

RDC-142 Air Reactivity Coke

Reactivity to oxidant gases is one of the most important coke properties as it dictates the anode burning behaviour i.e. the excess anode consumption.

The same furnace and reactive tube is used for air reactivity determination. As the combustion in air is exothermic, a loss in weight test is not appropriate. The ignition temperature of the coke is correlated to the air reactivity.

The typical range for coke lies between 520 and 555 °C ignition temperature i.e. between 0.5 and 0.1 %/min air reactivity at 525 °C. Repeatability can be estimated to be below 2 °C and reproducibility below 4 °C if a calibration sample is used.

The RDC-142 is used for the determination of the Air Reactivity of granular coke and it complies with the standard ISO 12982-1. R&D Carbon in Switzerland provides the reference material required to guarantee the accuracy of the tests and ensures consistent and repeatable values.



*Photos and Illustrations are not contractual.

Electrical Connection	230V 1/N/PE, 50/60Hz
Power	0.90 kW
Weight	42 kg
Dimensions	70 x 40 x 70 cm (LxWxH)
Measurement	Ignition Temperature [°C] Air Reactivity Coke 525°C (0.5°C/min) [%/min.] Air Reactivity Coke 600°C (10°C/min.) [% / min.]
Standard compatible	ISO 12982-1
Standard RDC	RDC-1142
Required ventilation	Place in well ventilated location or under fume hood - CO ₂ fumes released
Required air pressure	Min 3 bar (50 l/h); inlet pressure not to exceed 7 bar
Gaz supply	Air 50 l/h, min 3 bar
Gas quality	Air (N ₂ : 78 %, O ₂ : 21 %, Air: 1 %; H ₂ O < 150 mg/Nm ³) Free of oil
Configuration	Bench-top
Configuration	Workbench (solid, flat working surface) do not install closer than 25 cm from any door or wall
Number of samples /test	1
Sample size	Coke 1.4 - 1 mm
Process time	~ 4 hours

Microprocessor Features:

- The Microprocessor features and advantages:
- User friendly operating system (wide colour screen, soft touch key panel)
- Fully interlinked with Key Lab application (LIMS)
- Data history (measured value, calibration factor, date, time...)
- Connectivity (database, external printer, USB mass storage, WIFI network)