

Testing coke quality according to ISO/DIS 18894, ASTM D 5341 Standards



The RF-33 system for determining coke reactivity and strength after reaction by CRI/CSR tests

Hardware of the RF-33 test system

- ⇒ vertically openable electric furnace of 10 kVA maximum power input
- ⇒ automatic control of test procedures by a powerful computer
- ⇒ fully automated operation of the system
- ⇒ gas management for CO₂, N₂, (Ar) gases
- ⇒ detection of possible CO leakage
- ⇒ exact control of tumbler's rotational speed during the CSR test



Features of furnace for testing CRI

- ⇒ mass produced heating sections
- ⇒ working temperature $1\ 100 \pm 1\ ^\circ\text{C}$
- ⇒ simple maintenance and replacement of heating sections
- ⇒ automatic moving of retort into and out of the furnace
- ⇒ monitoring of temperature profile in the retort
- ⇒ checking the gas tightness of retort
- ⇒ high frequency of measurements
- ⇒ mobile box for cooling the retort

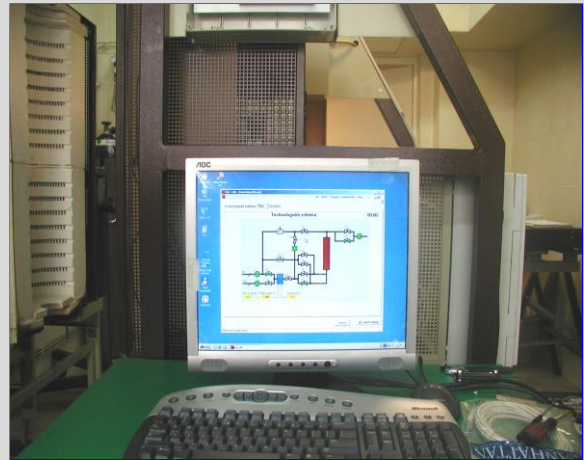
Equipment for doing CSR tests



- ⇒ computer controlled CSR test operation
- ⇒ exact control of tumbler's rotational speed (20 ± 0.1 rev/min)
- ⇒ automatic diagnostics of the system
- ⇒ Results of the CRI/CSR testing are:
 - coke reactivity index – CRI
 - coke strength after reaction – CSR
 - time chart and index of coke weight loss during reaction
 - digital photo documentation of coke remains after CRI and CSR tests

Software for performing the tests

- ⇒ operated by "MENU"
- ⇒ listing of actual values of all parameters for the given measurement
- ⇒ automatic scale change of graphs
- ⇒ comprehensive evaluation of tests
- ⇒ registration of events (including failures)
- ⇒ color print of test protocol
- ⇒ visualization of archived tests including photo documentation of coke remains



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