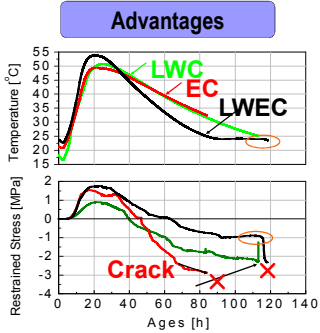


Performance of lightweight expansive concrete subjected to shear fatigue loading

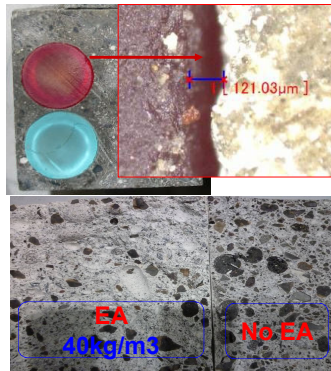
KISHI Lab

[BACKGROUND]



- Reduce thermal and drying shrinkage (Lin 2006).
- Reduce dead load.
- Good structural performance before crack occurred.

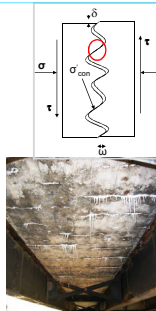
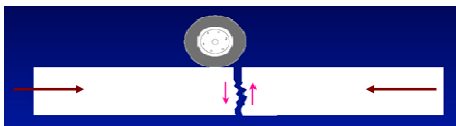
Disadvantages



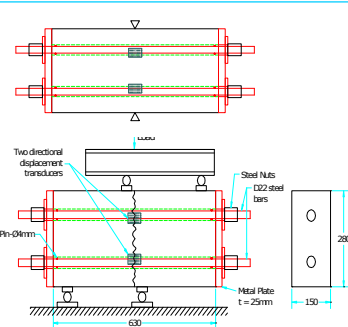
Initial imperfections are found when high dosage of EA is used (Sakai 2011)

[OBJECTIVE]

To exam the fatigue behavior of **LWC+EA** subjected to **shear**.



[EXPERIMENTAL PROGRAM]

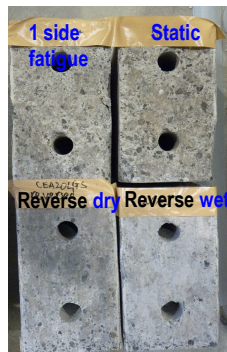


Loading history

- Reverse cyclic
- One side fatigue

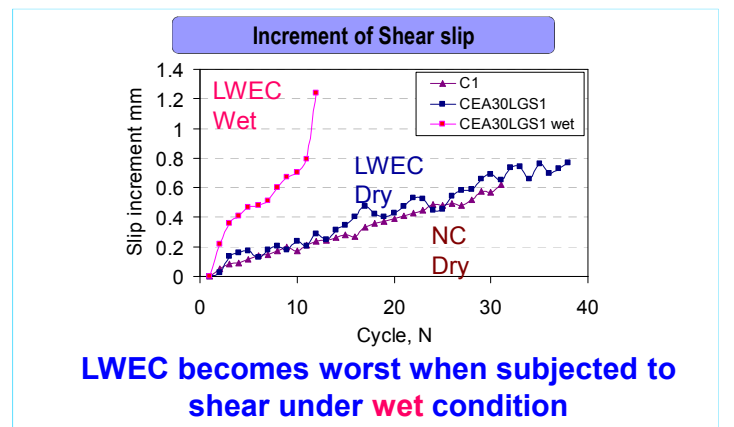
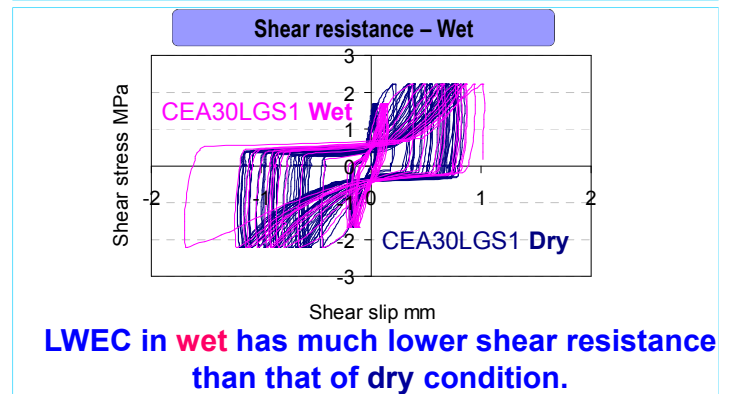
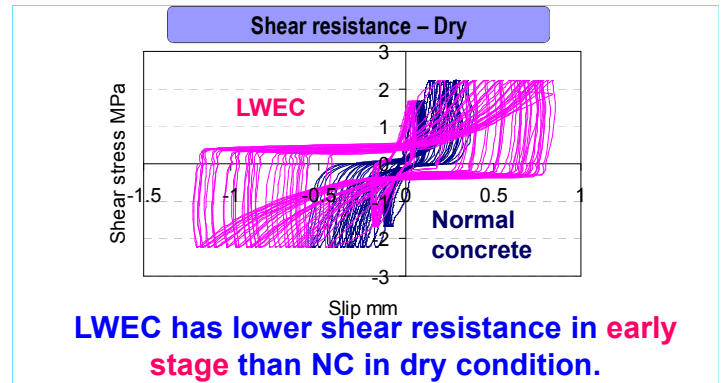
Loading condition

Environment		
NC	Dry	Wet
LWEC	Dry	Wet



Crack surface after test

[EXPERIMENTAL RESULTS]



[CONCLUSION]

When **crack** appears.

	Dry		Wet	
	Short term	Long term	Short term	Long term
NC	Good	Good	Good	normal
LWEC	normal	Good	Bad	Worst