

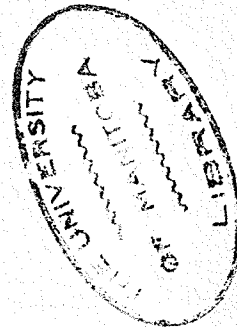
AN EXPERIMENTAL VERIFICATION OF THE THEORY
FOR CLASSICAL WATER HAMMER

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of the Requirements for the Degree
Masters of Science in Engineering

by
Thomas Walter Godfrey

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ABSTRACT

Title: AN EXPERIMENTAL VERIFICATION OF THE THEORY
FOR CLASSICAL WATER HAMMER.

This thesis is an investigation of the water hammer effect caused by sudden closure of a valve on a closed conduit, when the pressure of the negative wave is allowed to drop to absolute zero thereby causing a break in the water column.

Study of the water hammer pressure waves was carried out by the use of a cathode ray oscilloscope and a brass pressure cell with SR-4 strain gauges mounted on it.

The conclusions drawn from this investigation were: 1) The water column does not hold together when the pressure drops to absolute zero during the negative wave.

2) The wave form of the negative wave at the mid-point of the pipe does not occur as expected theoretically.

3) The coefficient of rebound decreases with an increase in velocity.

4) Le Conte's method of analysis gives a very close approximation of the actual conditions.

T.W. Godfrey

TABLE OF CONTENTS

Chapter	Page
1 Introduction	1
1 The Problem	1
2 Definition of Water Hammer	1
3 Early Investigations	1
11 Theory of Water Hammer	3
1 General Theory of Instantaneous Closure	3
2 Pressure Variation Along the Pipe	7
3 Conditions for Instantaneous Closure ...	8
4 Allievi's Equations	10
5 Ideal Concept of the Problem	14
111 Laboratory Procedure	20
1 Apparatus	20
2 Test Procedure	30
1V Data and Calculations	38
1 Test Results	38
2 Sample Calculations	47
V Discussion	55
1 The First Positive Wave	55
2 Possible Sources of Error	55
3 Time Lag and the Pressure Build-up	57

Chapter	Page
4 Negative Waves Recorded at the Mid-point	59
5 The Coefficient of Rebound	61
6 Durations of the Negative Waves	62
7 Pressures of the Positive Waves	65
8 Wood's Theory	65
 VI Conclusions and Recommendations	 67
1 Conclusions	67
2 Recommendations	67
 Bibliography	 70

LIST OF TABLES

Table	Page
1 Calibration of the Pressure Cell	38
2 Test Data	39
3 Summary of the Pressures of the Positive Waves	40
4 Summary of the Durations of the Negative Waves	41

LIST OF FIGURES

Figure		Page
1 - 3	Pressure Diagrams	3
4 & 5	Pressure Diagrams	4
6 & 7	Pressure Diagrams	5
8 & 9	Pressure Diagrams	6
10 & 11	Pressure Fronts	8
12	Pressure Fronts	9
13	Pressure Variation at the Gate	14
14	Pressure Variation at Mid-point	15
15	Wood's Pressure Waves	19
17	The Oscilloscope	22
18	The Pump and Reservoir	22
19	The General Layout	22
20	Pressure Cell	23
21	Gauge Locations	24
22	Quick-closing Valve and Spring	27
23	Quick-closing Valve and Spring	27
24	Overcenter Lever - closed	28
25	Overcenter Lever - open	28
26	The Calibration Circuit	30
27	American Dead Weight Gauge Tester	31
28	Graph of the Duration of the Negative Wave vs the Number of Rebound	42

Figure		Page
29	Graph of the Coefficient of Rebound vs the Velocity	43
30 - 34	Sample Pressure Waves	44 - 46