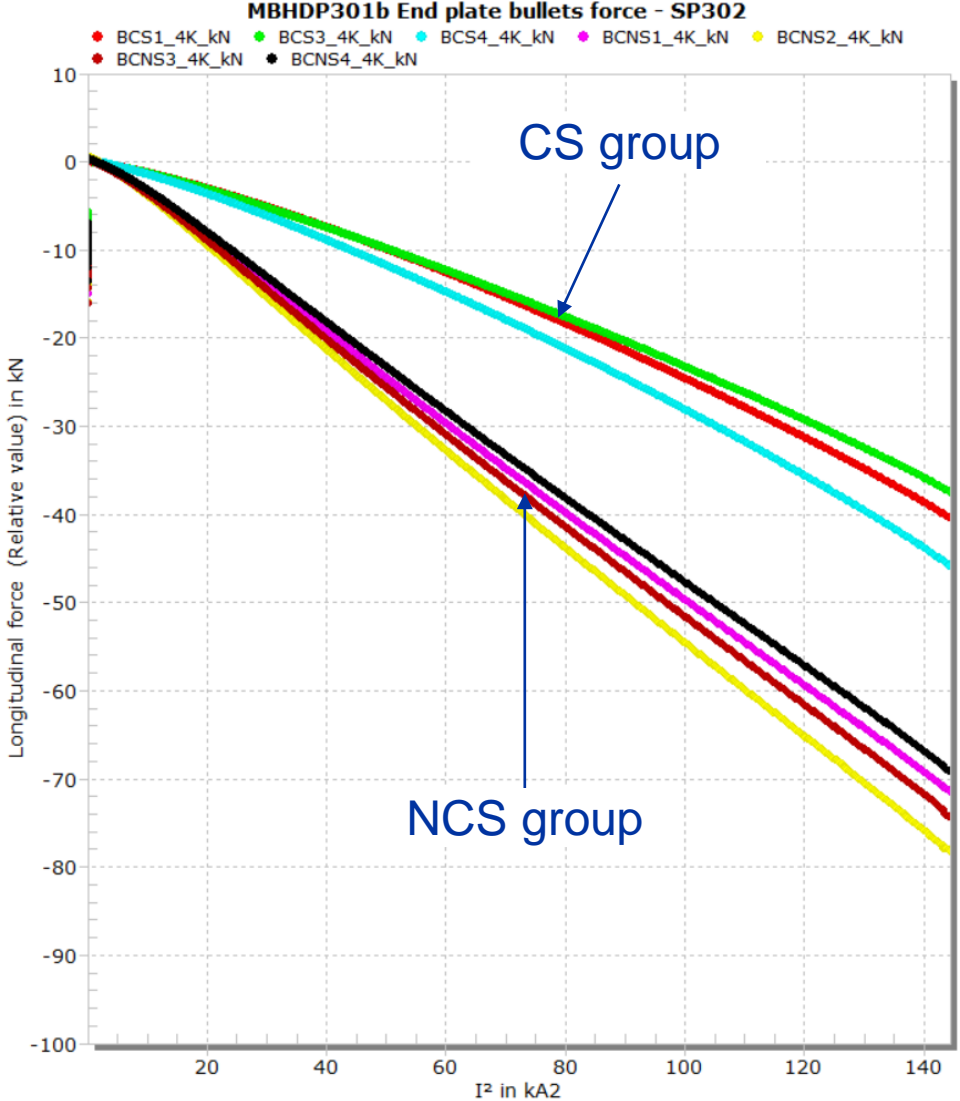
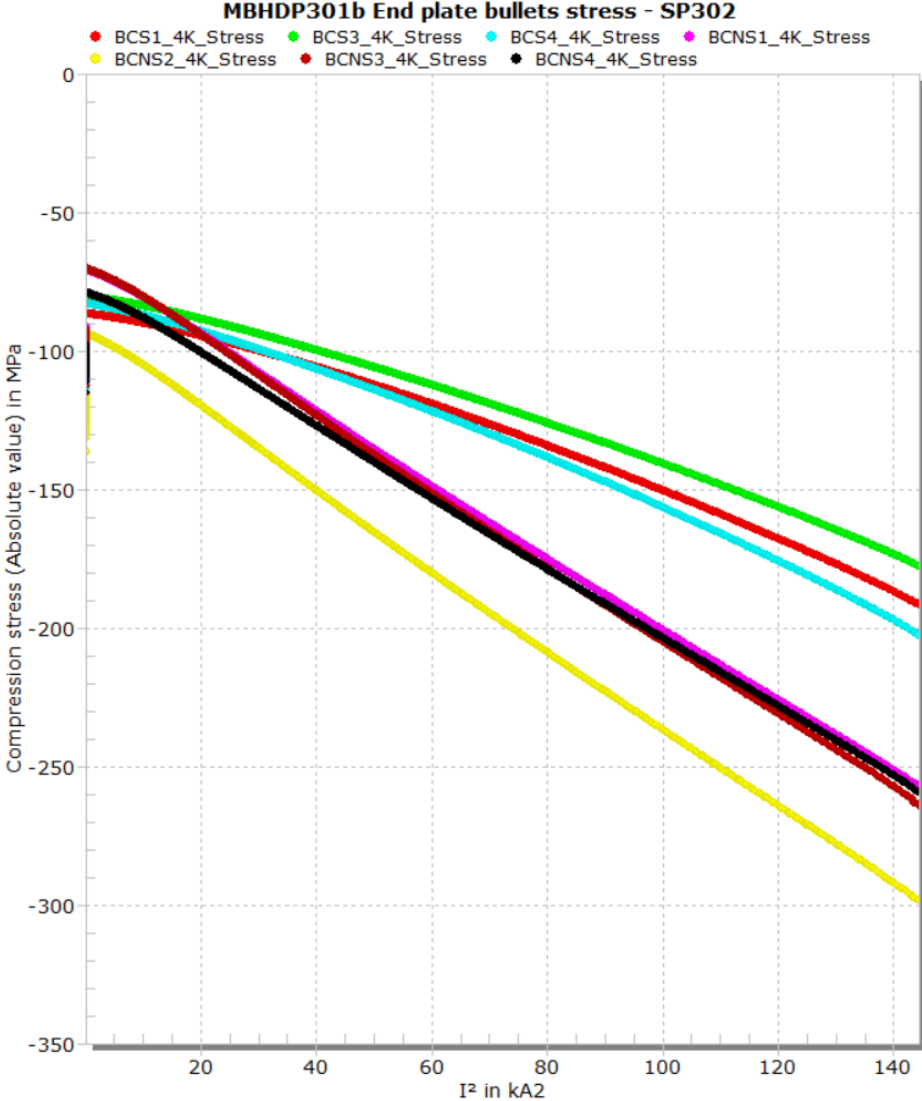


SM18 Event	14/05/2024 at 16h30
I_{\max}	12,017 kA
Aperture powered	SP302
Magnet temperature	1,9 K

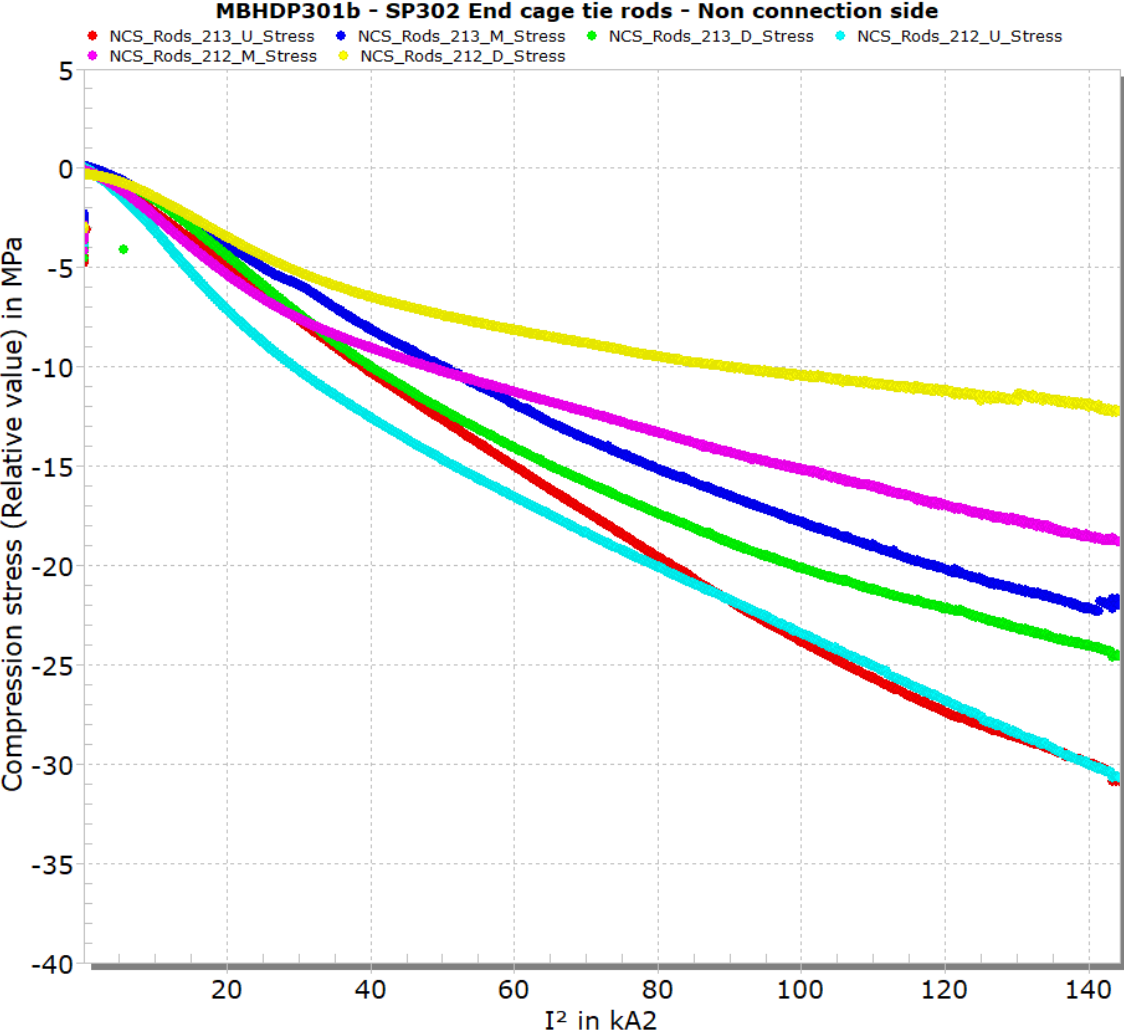
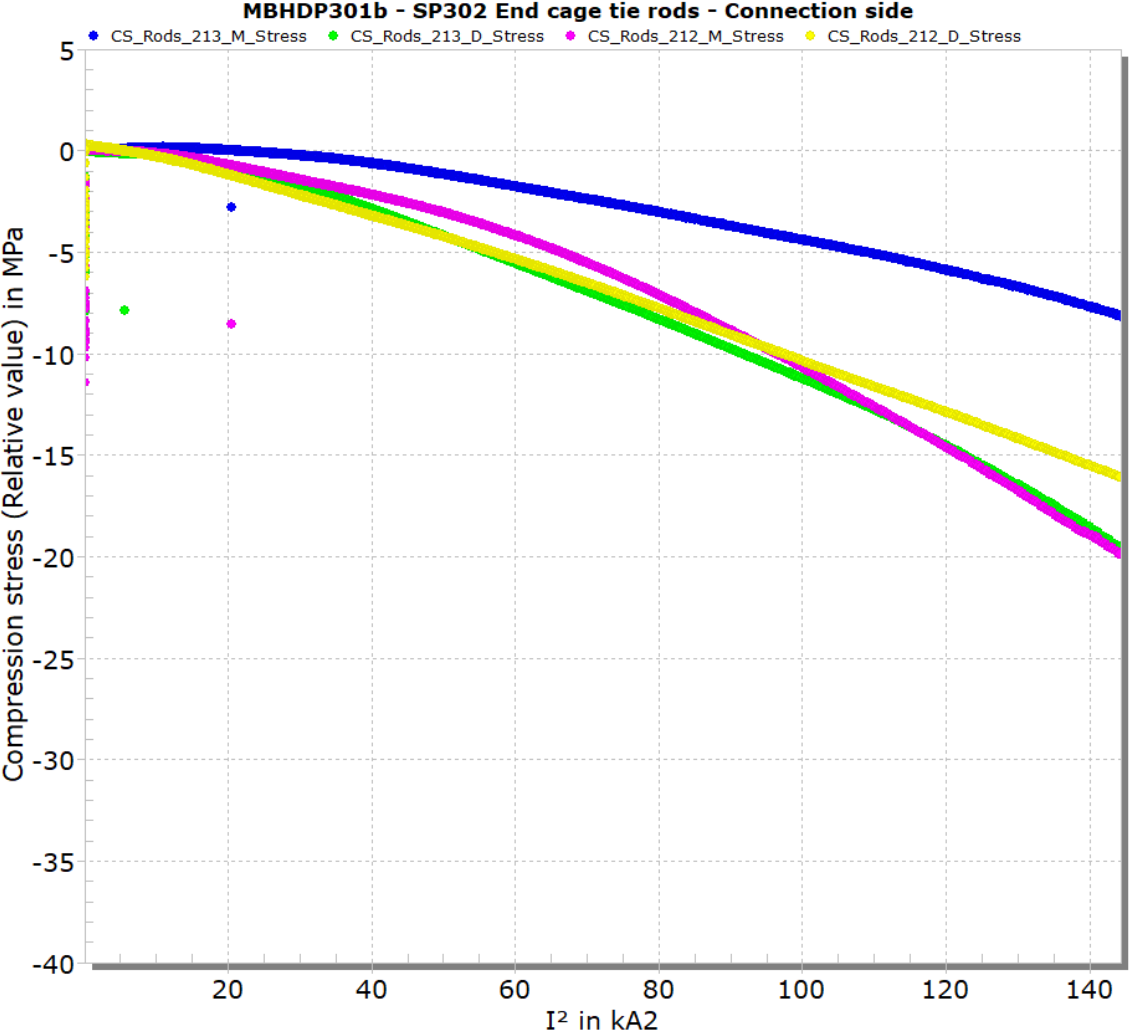
SP302 collars compression stress

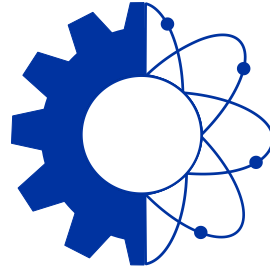
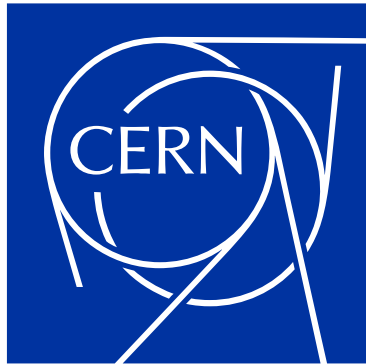


SP302 End plates bullets longitudinal stress & force



SP302 End cage tie rods (relative values)





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DEPARTMENT**

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