

# RDC-150

## Name SPECIFIC ELECTRICAL RESISTANCE ANODE

Material type  
**GRANULAR  
PITCH  
ELECTRODES  
LINING**

Utilization  
**R&D  
IN-PLANT  
LAB**

General description  
The specific electrical resistance of the electrode is an important property to minimize, as it directly affects the voltage drop and, thus, the metal production cost. It not only characterizes the behavior of the electrode during its use, but it also gives interesting information about the production of the electrode, such as its structural condition due to baking or graphitization processes, as well as the raw materials and the production parameters. The potential presence of cracks can also be detected with this test.

The measurement is conducted with the RDC-150 apparatus, where a core sample with a diameter of 50 mm and a length of 130 mm is clamped between surfaces with a specific load. A constant direct current is applied to the sample and the voltage drop is measured to calculate its specific electrical resistance in  $\mu\Omega\text{m}$ .

|                                      |                             |  |
|--------------------------------------|-----------------------------|--|
| Technical information                | <b>Standard Method:</b>     | ISO 11713  |
|                                      | <b>Property:</b>            | Specific Electrical Resistance [ $\mu\Omega\text{m}$ ] |
|                                      | <b>Sample:</b>              | Core $\varnothing 50 \times 130$ mm                    |
|                                      | <b>Process Time:</b>        | ~ 1 minute   |
|                                      | <b>Installation:</b>        | Workbench  |
|                                      | <b>Dimensions (LxWxH):</b>  | 54 x 52 x 57 cm  |
|                                      | <b>Weight:</b>              | 62 kg  |
|                                      | <b>Electrical Property:</b> | 230 V 1/N/PE, 50 Hz<br>0.5 kW, 2.2 A                   |
| <b>Certified Reference Material:</b> | RDC-1150                    |  |
| <b>Database Connection:</b>          | No                          |  |

### Additional Recommended Equipment:

Drilling Machine (RDC-157 or RDC-179)

Saw (RDC-140 or RDC-148)

Drying oven (min. temperature 180°C)



# RDC 1150

|                       |                         |     |
|-----------------------|-------------------------|-----|
| Technical information | <b>Weight per unit:</b> | N/A |
|                       | <b>Number of tests:</b> | N/A |

