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Keynote Paper

Numerical Modelling for Climate Change Impacts on RC Structures

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ABSTRACT

One of the significant consequences of increasing atmospheric CO_2 levels is increased potential for carbonation-induced corrosion. A rational model is presented for prediction of the carbonation progress in concrete structures. The model predictions are shown to be in good agreement with test data. The impact of climate change on the progress of carbonation in RC structures within Sydney, Australia, is then investigated for different concrete quality using the different representative concentration pathway (RCP) projections described by the Intergovernmental Panel on Climate Change (IPCC).

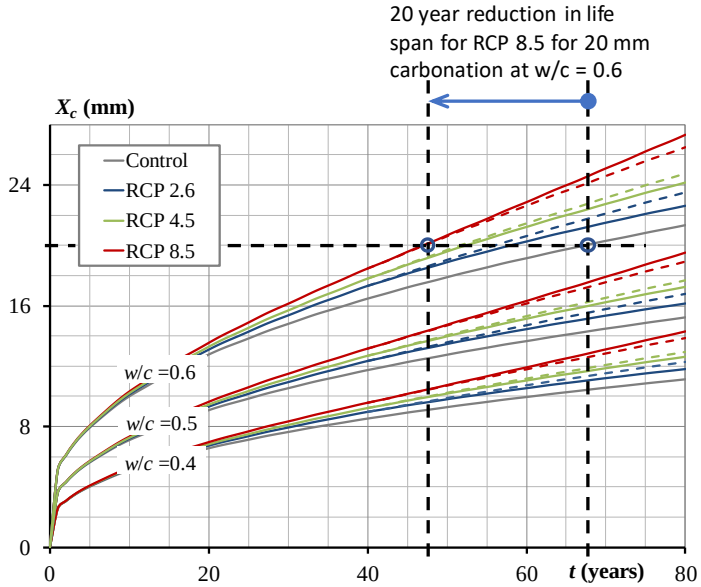

Fig. 1 Carbonation of RC structures in Sydney for climate change scenarios.

REFERENCES

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