

STUDY OF COLD JOINT CONCRETE BY INFRARED THERMOGRAPHY AND ULTRASONIC PULSE VELOCITY

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SUPERVISOR'S DECLARATION

I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Bachelor of Engineering (Hons) in Civil Engineering.

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STUDENT'S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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LIST OF SYMBOLS

μm	Micrometre
%	Percentage
$^{\circ}\text{C}$	Degree Celsius

LIST OF ABBREVIATIONS

Hz	Hertz
lm	Lumen
IRT	Infrared Thermography
kN	Kilo Newton
MPa	Mega Pascal
mm	Millimetre
m	Meter
NDT	Non-Destructive Test
PT	Pulse Thermography
PPT	Pulse Phase Thermography
psi	Pound Per Square Inch
RGB	Red, Green, Blue
TM	Thermal Modelling
UPV	Ultrasonic Pulse Velocity
VGA	Video Graphic Array