

Table of contents

I.	INTRODUCTION	5
II.	BASIS OF STRUCTURAL DESIGN	6
	1. Assumptions	6
	2. Principles and application rules	7
	3. A few definitions... ..	7
	4. Design in fire conditions	10
	5. Limit states	12
	6. Principles of limit state design	12
	6.1. Ultimate limit state	12
	6.2. Serviceability limit state	13
	7. Material and product properties	13
	8. Geometrical data	14
	9. Actions on structure	14
	9.1. Design values of actions	15
	10. Effects of actions	16
	10.1. Design values of effects of actions	17
	10.2. Design values of material or product properties	18
	10.3. Design values of resistance	18
	11. Ultimate limit states (ULS)	19
	11.1. Combination of actions for persistent or transient design situation	19
	11.2. Combination of actions for accidental design situations	19
	12. Serviceability limit states (SLS)	20
	13. Loads	22
	13.1. Permanent loads	22
	13.2. Imposed loads	24
	13.3. Snow loads	26
	13.4. Wind loads	29
III.	TIMBER STRUCTURES	34
	1. Material properties	34
	2. Ultimate limit states	37
	2.1. Bending	38
	2.2. Tension	38
	2.3. Compression	39
	3. Serviceability limit state	41
IV.	THERMAL INSULATION	43

V.	FOUNDATION	45
VI.	EXAMPLES	49
	1. Rafter	49
	1.1. Permanent actions	50
	1.2. Variable action – snow load	52
	2. Purlin	58
	2.1. Loads	59
	2.2. ULS	59
	2.3. SLS	60
	3. Column	64
	3.1. Loads	68
	3.2. ULS	68
	4. Thermal insulation	74
	5. Foundation	76
VII.	BIBLIOGRAPHY	77