

## **CONTENTS**

<b>1. INTRODUCTION .....</b>	<b>7</b>
<b>2. EXPERIMENTAL INVESTIGATION OF BUILDING MATERIALS .....</b>	<b>7</b>
2.1 Concrete strength .....	7
2.2 Deformations of concrete .....	7
2.3 Testing technique .....	8
2.3.1 Measuring of strains .....	9
2.3.2 Preparation of specimens .....	10
<b>3. EXPERIMENTAL INVESTIGATION OF BUILDING STRUCTURES ...</b>	<b>11</b>
3.1 Loading test of the GFRP reinforced slab .....	11
3.2 Loading test of the prestressed T beam .....	14
3.2 Loading test of the Ruzyně airport radar .....	16
3.3 Loading test of the roofing of the Slavia football stadium .....	17
<b>4. VERIFICATION OF THE EXPERIMENTAL INVESTIGATION .....</b>	<b>21</b>
<b>5. VARIABILITY OF TEST RESULTS .....</b>	<b>23</b>
5.1 Distribution of the strength .....	23
5.2 Standard deviation .....	23
<b>6. CONCLUSIONS .....</b>	<b>25</b>
<b>REFERENCES .....</b>	<b>26</b>
<b>CURRICULUM VITAE .....</b>	<b>27</b>