

TECHNICAL UNIVERSITY OF CIVIL ENGINEERING

Research Center of Mineral Waste Valorisation into Construction Materials

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Research Center of Mineral Waste Valorisation into Construction Materials (CC-VADEMC) includes professor-researchers from the Technical University of Civil Engineering Bucharest, from Romania and abroad collaborators with important research activities on the mineral resources management in construction.

The evaluation of the waste recycling technological, environmental and economic advantages /limitation

INVESTIGATING— IDENTIFYING

PROCESSING

The recovery (treatment) of industrial waste as secondary raw materials (SRMs) into conventional and advanced construction materials

THE
TECHNICAL /
SCIENTIFIC
OFFER

Life cycle assessment

Atomic absorption spectrophotometer

Multiparameter analyzer function of pH

meter conductivity, oxygen meter;

AA-500;

C200 colorimeter

DEVELOPMENT OF
THE RECOVERY &
RECYCLING
TECHNOLOGICAL
PROCESS

TESTING OF THE
CONSTRUCTION
MATERIALS
ENGINEERING AND
ENVIRONMENTAL
PROPERTIES

Achievements: required mechanical strengths and durability, immobilization of heavy metals into hydraulic matrix

- Automatic titrator TitroLine Easy;
- Vacuum Pump Rocker 410;
- Masterflex 7524-55 peristaltic pump;
- Column for percolation leaching test;
- Magnetic stirrers and other devices for leaching tests.

APPARATUS & METHODS

- Automatic mixer for pastes and grouts processing;
- Drum mixer for concrete;
- Apparatus (Rheotest Medingen GmbH type) for measuring characteristics of pastes and mortars;
- Standard devices for measuring the rheological characteristics of self-compacting concrete;
- Drying oven UFB 400;
- Hydraulic machines for mechanical strengths testing.
- Experimental methods and numerical simulation of the construction materials with the SRMs behavior in application, as required by EU Construction Product Regulation 305/2011- Basic Requirements;
- Assessment of contaminants release by appropriate leaching test (CEN /TC 351/WG1 N179, CEN /TC 292).











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