A study of the durability properties of waste tire rubber applied to self-compacting concrete
4. Conclusions

(1) The compressive strength of SCRC was the best when 5% of the waste tire rubber powder that had been passed through a #50 sieve was added (increased by 1–10%), which meant that adding waste tire rubber powder can meet the safety performance requirements of SCRC. It was not true that when the waste tire rubber powder was finer, the compressive strength of the concrete was higher.

(2) The ultrasonic pulse velocity after 28 days was 4000 m/s when 5% waste tire rubber powder was added, and all of the samples were higher than 4000 m/s. However, if more rubber was added, the ultrasonic pulse velocity decreased to less than 4000 m/s. Because the average waste tire rubber powder that had been passed through a #30 sieve was 6.5% lower than the control group, this indicated that the ultrasonic pulse velocity would decrease with an increase in the amount of waste tire rubber powder.