

Sample Ph.D. in a Department
**LANDMINE DETECTION TECHNIQUES USING
ELECTRONIC SCANNING DEVICES**

by

ROBERT DAWES

A DISSERTATION

**Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in
The Department of Electrical and Computer Engineering
to
The School of Graduate Studies
of
The University of Alabama in Huntsville**

HUNTSVILLE, ALABAMA

2003

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**THREE-DIMENSIONAL TESTING METHODS FOR
LASER MODULES**

by

MELANIE THOMAS

A THESIS

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CHAPTER I

INTRODUCTION

In the past 25 years, coronary artery bypass grafting (CABG) has risen from its infancy to become the most frequent cardiac operation worldwide. Approximately 200,000 CABG surgeries are performed in the United States annually, according to Richards [27]. Despite the emergence of other treatments of coronary atherosclerosis such as pharmacologic agents and percutaneous transluminal coronary angioplasty, CABG remains the treatment of choice when other measures are inadequate in restoring coronary circulation.

In 1951, Vineburg et al. [48] implanted an internal mammary artery into the myocardium to increase blood flow to the muscle; this procedure had limited success. The biggest breakthrough came in the 1960s when Sones, at the Cleveland Clinic, developed a procedure to directly visualize the coronary arteries called cine coronary arteriography. In 1967, Falvaro [12], also at the Cleveland Clinic, began performing reversed saphenous vein bypass grafting.

(Reference list alphabetized and numbered.)

(The Reference list can also be ordered and numbered according to the sequence of first appearance in the text.)

Table 4.1 Summary of Results for Sense Line Fill Media

Medium	Resonant Frequencies (Hz)	Coefficient of Attenuation at 1 kHz	Coefficient of Attenuation at 5 kHz	Behavior Outside Resonant Bands
Air	250; 750	0.50	0.30	Smooth
Water	300; 900	0.10	0.05	Smooth
Agarose	Multiple	0.10	0.05	Irregular

Sample Portrait Figure

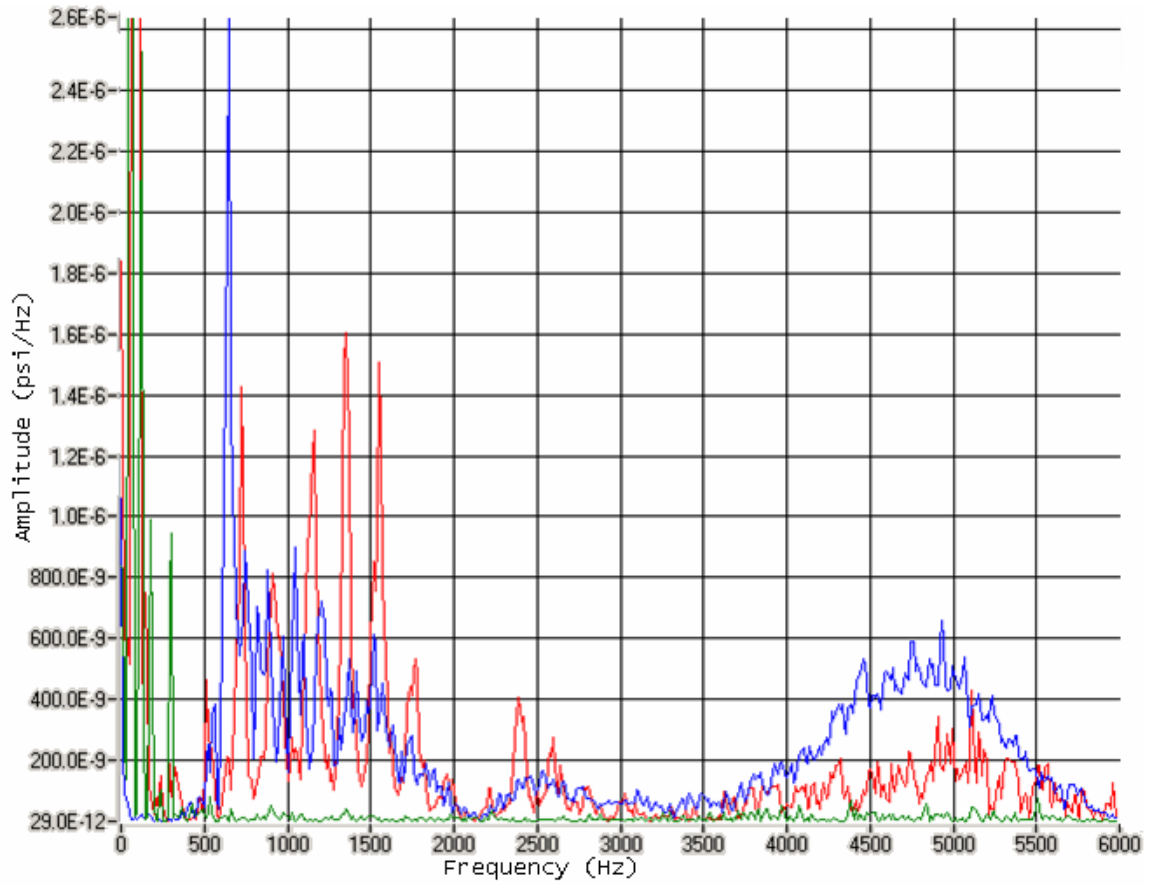


Figure 5.7 Power Spectra of Various Fill Media in Longer Sense Lines, Impulse Signal Input

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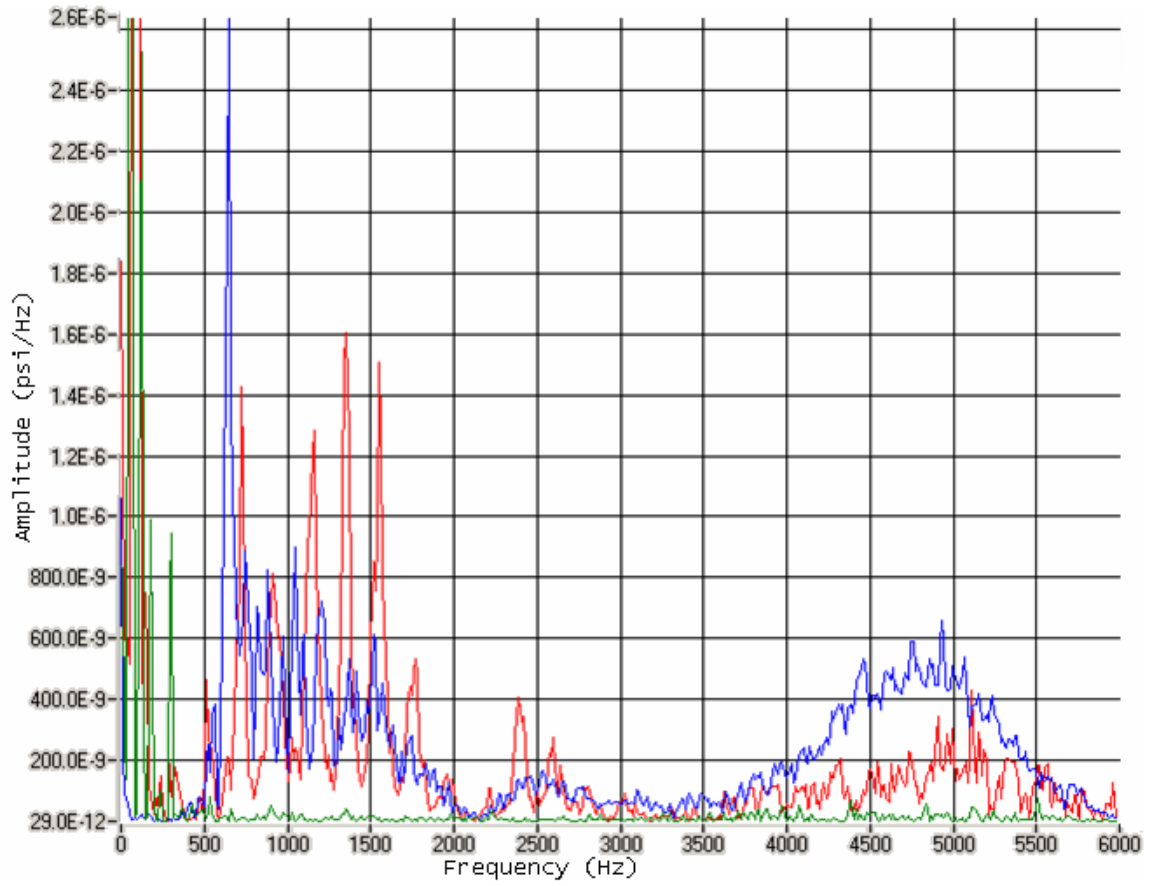


Figure 5.7 Power Spectra of Various Fill Media in Longer Sense Lines, Impulse Signal Input