Nikon XT H 225/320 LC with torsion, fluid flow, heating and cooling.

OGIC (The Oil and Gas Innovation Centre) are delighted to be funding the Nikon XT H 225/320 LC system x-ray microtomography in collaboration with the **University of Strathclyde** and the **University of Glasgow**.

Nikon XT H LC system specifications:

Dual Source transmission (180 kv) and reflection (225 kV).

Deben CT10KN Torsional Test Cell (torsion, compression and tension) ranging up to 10kN.

Deben heating/cooling stage from -60°C to 500°C.

Liquid/Gas chamber assembly for fluid flow.

Size of samples up to 50 mm long.

High-resolution images with voxel size down to 30 microns.

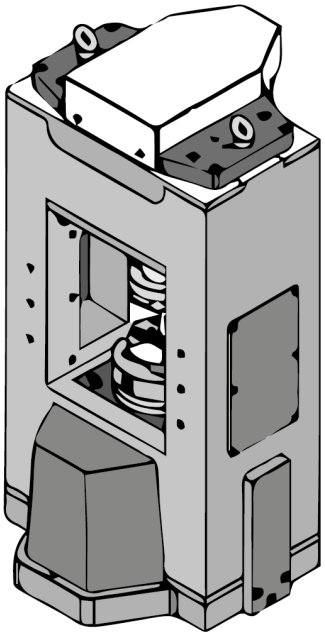
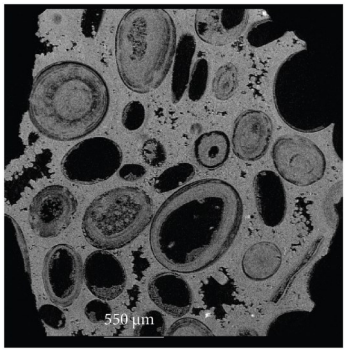


Figure 1—Deben CT10KN cell



This high-resolution system produces sharp images (figure 2). It comes with a Deben CT10KN cell which allows torsion, compression, tension and heating/cooling (c. -60 to +300 oC) with fluid flow.

Figure 2—Oolitic limestone showing secondary porosity images (0.55mm).

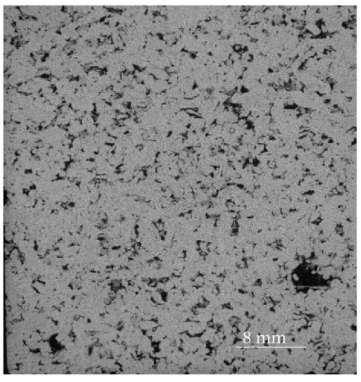


Figure 3— sandstone and porosity.

Some examples of potential applications in earth sciences:

Volume variation during mineralogical replacement.

Effect of stress on fluid flow.

Fracture propagation and process zone in outcrops.

Effect of stylolites on fluid flow.

To learn more about the system, or to enquire about using it please contact Nicolas Beaudoin on: **nicolas.beaudoin@strath.ac.uk**