



ESPCI
Laboratoire PMMH
10 rue Vauquelin, 75231 Paris Cedex 05



Séminaire café - PMMH

Bureau d'Études, Batiment L, 2^{ème} étage

Jeudi 12 mai 2016, 13h30

Théau Conte

PhD student at LMT Cachan, ENS Cachan

Rheological behavior of cement paste under large amplitude oscillatory shear (LAOS)

Cement pastes exhibit virtually all the rheological features of complex fluids. Thus, several rheological methods and setups have been used in the literature to characterize these materials. In the present investigation Large Amplitude Oscillatory Shear (LAOS) is for the first time exploited for cement pastes. LAOS can be used to characterize all the rheological properties within a single procedure. This technique is tested in the case of three different cement mixes : a Portland cement paste, nanoclay blended cement paste and a cement paste containing a hydro-soluble polymer. These mixes were selected in order to get rheological properties that are different both quantitatively and qualitatively. Indeed, addition of a low amount of nanoclay increased significantly the yield stress and the shear-thinning/thixotropic aspects of the cement paste, whereas addition of cellulose ether led to the decrease of yield stress and thixotropy. These non-linear rheological properties are discussed within the framework of LAOS.

Prochain séminaire : jeudi 19 mai 2016 à 13h30,
Intesaaf Ashraf (doctorant PMMH).

Programme des séminaires café : www.pmmh.espci.fr, onglet *Séminaires PMMH* > *Séminaires café (internes)*
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