

OSU Green Building Materials Laboratory

*An Oregon Built Environment & Sustainable
Technologies (BEST) Center Signature Research Facility*

School of Chemical, Biological and Environmental Engineering
School of Civil and Construction Engineering
Department of Wood Science and Engineering

Chemical, Biological and Environmental Engineering



TRMS - Thermal Resistance Measurement System

Can determine the thermal resistance or thermal conductivity of materials

Funded through BEST

TA Instruments AR200ex

Rheological characterization of materials from liquids to polymer melts

Active temperature control from LN2 to 600C is available



DSC - Differential Scanning Calorimetry TGA - Thermogravimetric Analyzer

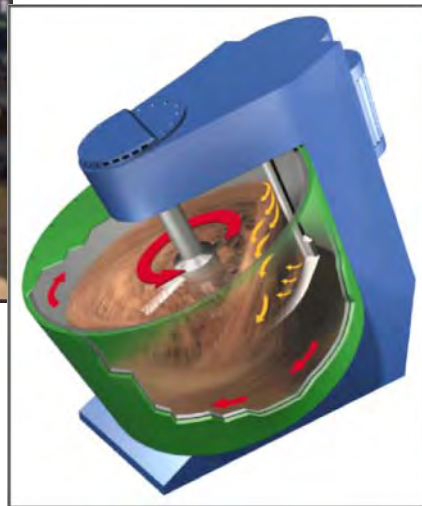
Dr. Skip Rochefort – skip.rochefort@oregonstate.edu

School of Civil and Construction Engineering

Eirich high intensity concrete mixer:

Maximum batch, 5.3 ft³

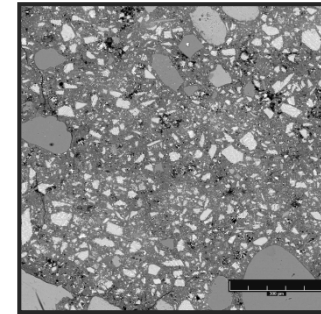
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Early-Age Testing



Pore Press



Microstructural Characterization Equipment –
microscopy (SEM) and x-ray diffraction (XRD)

Dr. Jason Ideker- jason.ideker@oregonstate.edu

Wood Science and Engineering

Viscoelastic thermal compression processing equipment:

- Reaction vessel, 28-inch ID, variable volume, internal platens with independent heating & cooling.
- Hydraulic press, 750 ton capacity.
- Steam generator, 200 psi.
- Veneer slicer, 24-inch by 4-inch.
- Funded through BEST



VTC reaction vessel with lid open showing wood specimens prior to compression



3-layer VTC composite

OSU GBML - Usage Model

1) Collaborative Research

No fee

2) Internal use (usually OSU, but sometimes other OUS institutions)

Projected for a NO FEE policy for these users.

Expendables - user provided

3) External (industry)

Hourly fee schedule +

Graduate student hourly wage +

Expendables

Equipment and Safety Training Required for all NEW users

OSU GREEN BUILDING MATERIALS LABORATORY

Dr. Skip Rochefort

School of Chemical, Biological and
Environmental Engineering

Thank You!



Dr. Fred Kamke

Department of Wood
Science and Engineering



Dr. Jason H. Ideker

School of Civil and
Construction Engineering

Oregon **BEST FEST '09**
September 14 | Portland, Oregon

