CONTENTS

TERMS AND DEFINITIONS 5
ABSTRACT 6
SECTION 1. ANALYSIS AND DEVELOPMENT PROSPECTS FOR CONTAINER TRANSPORT 8
1.1 Analysis of the prospects for container transport in Ukraine 8
1.2 Analysis of the design features of detachable modules 9
1.3 Literature review of the container designs
and their loads
1.4 Patent analysis of the existing dry cargo containers 21
Conclusions to Section 1
SECTION 2. LOAD OF CONTAINERS
UNDER MAIN OPERATING MODES 34
2.1 Main load diagrams of the containers transported by vehicles 34
2.2 Load diagrams of the containers during loading/unloading operations 39
Conclusions to Section 2
SECTION 3. TRANSPORT MEANS CONCEPTS
FOR STRATEGIC CARGO 44
3.1 Rectangular-pipe frame design for the universal container. 44
3.2 Optimal parameters of the corrugations
for container wall panelling 54
3.3 Strength of the sandwich panel wall container
under the operating loads 64
3.3.1 Strength of the sandwich panel wall container under the static loads 64

3.3.2 Strength of the sandwich panel wall container under the dynamic loads 7.	5
3.4 Vertical load of the sandwich panel floor container transported by flat wagon 79	9
3.5 Dynamic load of the sandwich panel wall container transported by train ferry.	9
3.6 Load of the hopper container concept under the operating modes 94	4
3.6.1 Analysis of the stress state of the hopper container transported by rail	4
3.6.2 Analysis of the load of the hopper-type container transported by train ferry. 10.	3
3.6.3 Vertical dynamics of the flat wagon with hopper-type containers and their elastic interaction 10	8
3.7 Load of the detachable module for long cargo transported by rail 117	7
3.8 Load of the improved tank container transported by rail 133	3
3.9 Load of the container for grain under operating modes 144	1
Conclusions to Section 3	2
GENERAL CONCLUSIONS 163	1
LIST OF REFERENCES 165	õ
APPENDIX A (Description of the patents of the proposed detachable module concepts)	7