

APPENDIX E

SCAN RESULTS OF ULTRASONIC ASSESSMENT OF GROUTING DEFECTS OF S3-1, S3-2, S3-3 & S3-4 (SUPPORT ANALYSIS FROM CHAPTER 4)

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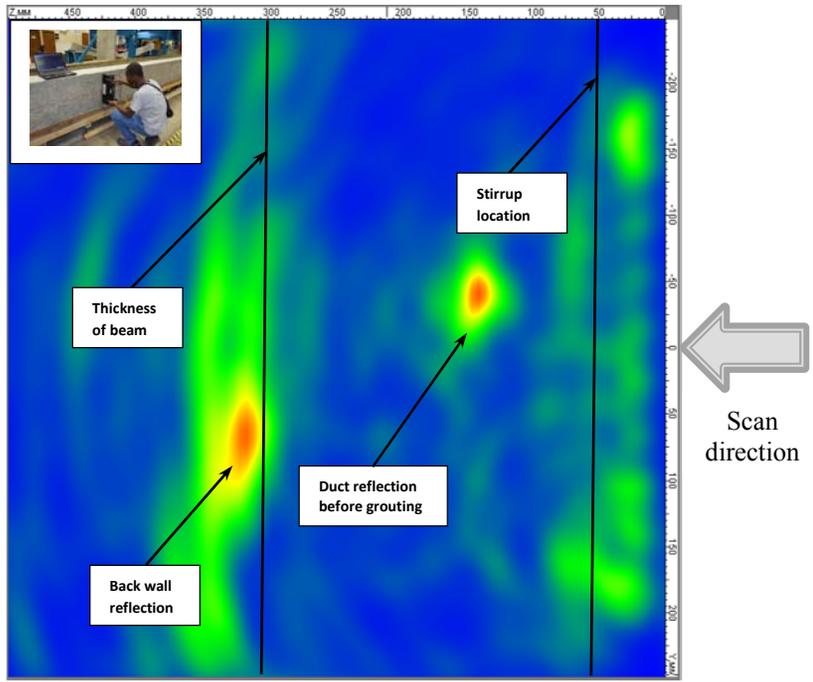


Fig. E-1(a): before grouting, 50 kHz, before grouting, S3-1

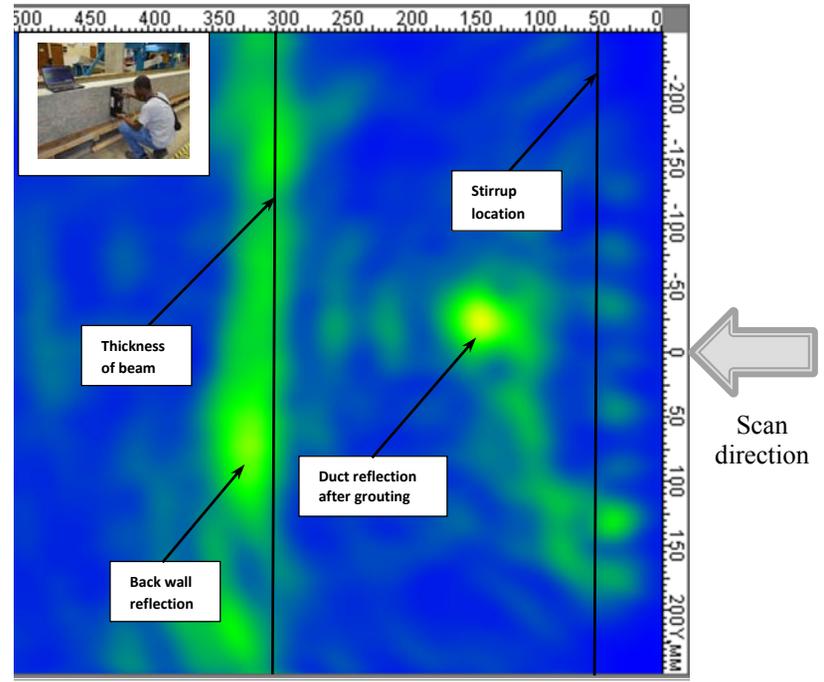


Fig. E-2(a): after grouting, 50 kHz, after grouting, S3-1

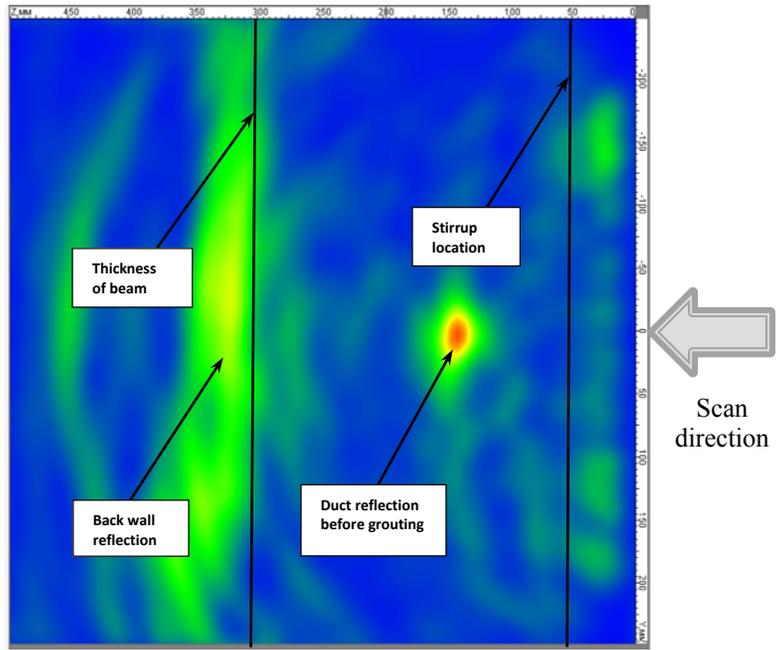


Fig. E-1(b): before grouting, 50 kHz, before grouting, S3-1

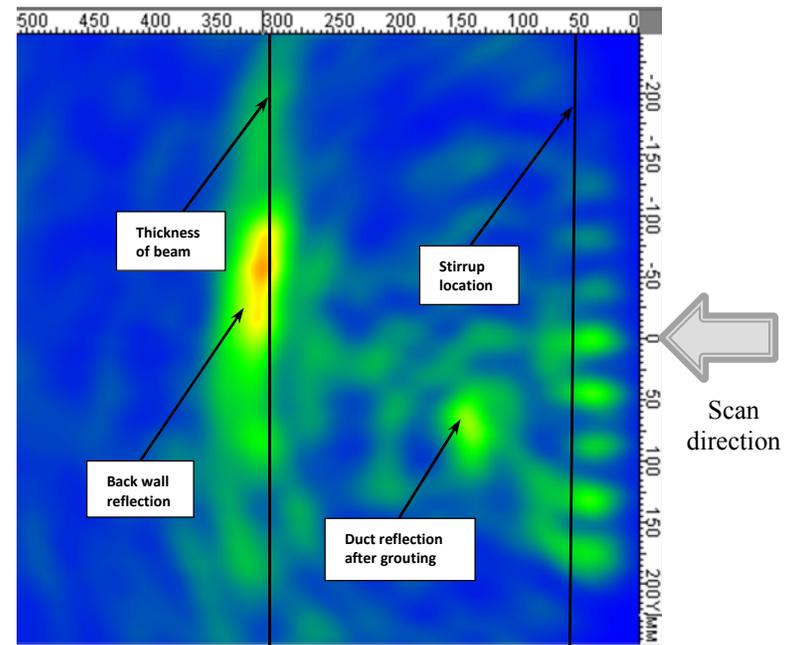


Fig. E-2(b): after grouting, 50 kHz, after grouting, S3-1

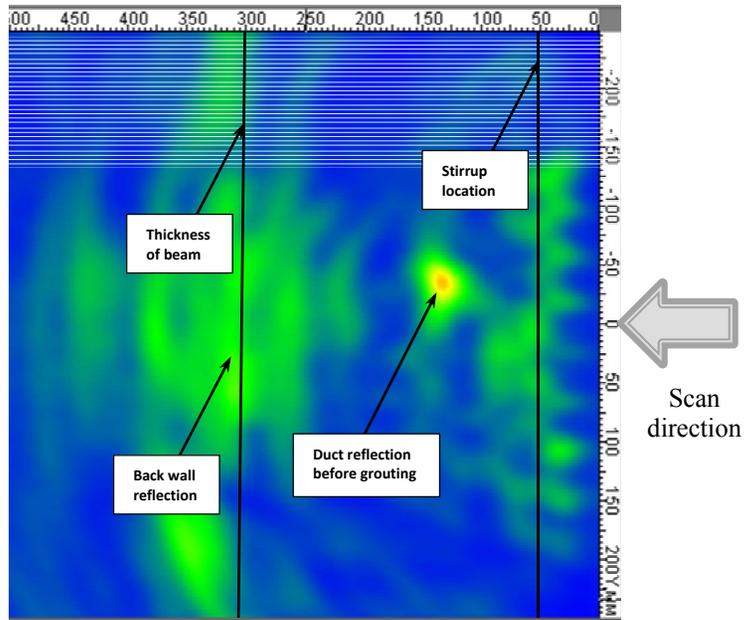


Fig. E-3(a): before grouting, 50 kHz, before grouting, S3-2

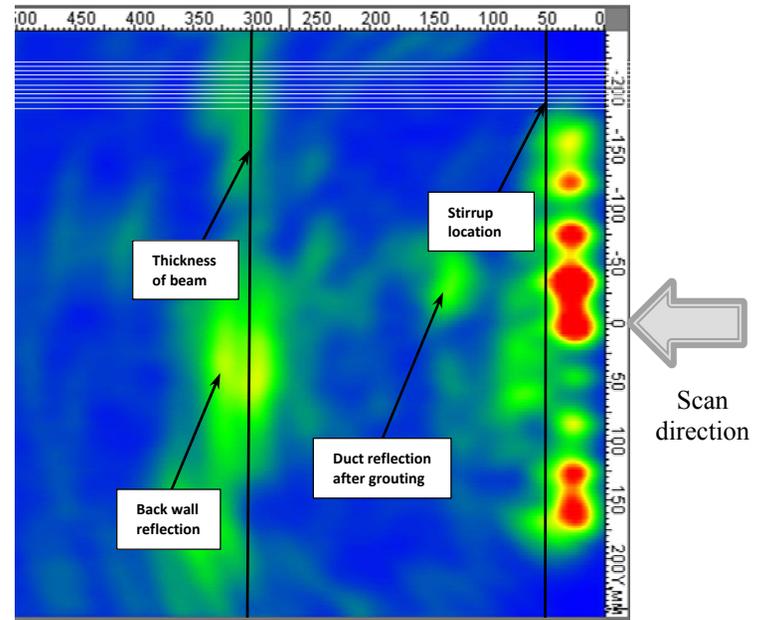


Fig. E-4(a): after grouting, 50 kHz, after grouting, S3-2

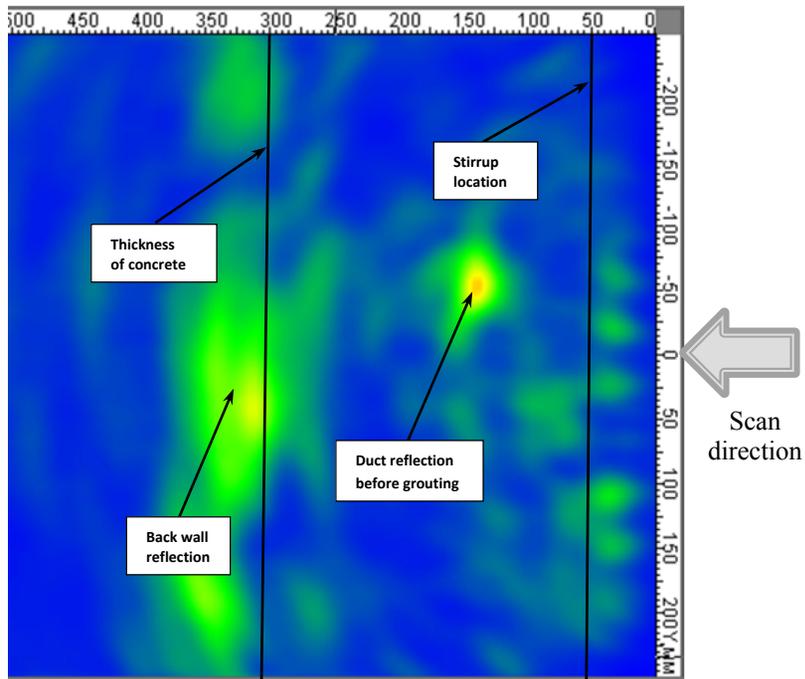


Fig. E-3(b): before grouting, 50 kHz, before grouting, S3-2

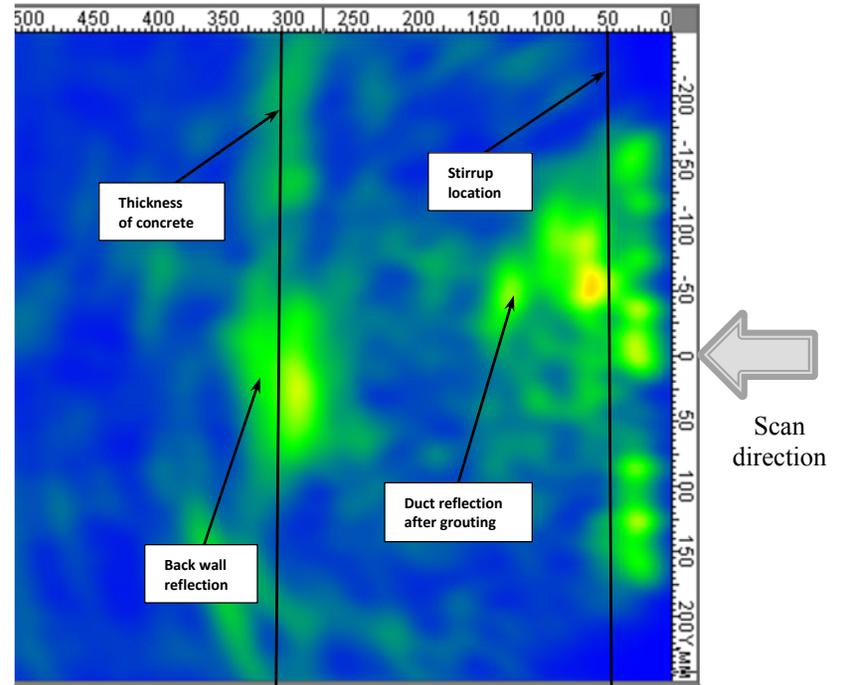


Fig. E-4(b): after grouting, 50 kHz, after grouting, S3-2

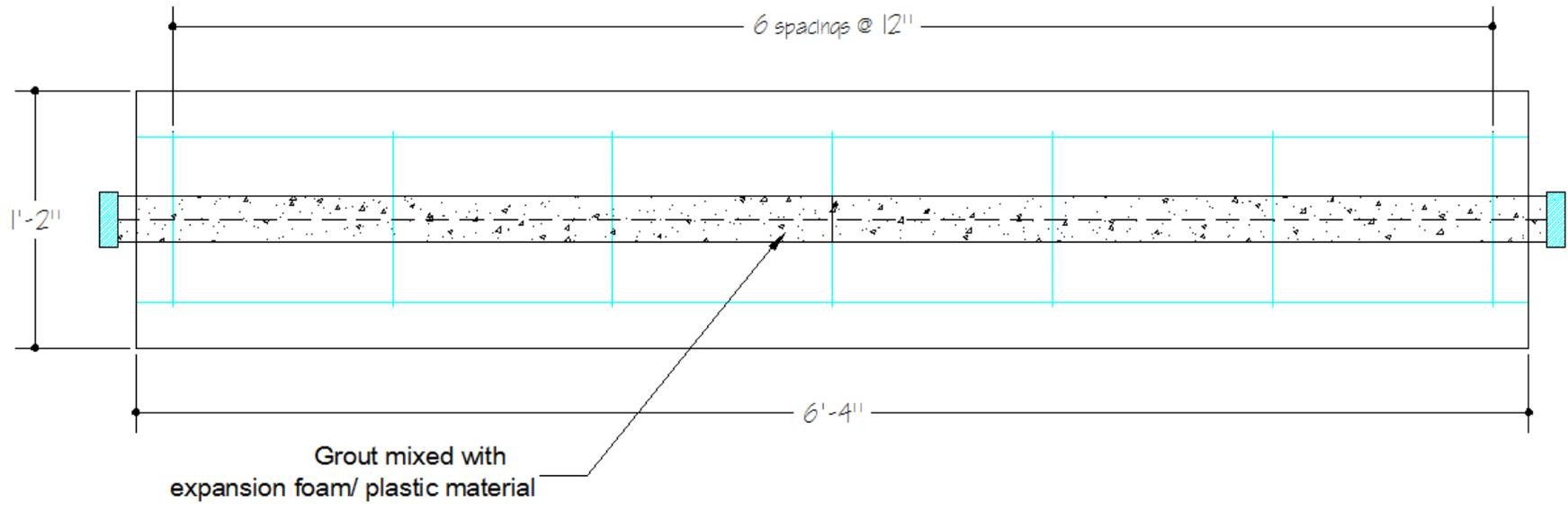


Figure E-5: Configuration of S3-3 showing straight steel duct with grout mixed with expansion foam and plastic material

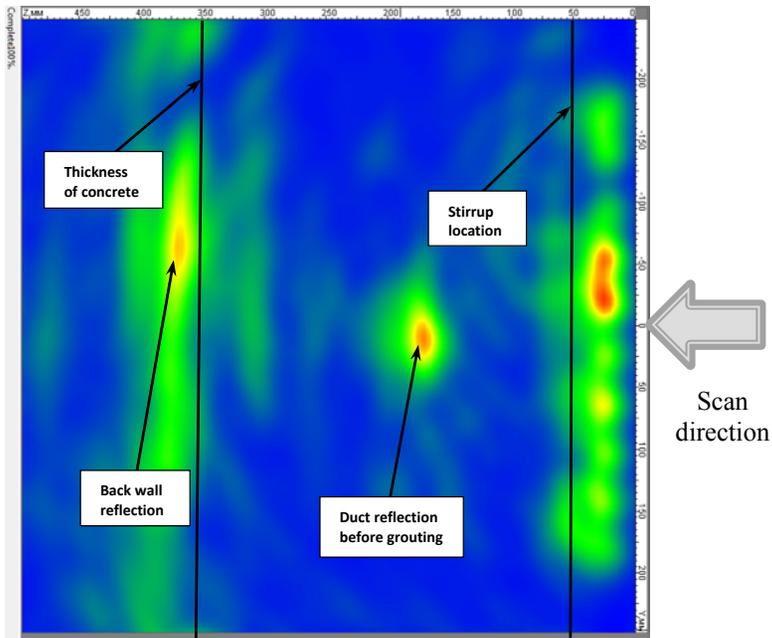


Fig. E-6(a): before grouting, 50 kHz, before grouting, S3-3

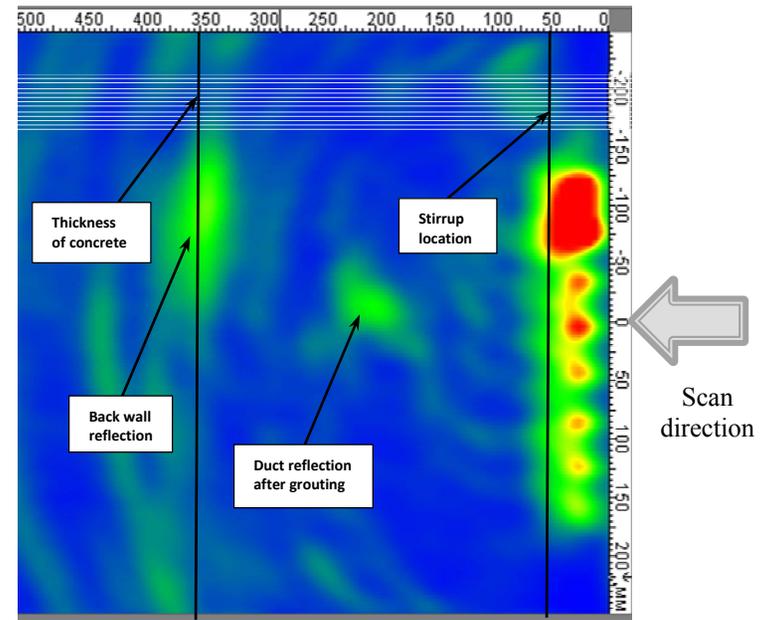


Fig. E-7(a): after grouting, 50 kHz, after grouting, S3-3

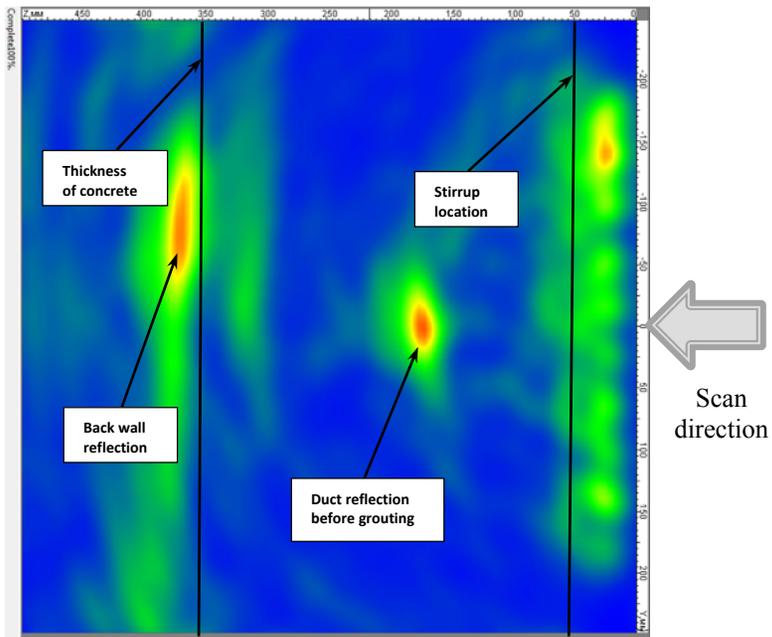


Fig. E-6(b): before grouting, 50 kHz, before grouting, S3-3

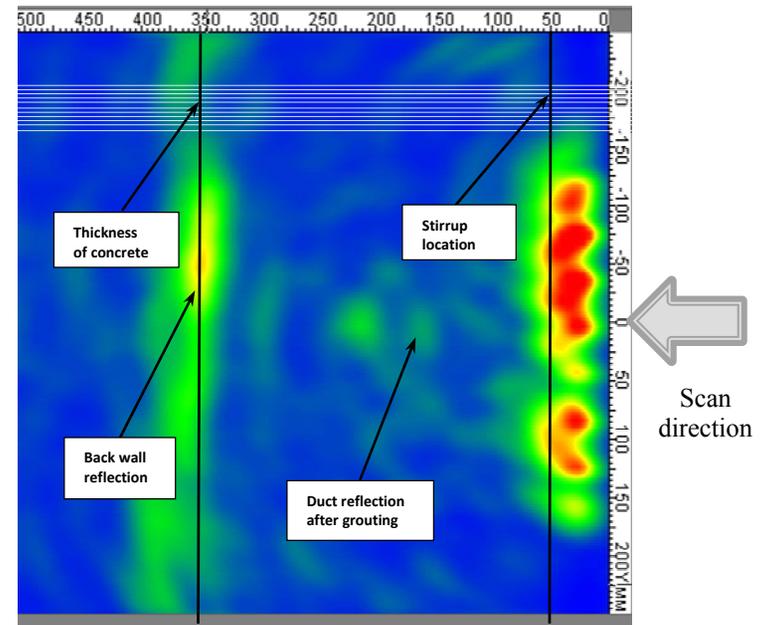


Fig. E-7(b): after grouting, 50 kHz, after grouting, S3-3

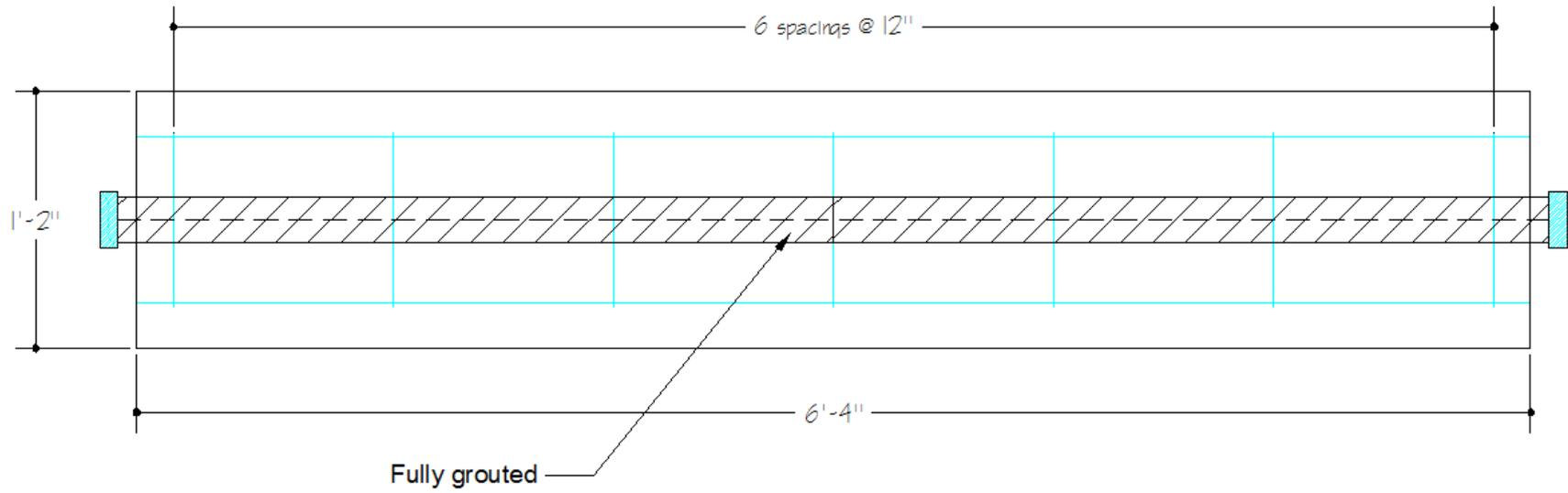


Figure E-8: Configuration of S3-4 showing straight steel duct fully grouted in vertical position

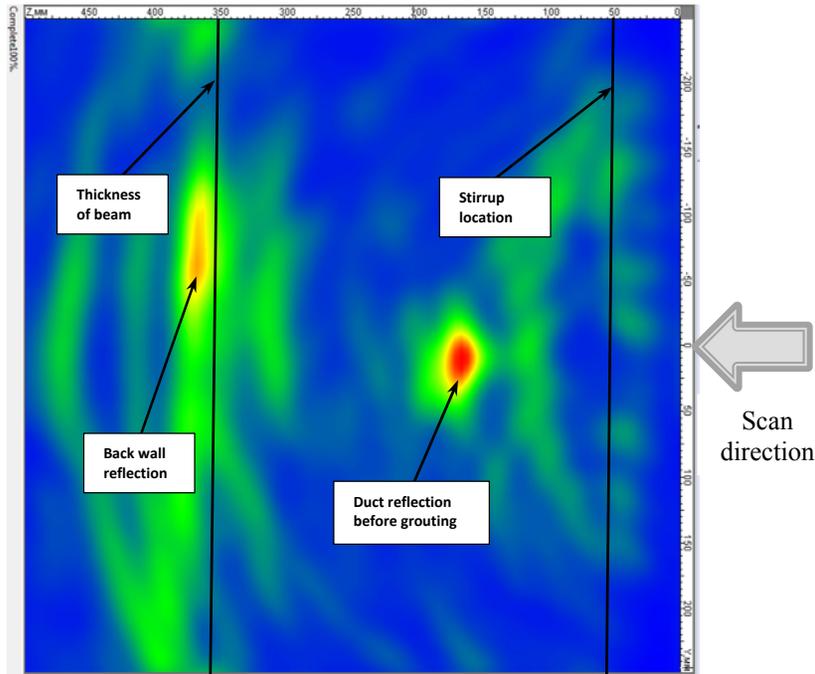


Fig. E-9(a): before grouting, 50 kHz, before grouting, S3-4

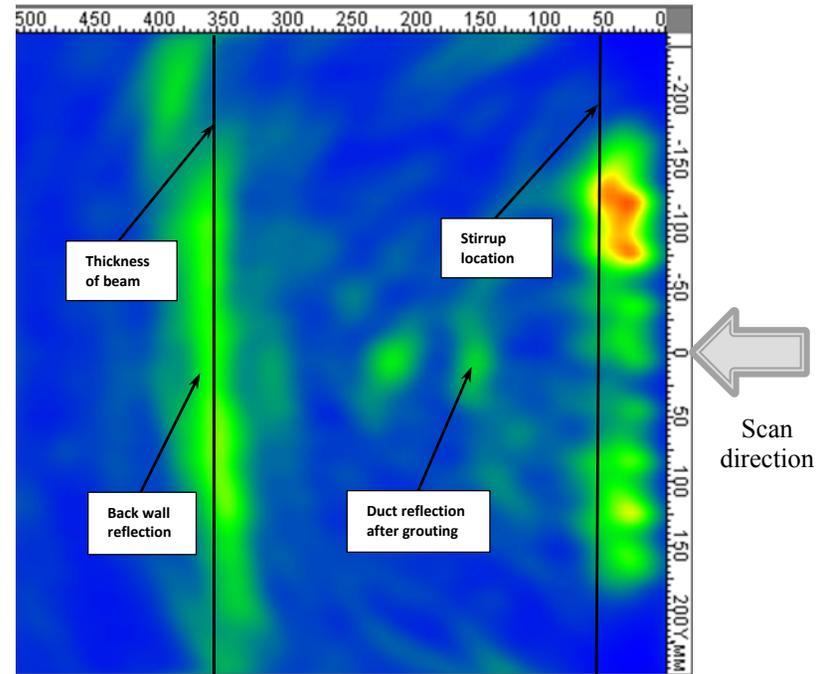


Fig. E-10(a): after grouting, 50 kHz, after grouting, S3-4

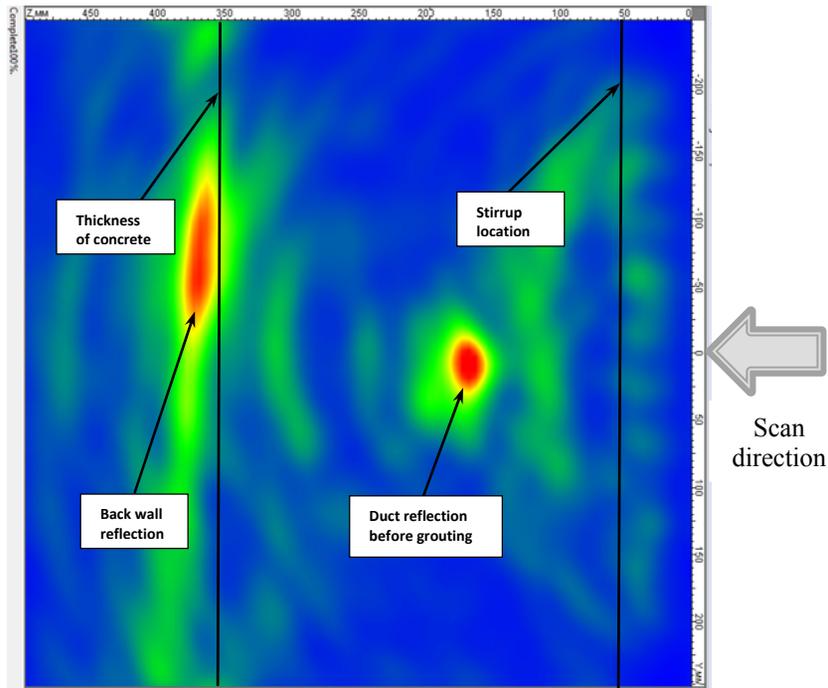


Fig. E-9(b): before grouting, 50 kHz, before grouting, S3-4

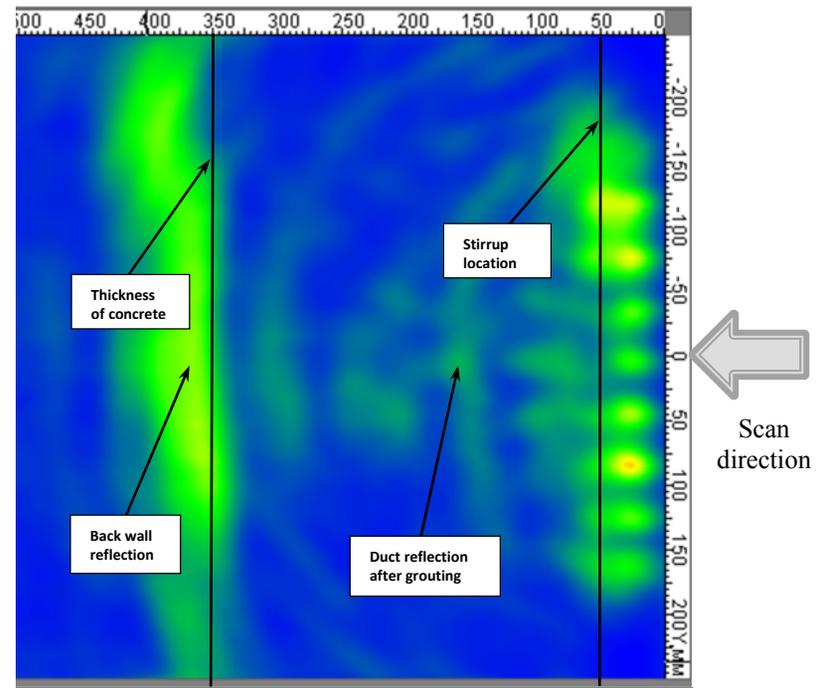


Fig. E-10(b): after grouting, 50 kHz, after grouting, S3-4

