



# Progress Report of the MCBRD Magnets

## (2025.02.10)

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# Progress of series production



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|                | Nickname CERN | Manufacturer | Remarks   | Status  | Location |
|----------------|---------------|--------------|---|---|----------|
| <i>MCBRD05</i> |               |              |   | On the way to CERN                            | -        |
| AP1            | MCBRD_CB18    | BAMA         | 532A, 42 quenches                                   | <b>394A (3 quenches); 422A (+6 quenches)</b>  |          |
| AP2            | MCBRD_CB19    | BAMA         | 530A, 68 quenches                                   | <b>394A (7 quenches); 422A (+10 quenches)</b> |          |
| MCBRD06        |               |              |   |   | CERN     |
| AP1            | MCBRD_CB14    | BAMA         | <b>530 A (30+34 quenches)</b>                       |   |          |
| AP2            | MCBRD_CB21    | BAMA         | <b>530 A (119quenches)</b>                          |   |          |
| MCBRD07        |               |              |   | On the way to CERN                            |          |
|                | MCBRD_CB20    | BAMA         | <b>530A (68 quenches)</b>                           |   |          |
|                | MCBRD_CB23    | BAMA         | <b>530A (76 quenches)</b>                           | 3.2kV-20.4GΩ                                  |          |
|                | MCBRD_CB22    | BAMA         | <b>489A (124 quenches), put in quarantine</b>       | 3.2kV-71GΩ                                    | IHEP     |
| <i>MCBRD08</i> |               |              |   |   |          |
|                | MCBRD_CB24    | BAMA         | <b>Injection: Dec. 23; Deliver to IHEP: Jan. 13</b> | 3.2kV-35GΩ                                    | IHEP     |
|                | MCBRD_CB25    | BAMA         | <b>Injection: Dec. 11; Deliver to IHEP: Jan. 13</b> | 3.2kV-49.9GΩ                                  | IHEP     |
| <i>MCBRD09</i> |               |              |   |   |          |
|                | MCBRD_CB26    | BAMA         | <b>Injection: Jan. 7; Deliver to IHEP: Jan. 13</b>  | 3.2kV-93.2GΩ                                  | IHEP     |
|                | MCBRD_CB27    |              | Pasting GF tapes on formers                         |   |          |
| <i>MCBRD10</i> |               |              |   |   |          |
|                | MCBRD_CB28    |              |   |   |          |
|                | MCBRD_CB29    |              |   |   |          |

- Formers for CB28 and CB29 will be ready by mid-February.

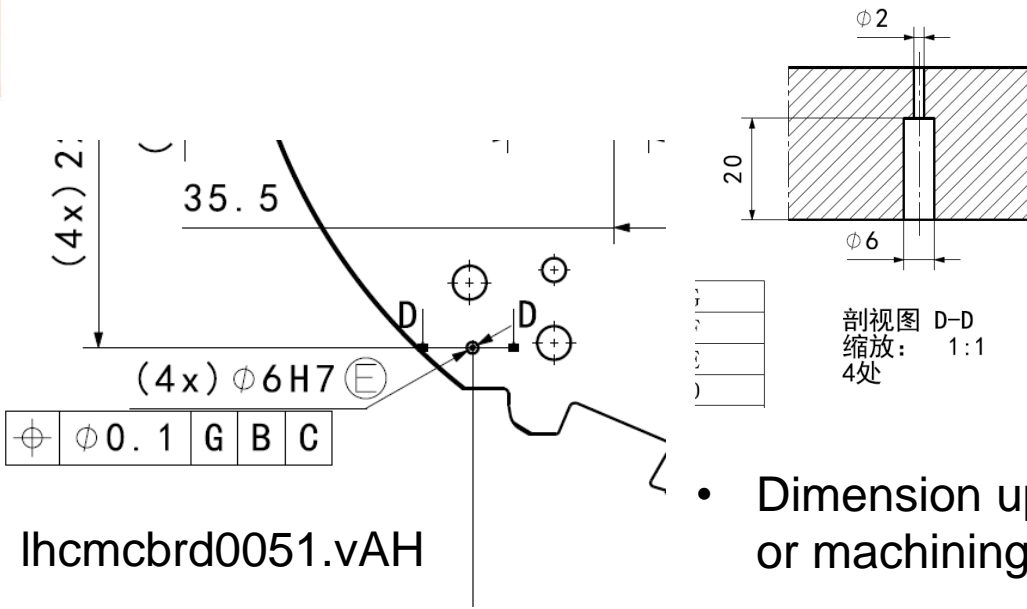
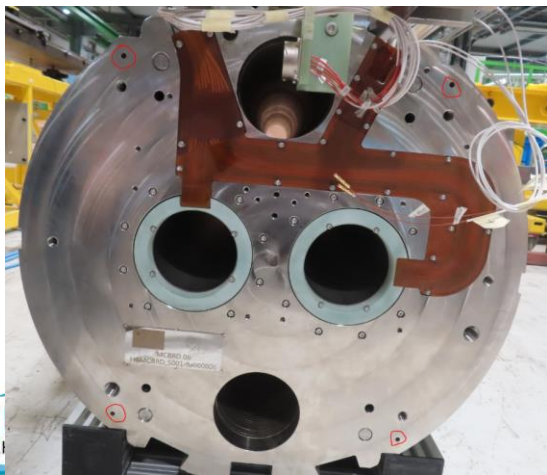


# Reception of MCBRD06

- tie rods ends are not welded , to be done on next magnets



- Using Nord-lock washer & welded?



- Dimension update or machining error?

# NCRs of CB14 and CB22

- Decisions for CB14: waiting for the test result of MCBRD06

## NCR for CB22:

- Designed gap between inner former and outer former:  $(120.8 - 119.75)/2 = 0.725\text{mm}$
  - Outer former and ext. tube:  $(136.3 - 134.85)/2 = 0.725\text{mm}$
  - Insulation between layers :  $0.11*2 + 0.13*2 = 0.48\text{mm}$  (overlapping GF + 2\*Polyimide)
  - Superconductor are  $0.2\text{mm}$  higher than the formers
- Gap for resin:  $0.725 - 0.2 - 0.48 = 0.045\text{mm}$

# Training history of all apertures

