RDC-145

Name **AIR PERMEABILITY**

Material type
GRANULAR
PITCH
ELECTRODES
LINING

Utilization
R&D
IN-PLANT
LAB

General description

The air permeability, corresponding to the open pores larger than 50 µm, strongly influences the burning reaction that can occur due to the presence of both air and CO_2 gases. For minimum excess carbon consumption in the electrolysis cells, low permeability is important, which reduces the anode surface area in direct contact with air or CO_2. The air permeability is also a good indicator of some process parameters, such as the mixing conditions, the variations of recycled anode butts or the binder pitch used during the electrode production process. The measurement is conducted with the RDC-145 apparatus, where the time required by a certain volume of air to pass through a sample with a 50 mm diameter and a height of 20 mm is measured. The method is based on a comparative measurement: the actual time is compared to the time required from a reference material with a known permeability. The calculated permeability is expressed in nanoperm (nPm).

Technical information

Standard Method:	ISO 15906
Property:	
Air Permeability	[nPm]
Sample:	Core Ø50 x 20 mm
Process time:	1–5 minutes
Installation:	Workbench
Dimensions (LxWxH):	60 x 62 x 69 cm
Weight:	53 kg
Electrical Property:	230V 1/N/PE, 50 Hz 0.5 kW, 2.2 A
Certified Reference Standard:	RDC–1145
Database Connection:	Yes

Additional Recommended Equipment:
Drilling machine (RDC–157 or RDC–179)
Saw (RDC–140 or RDC–148 or RDC–149)
Drying oven (min. temperature 180 °C)

RDC 1145

Technical information

Weight per unit:	N/A
Number of tests:	N/A