

RDC-161

Name

BENCH SCALE ANODE PRODUCTION

Material type

GRANULAR
PITCH
ELECTRODES
LINING

Utilization

R&D
IN-PLANT
LAB

General description

The evaluation of critical process parameters and raw materials such as calcined petroleum coke, binders, recycled materials, and additives on bench scale is essential to conduct research and development projects for continuous improvement in anode manufacturing. The production of anodes at the bench scale under controlled conditions is a fast, reliable, and cost effective approach to assess the quality of raw materials and optimize process parameters, avoiding the expensive exercise of full-scale trials.

Key components of the RDC-161 setup include:

- Preheating oven: used to bring the dry aggregate to a target temperature before mixing.
- Eirich mixer: an intensive impeller mixer equipped with temperature control to ensure consistent, homogeneous paste production.
- Forming Press: designed for shaping green bench scale anodes with a standardized 50 mm diameter and approximately 100 mm length.

Depending on the application, additional equipment is potentially needed to prepare the dry aggregate, bake the green electrodes, and test their properties.

Technical information

Function:	Production of Bench Scale Electrodes
Maximum Temperature:	180°C
Sample:	Electrode Paste up to 8 kg
Installation:	Floor standing under Fume hood
Dimensions (LxWxH):	
Furnace	125 x 82 x 180 mm
Mixer	162 x 82 x 210 mm
Press	122 x 82 x 220 mm
Weight:	
Furnace	260 kg
Mixer	510 kg
Press	550 kg
Electrical Property:	
Furnace	400 V 3/N/PE, 50 Hz 3.4 kW, 8.5 A
Mixer	400 V 3/N/PE, 50 Hz 7.1 kW, 18 A
Press	400 V 3/N/PE, 50 Hz 1.5 kW, 4 A
Database Connection:	No

Additional Recommended Equipment:
Baking Furnace (RDC-164 or RDC-167)
Test equipment for analysis
Weighing scale with an accuracy of 0.1 g

