

# How were the diodes tested prior to installation

A. Siemko TE-MPE

# Endurance tests of diode stacks

- All diode assemblies, prior to their installation in magnets were tested at cold condition
- Each set was submitted to 10 test cycles at ultimate current with strict acceptance criteria

# Diode tests in magnet assemblies

- Diodes installed in the first batch of ~200 dipoles were not tested at cold
  - these diodes were dismantled and reinstalled following dedicated procedure, including electrical qualification of the so-called half-moon joints
- All other diodes were cold tested during series tests of magnets in SM18.
  - “transient bump” method was developed to test the diodes and resistance of their joints and connections to the busbars

# “Transient bump” method



# “Transient bump” method (zoom)



# Example of the test results

