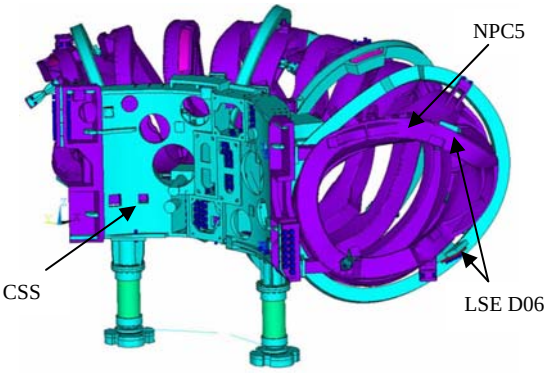

Fig.1. Bolted coil supports LSE D06 on module separation plane.

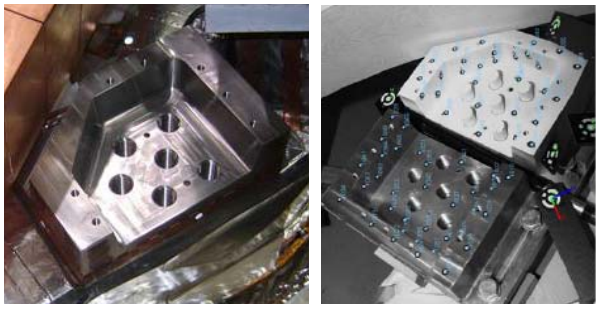

Fig.2. Coil block welded to NPC5 (left). Coil blocks of a test mock-up simulating assembly conditions (right) with reference marks for photogrammetric scanning.

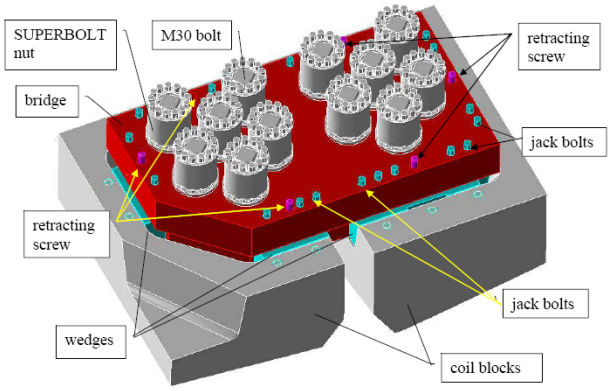

Fig.3. Initial LSE D06 design [4].

Fig.4. CAD model of the mono-block bridge for the maximal expected shift of adjacent coil blocks.

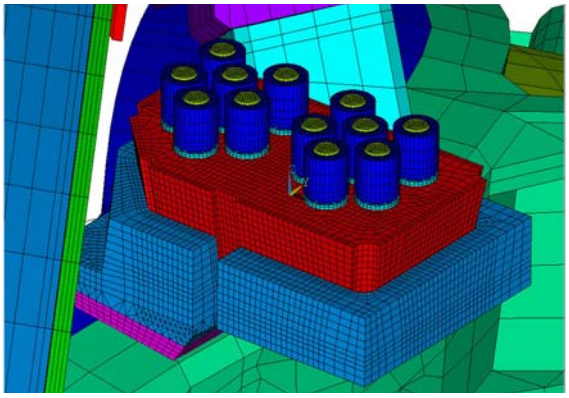

Fig.5. FE model of mono-block LSE D06 introduced in magnet system FE global model.

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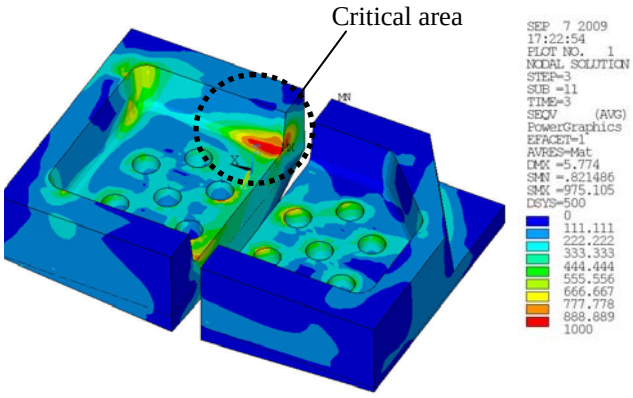

Fig.6. Critical area on coil block shoulder (von Mises stresses in coil blocks at 120% of operational design load at 4K shown).

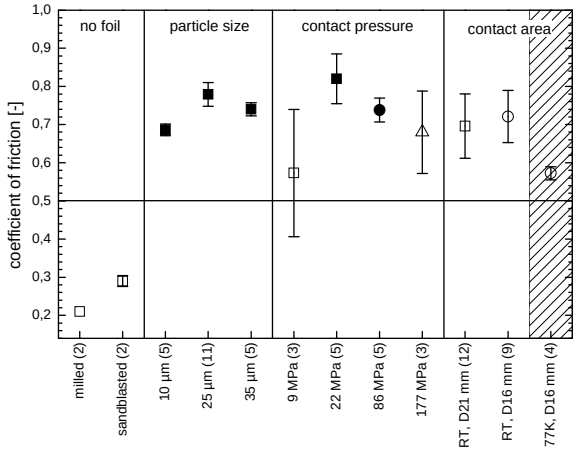

Fig.7. Measured coefficient of frictions versus different parameters using friction enhancing foils. Gray shaded area: cold tests; squares: diameter of circular contact area 21 mm, circles: 16 mm, and triangles: 10 mm; open symbols: updated test set-up to allow cyclic loads. Error bars are standard deviations of the average values. The numbers of performed tests are given in brackets.

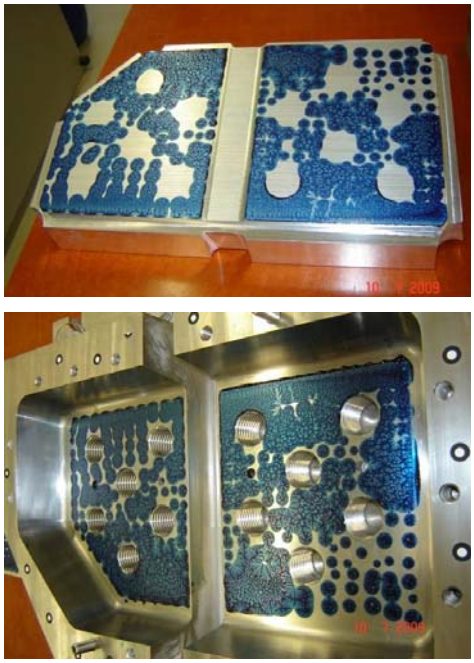

Fig.8. Feasibility test: check of matching of contact surfaces at the bottom of the mono-block bridge.

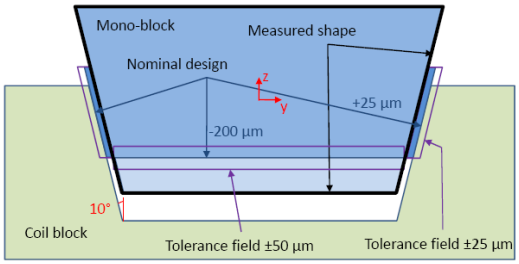

Fig.9. Measured and nominal design shape of mono-block with tolerances (bolts not presented). .