

*... writing books and publications is not always a proof of knowledge,
but often accustomed to a sedentary life style...*

TABLE OF CONTENTS

1. INTRODUCTION	7
2. IDENTIFICATION METHODS OF DYNAMIC STATE.....	9
2.1. General identification	9
2.2. Technical systems of dynamics study.....	12
2.3. Identification and diagnostic.....	18
2.4. Research of dynamic the technical systems.....	22
3. VIBRATIONS OF TECHNICAL SYSTEMS	25
3.1. The forming of load dynamics.....	25
3.2. Description of object state changes.....	27
3.3. The rules of vibration the source elimination	31
3.4. Vibroacoustic and its tasks	32
4. SOFTWARE FOR IDENTIFICATION RESEARCH	41
4.1. The state changes of the technical systems.....	41
4.2. Measurement process of vibration.....	47
4.3. Description of the program.....	58
4.4. Procedures to use modules of the program.....	61
5. EXAMINATION OF THE TECHNICAL SYSTEMS.....	77
5.1. The selection procedure of diagnostic parameters.....	77
5.2. The state evaluation procedure	82
5.3. The genesis procedure of the technical systems	90
5.4. The procedure of technical systems state prognosis.....	96
6. APPLICATION OF DIAGNOSTIC SYSTEMS IN PRACTICE	103
6.1. The basis of the technical diagnostic	103
6.2. The state recognition system.....	106
6.3. Portable Diagnostic System (PSD).....	113
6.4. Manage the technical system of exploitation.....	126

7. CASE STUDY	129
7.1. Important indications for using FEM.....	129
7.2. Research of excess of the information	135
7.3. Genetic algorithms.....	142
7.4. The theory of the grey system	149
7.5. State assessment of masonry components	156
8. SUMMARY	169
BIBLIOGRAPHY	171