

Project Manager **Dzmitry Pisarenka** +375-29-1-723-523, dmvp@yandex.ru





Construction lime is the largest raw material component in production of building materials. Development of the energy efficient technology of building lime manufacturing from local raw materials is an essential scientific task.



Project aims at establishing new manufacturing of the first-class construction lime from carbonate (dolomite) raw material using a fundamentally new way: supercritical carbon-dioxide extraction.



*Energy efficiency up to 2–2,5 times in comparison with the analogues

*No production waste

*Portability

*Green operation

*Cost reduction up to 5 times











Application has been made to obtain Eurasian patent for Invention "Carbonate raw material treatment method"



Potentially new energy efficient method of calcium oxide production by carbon-dioxide fluid extraction from dolomite raw materials has been experimentally proved





Project objective



Calcium oxide extraction out of dolomite powder using supercritical carbon-dioxide extraction method under stable which parameters, are theoretically and experimentally proved. **Investigation of chemical purity** oxide activity of the and obtained calcium in order to assess its potential possibility to be used as building lime.



Financial Plan



Innovation Voucher – €4000:

- Salary €1500:
- $\in 1000 \text{commissioning of the laboratory setup};$
- \in 500 conduct of the experiments using the lab-scale installation;
- Research partner services (Republican Innovative Unitary Enterprise "Science and Technology Park of BNTU "Polytechnic") – €2500:
- €2500 Laboratory study of the achieved experimental results.
- Own contribution of Private Trade Unitary Enterprise "Infostroykomplekt" – €2400:
- €1900 costs of lab-scale installation components purchase;
- \in 500 costs of lab-scale installation manufacturing (building and testing).