

RDC-151/1 – Air Reactivity – 1 Furnace

The test arrangement for the air reactivity is somewhat more sophisticated than that for the carboxy reaction. A test at constant temperature is not satisfactory for the many different anodes produced worldwide. This is due to possible ignition of the specimen before selective air burn occurs. The sample (diameter 50 mm and 60 mm length) is preheated in an inert atmosphere at 550 °C and then cooled with a gradient of 15 °C/h to 400 °C in an air flow of 200 l/h. In order to collect the dust in a cold area the sample is cyclically tapped. The results are expressed in the same manner as for the carboxy reactivity tests (ARL, ARD, ARR).

Typical ranges for the air reactivity are:

Residue ARR: 65 – 90 %

Dust ARD: 2 – 10 %

Loss ARL: 8 – 30 %

The RDC-151 is used for the determination of the Air Reactivity of anodes. It comprises of one furnace, microprocessor, temperature and gradient controller.



*Photos and illustrations are not contractual.

Standards	Compatible	ISO 12989-1
	RDC	RDC-1151
Specifications	Measurement	Residue [%] Loss [%] Dust [%]
	Sample	Core (Ø50x60mm)
	Sample / test	1
	Process time	~ 12 hours
Configuration	Set up	Free standing
	Dimensions	100 x 65 x 185 cm (LxWxH)
	Weight	180 kg
Facilities	Electrical connection	400V 3/PE, 50/60Hz
	Power	1.10 kW
	Ventilation	Fume hood
	Air pressure	3 - 7 bar (200 l/h)
	Quality of gas	Air (N ₂ : 78%, O ₂ : 21%, Ar : 1%; H ₂ O < 150 mg/Nm ³) - Free of oil

RDC-151/3 – Air Reactivity – 3 Furnaces

The test arrangement for the air reactivity is somewhat more sophisticated than that for the carboxy reaction. A test at constant temperature is not satisfactory for the many different anodes produced worldwide. This is due to possible ignition of the specimen before selective air burn occurs. The sample (diameter 50 mm and 60 mm length) is preheated in an inert atmosphere at 550 °C and then cooled with a gradient of 15 °C/h to 400 °C in an air flow of 200 l/h. In order to collect the dust in a cold area the sample is cyclically tapped. The results are expressed in the same manner as for the carboxy reactivity tests (ARL, ARD, ARR).

Typical ranges for the air reactivity are:

Residue ARR:	65 – 90 %
Dust ARD:	2 – 10 %
Loss ARL:	8 – 30 %

The RDC-151 is used for the determination of the Air Reactivity of anodes. It comprises of one furnace, microprocessor, temperature and gradient controller.



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Standards	Compatible	ISO 12989-1
	RDC	RDC-1151
Specifications	Measurement	Residue [%] Loss [%] Dust [%]
	Sample	Core (Ø50x60mm)
	Sample / test	3
	Process time	~ 12 hours
Configuration	Set up	Free standing
	Dimensions	170 x 65 x 185 cm (LxWxH)
	Weight	390 kg
Facilities	Electrical connection	400V 3/PE, 50/60Hz
	Power	3.30 kW
	Ventilation	Fume hood
	Air pressure	3 - 7 bar (600 l/h)
	Gas quality	Air (N ₂ : 78%, O ₂ : 21%, Ar : 1%; H ₂ O < 150 mg/Nm ³) - Free of oil