

COBBAUGE KICK-OFF EVENT

RÉUNION DE LANCEMENT COBBAUGE



CobBauge

28th November 2017
Plymouth University



Interreg
France (Channel Manche) England
EUROPEAN UNION

Présentation du projet CobBauge

Introduction of CobBauge project



Kick-off event



Malo Le Guern
Ecole Supérieure
d'Ingénieurs des Travaux
de la Construction de Caen



28/11/2017



Technical aspects of cob

Aspects techniques de la Bauge



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- Cob components



Soil



Straw



Water



Technical aspects of cob

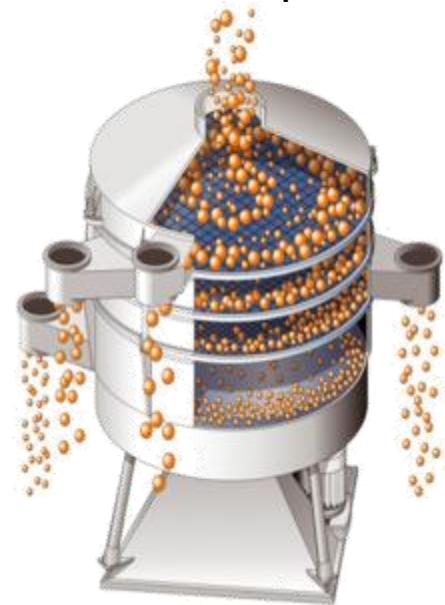
Aspects techniques de la Bauge



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- Soil characterisation :
→ Particle Size Distribution « ISO 13320 »

$d > 80 \mu\text{m}$

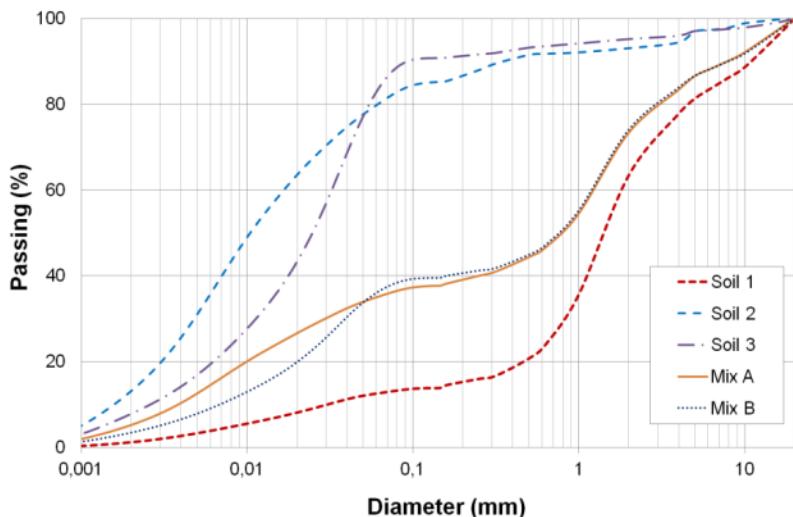


$d < 80 \mu\text{m}$



Mechanical sieving

Laser diffraction



Particle size distribution of several soils



Technical aspects of cob

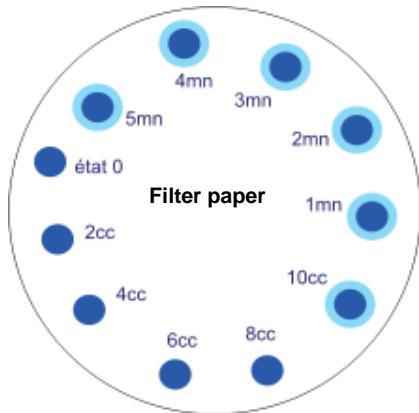
Aspects techniques de la Bauge



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- Soil characterisation :

→ Clay activity (shrinkage/swelling) « NF P94-068 & NF P94-051 »



Methylene blue value



Atterberg's limits



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Aspects techniques de la Bauge

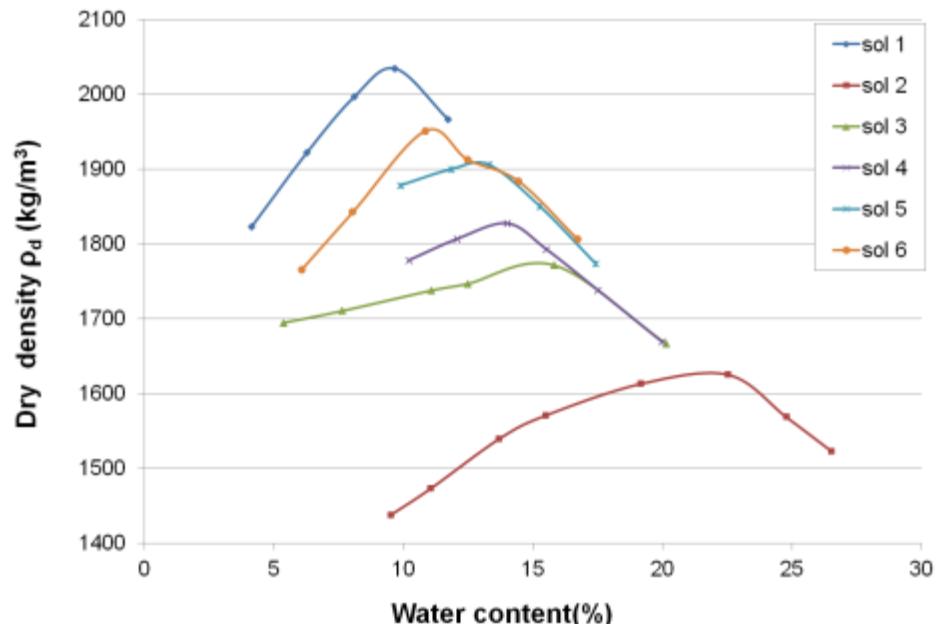


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- Soil characterisation :
→ Proctor test « NF P94-078 »



Automatic compactor



Atterberg's limits



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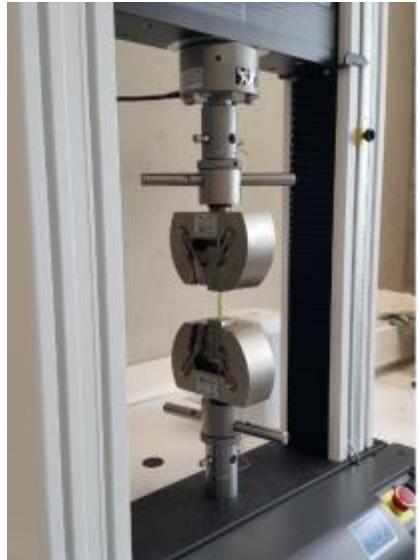
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Aspects techniques de la Bauge

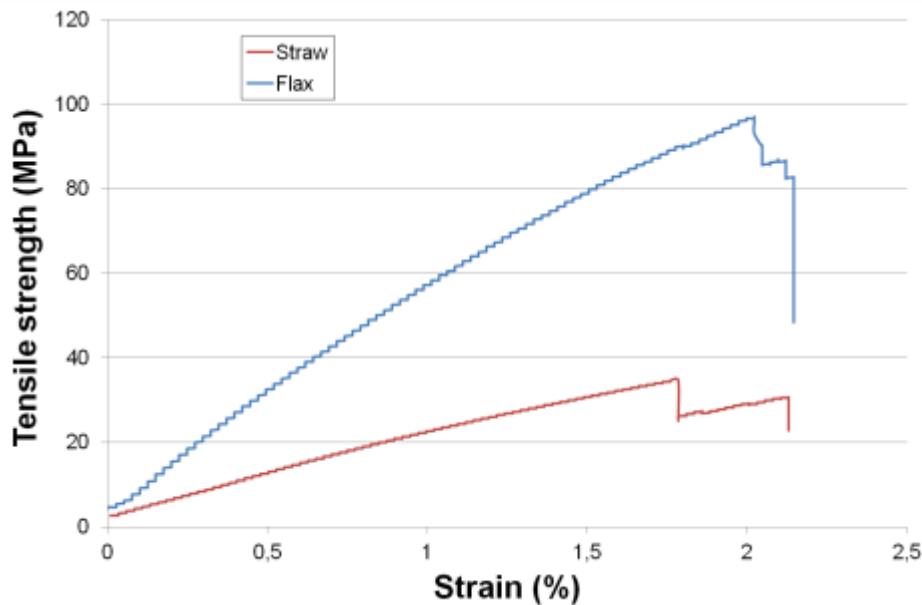


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- Fibre characterisation :
→ Tensile strength



Tensile strength test



Fibres' tensile strength test



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Aspects techniques de la Bauge

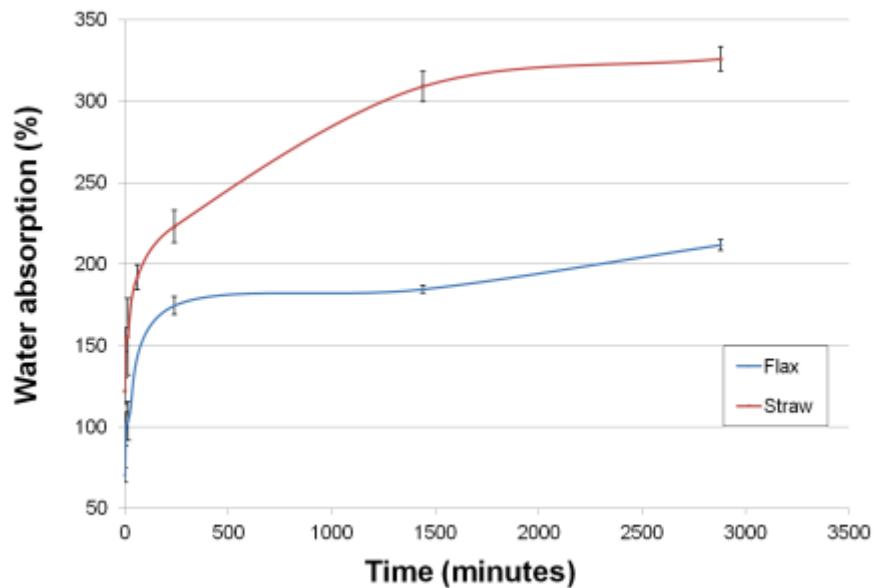


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- Fibre characterisation :
→ Water absorption



Immersed fibres



Water absorption of flax and straw



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- Samples:



Cylindric



Cubic



Prismatic



CobBauge

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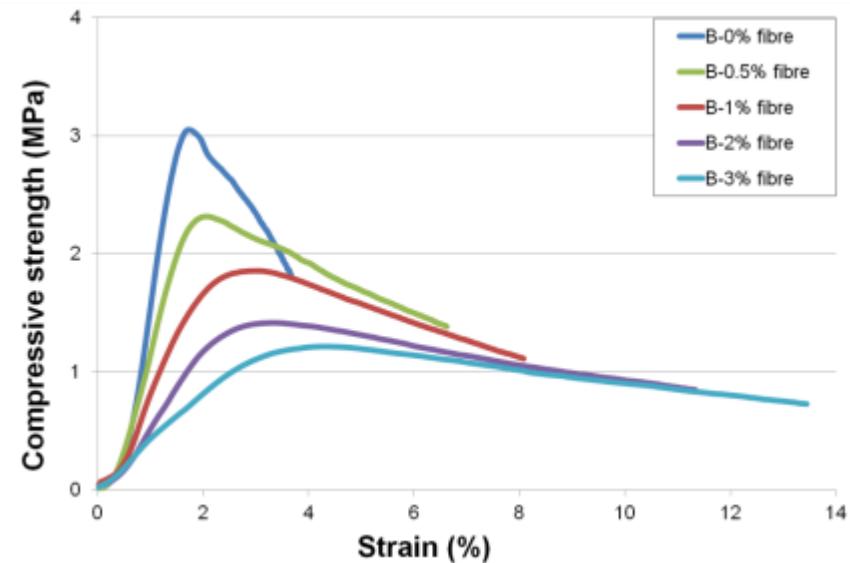


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- Cob characterisation :
→ Compressive strength



Compressive strength test



Cob's compressive strength test



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Technical aspects of cob

Aspects techniques de la Bauge

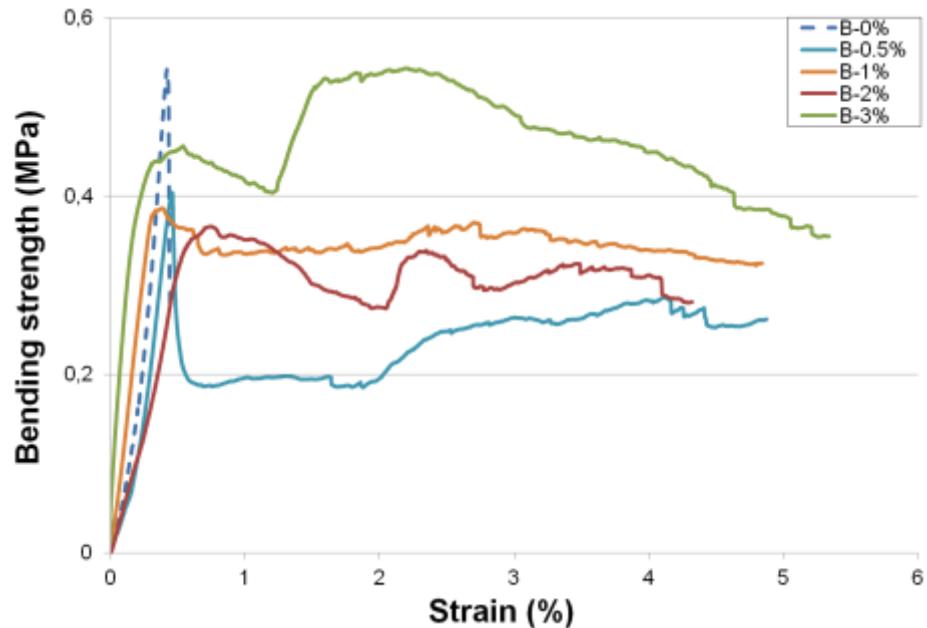


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- Cob characterisation :
→ Bending strength



Four point bending strength test



Cob's compressive strength test



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- Cob characterisation :
→ Thermal conductivity



Hot wire conductivity meter
« NF B40-316 »



Heat flux transducer
« NF EN 12667 »



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Aspects techniques de la Bauge

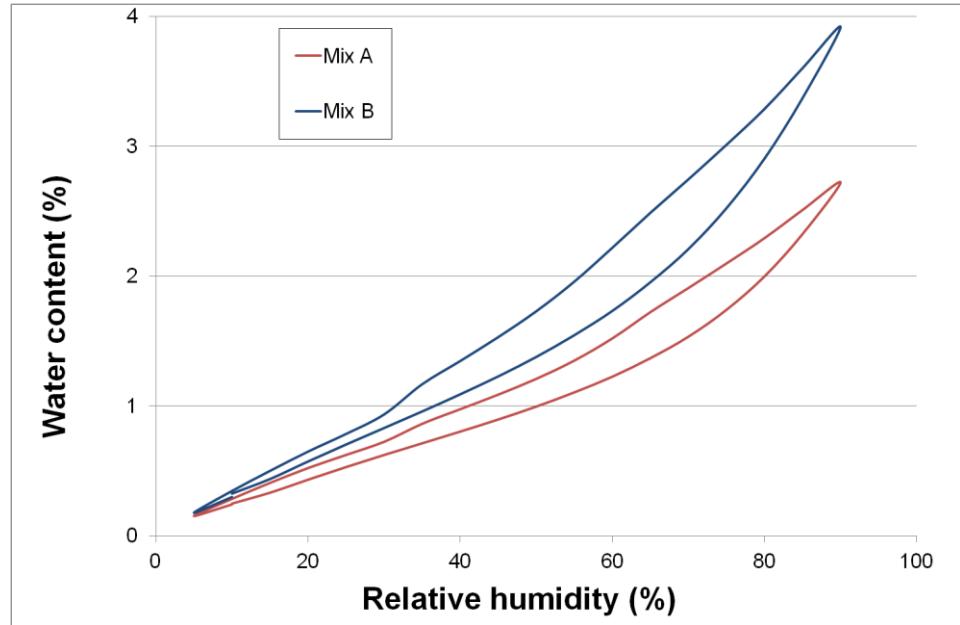


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- Cob characterisation :
→ Hygrometric properties « NF EN ISO 12571 »



Dynamic Vapour Sorption analyser



Example of cob's hygrometric hysteresis



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Knowledge of fibres' influence

Determine the ideal type of soil



Determine 4 optimal Cob mixes



Manufacturing process optimisation



CobBauge

Follow the project

Suivez nos travaux



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CobBauge Project



<http://www.cobbauge.eu/>

- News
- Events
- Documentation
- Trainings
- And more !

The screenshot shows the CobBauge project website. At the top, there's a header with the CobBauge logo, Interreg France (Channel Manche) England logo, and a European Union flag. Below the header, there are navigation links for Accueil, Le projet CobBauge, Les partenaires, Ressources, and Contact, along with social media links for Facebook, LinkedIn, and Twitter. The main content area features a large image of a cob wall under construction. To the right of the image, there's a section titled "ACTUALITÉS" with several news items:

- Réunion de lancement :** Invitation au lancement du nouveau projet de recherche CobBauge le 28 Novembre 2017 à Plymouth.
- Clayfest 2018 : du 24 au 29 septembre 2018 :** L'édition 2018 de Clayfest se tiendra en septembre 2018 en Irlande au Irish National Heritage Park.
- Le nouveau projet CobBauge approuvé !** Nous sommes heureux d'annoncer l'approbation du projet CobBauge par le programme Interreg V-A France (Manche) / Angleterre cofinancé par la FEDER.

At the bottom of the page, there are footer links for Interreg France (Channel Manche) England, a "Mentions légales" link, and a "Gérer mes cookies" link.



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Thank you for your attention
Merci de votre attention

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BUILDING
RESEARCH
WITH
PLYMOUTH
UNIVERSITY

ESITC
CAEN
Ecole Supérieure d'Ingénieurs
des Travaux de la Construction



Parc naturel régional
des Marais du Cotentin et du Bessin

ebuki
FOSTERING EARTH BUILDING
IN THE UK AND IRELAND

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