

CONTENTS

1. INTRODUCTION TO TRANSPORT	5
1.1 Subject of transport.....	5
1.2 Transport history.....	7
1.3 Transport and logistics.....	9
1.4 Transport theory.....	12
1.5 Transport and environment.....	15
1.6 Law frame in Czech Republic	16
1.7 Transport Policy of the Czech Republic and European Union	16
2. TRANSPORT AND TRANSPORTATION PROCESS	26
2.1 Service requirements demand on vehicles.....	28
2.2 Traffic capacity.....	29
2.3 Transport quality.....	30
3. TRANSPORTATION AND TRANSPORTATION OUTPUT	31
4. TRANSPORT SERVICE	35
4.1 Influences with effect on transport service	36
4.2 Transportation service demand and citizens' mobility	36
4.3 Transportation demand	37
4.4 Information systems for transport service.....	38
4.5 Transition points and multimodal terminal in EU	39
4.6 Basic area of traffic control.....	40
5. SELECTED AGGREGATES	42
5.1 Marginal transportation distance	42
5.2 Speeds of transport	42
6. RAILWAY TRANSPORT TECHNOLOGY	46
6.1 Characteristics of railway transport	46
6.2 Railway transport process.....	53
6.2.1 <i>Wagons</i>	53
6.2.2 <i>Tractive vehicles</i>	56
6.2.3 <i>Trains</i>	57
6.3 Timetable	59
6.3.1 <i>Background for construction of TT - quantitative standards</i>	60
6.3.2 <i>Background for construction of TT - time standards</i>	61
6.3.3 <i>Aids for TT</i>	64
6.3.4 <i>Time table indicators</i>	66
6.4 Capacity of railway network.....	67
6.5 Railway lines and stations.....	68
6.5.1 <i>Technological procedures in railway stations</i>	70
6.5.2 <i>Tracks in the stations</i>	74
6.5.3 <i>Signals in the railway stations</i>	75
6.5.4 <i>Railway interlocking</i>	76
6.5.5 <i>Disposal for freight transportation</i>	77
6.5.6 <i>Dispatching management of railway traffic operation</i>	79
6.6 Information and control systems in railway transport.....	80

7. ROAD TRANSPORT TECHNOLOGY	88
7.1 Road transport characteristics	88
7.2 Key technological indicators	90
7.3 Road network	92
7.4 Road vehicles	95
7.5 Operative road transport management	97
7.5.1 Operative management of road cargo transport	97
7.5.2 Operative management of road passenger transport	100
7.6 Traffic streams	101
7.7 Information and control systems in road transport	102
8. WATER TRANSPORT TECHNOLOGY	105
8.1 Water transport characteristics	105
8.2 Infrastructure of water transport	107
8.3 Ports	110
8.4 The maritime shipping industry	112
8.5 Vessels	115
8.5.1 Cargo ship categories	115
8.5.2 Passenger boats	116
8.5.3 Cargo ships	117
8.5.4 Sailing conditions	121
8.6 Information and control systems in water transport	122
9. AIR TRANSPORT TECHNOLOGY	124
9.1 The Characteristic of the Air Transport	124
9.2 Transport process	127
9.2.1 Airport	127
9.2.2 Air services	131
9.2.3 Aviation	134
9.2.4 Aircraft	135
9.3 Air Cargo Transport	137
9.4 Czech avionic infrastructure and airlines	139
9.5 Information and control system in the Air Traffic	139
9.6 The International Organizations in the Air Traffic	142
10. INTERMODAL TRANSPORT TECHNOLOGY	144
10.1 Definition	145
10.2 Division of intermodal transport	149
10.3 Importance of intermodal transport	148
10.4 Ecology and intermodal transport	149
10.5 Intermodal transport systems	151
10.6 Infrastructure of intermodal transport	155
10.7 Intermodal transport terminal	156
10.8 Reloading mechanisms	161
10.8.1 Vertical reloads and facilities for vertical reloading	162
10.8.2 Horizontal reload and equipment for horizontal reloading	164
10.8.3 Reloading mechanisms	165
10.8.4 Crane gantries	166
10.8.5 Container carrier – rubber tyred mobile reloading mechanisms	168

11. LOGISTIC TECHNOLOGY	172
11.1 Infrastructure and Technology	172
11.2 Freight Distribution and Network Strategie.....	175
12. PUBLIC TRANSPORT TECHNOLOGY	177
12.1 Characteristics of city public transport	178
12.2 Systems and subsystems of mass public transport.....	180
11.3 Integrated transport systems	186
13. LITERATURE.....	191