

## What can we do for the Stone Industry ?



- You are in need of alternative simple and fast techniques to characterize the properties of your stones,
- You need to determine the performances of your tools and compare them to the concurrent products,
- You want to monitor your equipments to determine the performances and to improve the efficiency of your process,
- You are interested in new research and development concepts to increase your activities,

**Stone Assistance may help you to reach your objectives.**

## R&D Services for the Stone Industry & Geomaterial Engineering

*Characterizing - Understanding - Improving*

### STONE ASSISTANCE



#### STONE ASSISTANCE SPRL

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# Innovations for the Stone Industry

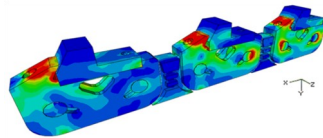
Stone Assistance is a Spin-Off of the Civil Engineering Department of the University of Mons, in Belgium.

Stone Assistance has been created to valorize research and development activities to the Stone Industry.

Stone Assistance activities are divided in 5 main topics:

1. Stone characterization
2. Cutting technology improvement
3. Evaluation of cutting tools
4. Inheritance restoration
5. Recycling of stone waste materials

Stone Assistance is providing services in those different topics and is also developing new concepts in partnership with private companies in Belgium or abroad.



## Characterization of stones

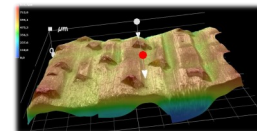
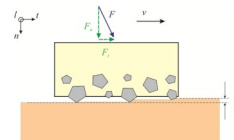
Physico-mechanical characterization based on standards or alternative fast techniques on samples which can not be characterized with classical methods.

- Density, porosity, permeability, capillarity
- Strength (UCS, TS, Point load, ...)
- Intrinsic specific energy, drilling strength
- Hardness, abrasiveness
- Sonic velocity, dynamic Young's Modulus
- Slip resistance (SRT)
- Resistance to abrasive wear
- Salt weathering, frost resistance



## Understanding of the tools working mechanisms

- Understanding of stone cutting mechanisms with carbide and PDC, cutters or impregnated diamond inserts
- Characterization of wear mechanisms, and tool resistance to abrasive wear
- Development cutting and wear models for the design of new cutting tools
- Advice for choosing adapted tools based on stone properties



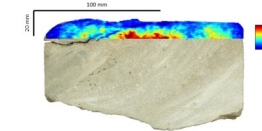
## Improving machine efficiency

- Development of testing benches
- Comparative studies of tools performances
- Monitoring of stone machines
- Studies of the machines performances to increase their efficiency



## Cultural Heritage conservation

- Stone characterization
- Advice for stone substitution for the inheritance restoration
- Evaluation of consolidation and waterproof treatments



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