

# NDT Guide Supplement MAB 1033

MAB 1033 Structural Assessment and Repair  
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The following is a compilation of non-destructive testing evaluation guideline obtained from various literature and its use is strictly confined for academic purposes only.

<b>PULSE ULTRASONIC VELOCITY MEASUREMENT</b>	<b>Pulse Velocity (km/sec)</b>		<b>Probable Concrete Quality</b>	
	> 4.5		Excellent	
	3.5 – 4.5		Good	
	3.0 – 3.5		Fair/Doubtful	
	2.0 – 3.0		Poor	
	< 2.0		Very Poor	
<b>REBOUND HAMMER SURFACE HARDNESS TEST</b>	<b>Rebound Number</b>	<b>Probable Concrete Strength (N/mm<sup>2</sup>)</b>	<b>Concrete Quality Assessment</b>	
	< 25	20	Poor	
	25 – 35	20 – 30	Medium	
	> 35	> 30	Sound	
<b>CORROSION POTENTIAL ASSESSMENT CRITERIA</b>	<b>Potential Measurement (mVolts)</b>		<b>% Chance of reinforcement being corrosively active</b>	
	< - 350		95%	
	-200 to -350		50%	
	> -200		5%	
<b>RESISTIVITY MEASUREMENT</b>	<b>Concrete Resistivity (ohm-cm)</b>		<b>Rate of corrosion</b>	
	> 20,000		Negligible	
	10,000 – 20,000		Low	
	5,000 – 10,000		High	
	< 5,000		Very High	
<b>CHLORIDE ASSESSMENT</b>	<b>Chloride Content (by wt of concrete)</b>		<b>Corrosion Risk</b>	
	Up to 0.02%		Insignificant	
	Up to 0.05%		Low	
	0.05 – 0.15%		Medium	
	> 0.15%		High	