

Vibrated Bulk Density Coke

RDC - 117

Granular In-Plant Lab

General Description

The porosity of the different raw materials used for the production of electrodes has a very big impact on the electrode performance, not only for its quality but also in terms of process parameters to be optimized accordingly, such as the binder content. This porosity level can be estimated by measuring the Bulk Density of the materials.

The measurement is conducted with the RDC-117 apparatus, where a given quantity of one coke fraction, prepared according to the ASTM D4292 standard method, is filled under controlled conditions into a graduated cylinder. This cylinder is then vibrated for a given time and the volume of the sample is measured after the test. The bulk density is calculated and reported in kg/dm^3 , as the ratio of the sample's mass to its volume.

Alternatively, this measurement can be performed by using the RDC-153 apparatus according to the ISO 10236 standard method, which allows to reach better precision figures and to gather additional information, as several natural fractions are measured.



Technical Information

Standard Method	ASTM D4292
Property	Vibrated Bulk Density [kg/dm^3]
Sample	100 g of one specific prepared fraction
Process Time	~ 7 minutes
Installation	Workbench
Dimensions (LxWxH)	40 x 48 x 82 cm
Weight	46 kg
Electrical Property	230 V 1/N/PE, 50 Hz 0.14 kW, 0.6 A
Certified Reference Material	RDC 1117
Database Connection	No

Additional Recommended Equipment

Drying oven (min. temperature 110°C)
Sieving machine with defined sieve sizes
Jaw Crusher
Roller Crusher
Weighing scale with an accuracy of 0.1 g

Certified Reference Material



RDC 1117

Weight per unit	400 g
Number of tests	N/A