Abstract

- The magnet assembly of EDIPO was irreversibly damaged in 2016.
- However, the cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)

1.5 T reached in the bore center operating at 85% of short sample current, \( j_c, n_c \)
- The cryostat, cryo-plant, power supply and high current transformer of the test facility remain intact.
- EDIPO 2 (the upgraded EDIPO test facility) will provide a unique test bed for superconducting cables for fusion and accelerator magnets, as well as other applications.
- Enhanced features compared to previous magnet design:
  - EDIPO 1
  - EDIPO 2
  - SULTAN samples + insert dipoles
- Retained key features:
  - Wide range of sample temperature: \( T_{\text{sample}} = 4.2 - 80 \, \text{K} \)
  - High sample current: \( I_{\text{sample}} \leq 100 \, \text{kA} \)