

The purpose of regulation is the clarification and standardization of concepts and to acquaint advantages and disadvantages of the possible ways of identification. The other aim is to review of the domestic dual identification with detailed description and to control the site works.

## Contents

1. Preface
- 1.1. General introduction
- 1.2. Concepts
- 1.3. The types of location identification, advantages and disadvantages
- 1.4. Conclusions
- 1.5. Domestic state
2. Reference point method for site identification
- 2.1. Introduction
- 2.2. Types and codes
- 2.3. Network elements of the system
3. Aspects of the location of reference points
- 3.1. Simple grade junctions of the national highway network
- 3.2. Assignment of detailed points in large grade junction or large split level junctions of the national road network
- 3.3. Aspects of other points location
- 3.4. Configuration of aggregation point in case of reference points with detailed points
4. Tasks at the location of reference points
- 4.1. Marking
- 4.2. Anchoring and documentation
- 4.3. Maintenance
- 4.4. Measurement using frame of reference
- 4.5. Link with kilometre signs
5. Consummation of length and distance measurements
- 5.1. Description of applicable gauges
- 5.2. Survey of new roads or road sections
- 5.3. Survey of location of kilometre marks between reference points
- 5.4. Circumstances affecting the precision of measurement
- 5.5. Safety requirements

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Modification of regulations of the National Road Data Bank to comply with the new OKA2000 system taking into consideration of its new prospects. The goal is to control the data updating and service with special attention to the data transfer to the National Road Data Bank.

**Contents**

1. Premises
2. Abstracts
3. Data maintenance
  - 3.1. Principles
  - 3.2. The responsibility of data transcription in data file
  - 3.3. Consummation of data maintenance
  - 3.4. Code maintenance
  - 3.5. Appointment of system administrator and his tasks
  - 3.6. Responsibility of the road management organization
  - 3.7. Responsibility of the Technical and Information Services on National Roads (ÁKMI Kht.)
4. Save and back-up of OKA2000 data files
5. Data, file transfer
  - 5.1. Data, file transfer to external organizations
  - 5.2. Tasks connecting with route permission data
  - 5.3. OKA2000 data sending to ÁKMI Kht.
  - 5.4. Data transfer among road organizations

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## **ÚT 2-0.004:2001      Arrangement of Site Experiments**

The regulation of the one-time tryout or long time test of using material, technology, process or technical resolution have not been applied on national road network.

### **Contents**

1. Abstracts
2. Plan and initiate of test
3. Approval of test
4. Contract of test
  - 4.1. Contents of the contract of test
  - 4.2. Contents of contract of test plan
5. Realization of test facilities
  - 5.1. Preparation tests
  - 5.2. Method instructions
  - 5.3. Site diary
  - 5.4. Control-facility
  - 5.5. Method statement and site check of test construction
6. Qualifying and evaluating of test construction
  - 6.1. Qualifying documentation
  - 6.2. Evaluating report
7. Hand-over and installation process of test construction
  - 7.1. Hand-over
  - 7.2. Operation instructions
8. Warrant and guarantee
9. Control of the test construction
10. Test results utilization
11. Registry

Pages: 10

The regulation specifies levels of data acquisition and information service and controls the mode and time of data transfer.

### Contents

1. Abstracts
2. Duty system of road management organisation
  - 2.1. Duty system of County Road Management Public Limited companies
  - 2.2. Central duty system of County Road Management Public Limited Companies
  - 2.3. Road Information Company (Útinform)
3. Factors affecting the road traffic
  - 3.1. Main groups and their specifications
  - 3.2. Data for specification
  - 3.3. Sources of data collected and to be provided by road management organizations
4. The mode of information transfer and link between road management organizations
5. Principle of information service with computer database
  - 5.1. Features of information service
  - 5.2. Technical conditions of information service
6. The required time of data transfer for duty systems of road management organizations and for Útinform
  - 6.1. Daily information service
  - 6.2. Weekly information service
  - 6.3. Ad hoc information data service and special reports
  - 6.4. Season reports
7. Tasks on received information
  - 7.1. Road Information Company (Útinform)
  - 7.2. Directorate for Road Management and Coordination (Ukig)
  - 7.3. Registration and archives of the collected data

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Control of dual identification in the National Road Network registry.

### **Contents**

1. The application of section identification
2. Abstracts
3. General requirements and conclusions
4. Road number + section type identification system
  - 4.1. Rules of road numbering
  - 4.2. Classification of roads
  - 4.3. Road pavement code
  - 4.4. Road section rules
5. Link between section type identification and reference points identification
  - 5.1. Conversion calculation based on known distances between section signs
  - 5.2. Conversion calculation in case of unknown distances between section signs
6. Roundabout sections data
7. Execution of distance measurements
8. Site tasks for data for road number and section system

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**ÚT 2-0.008:2000**

**National Road Network Registry. Regulation of the Site  
Identification of Bridges**

Site identification of road bridges and data registration.

**Contents**

1. Preface
2. Identification of national road bridges
  - 2.1. The content of reference point of bridge
  - 2.2. Addressing of reference point
  - 2.3. Determination of reference point
  - 2.4. Special cases of reference point determination
3. Tasks of site identification of reference point
  - 3.1. Remark of reference point on the site
  - 3.2. Assurance and documentation of reference point
  - 3.3. Maintenance tasks on the site
  - 3.4. Survey of bridge reference points using frame of reference

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Regulation of using road works data display boards referred to road construction site.

**Contents**

1. Abstracts
2. Group of road works data display boards
3. Application of boards
4. General instructions
5. Location of boards
6. Road works data display boards
7. Supplementary Board
8. Goodbye board

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## **ÚT 2-0.011:2004      Static Axle-load Measuring**

Measuring method statement for mobile road site checking groups using portable measuring equipment.

### **Contents**

1. Abstracts
2. Gauges
  - 2.1. General requirements
  - 2.2. Technical requirements
  - 2.3. Functional requirements
3. Measuring site
  - 3.1. Identification of measuring site
  - 3.2. Allocated measuring site
  - 3.3. Ad hoc measuring site
4. Measuring process
  - 4.1. Preparations
  - 4.2. Check of measuring site
  - 4.3. Installation of measuring equipment
  - 4.4 Axle-load measuring
5. Evaluation of measuring results
  - 5.1. Determination of sanction value
  - 5.2. Penalty of overweight
6. Measuring documentation
  - 6.1. Measuring report
  - 6.2. Measuring diary
7. Traffic safety requirements
8. Individual conditions of axle-load measuring

Pages: 11

Requirements referred to the location of guardrails.

**Contents**

1. Abstracts
2. Intention of guardrail location
3. Main features of guardrail
4. General requirements of guardrail location
5. Detailed requirements of guardrail location
  - 5.1. Location at the outer edge of road crown
  - 5.2. Location at central reserve
  - 5.3. Location at special places
6. Plan of guardrail location and its realization
7. Safety requirements

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## **ÚT 2-1.102:1982      Guardrail. Steel Beam-type Guardrail**

Elements of steel guardrail, its structure and quality of material.

### **Contents**

1. Elements of guardrail
2. Shapes of guardrail
3. Steel quality
4. Corrosion protection
5. Shape requirements

Pages: 22

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**ÚT 2-1.102:1998      Guardrail. Steel Beam-type Guardrail (Affix)**

Announcement of The Road Department of Ministry of Transport and Water-Management.

Contents

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**ÚT 2-1.106:1991**

**Paints for Road Marking. Cold Plastics Containing Solvent.  
Solvent Containing, One-component, Cold Hardening  
Paints**

One-component, cold hardening, solvent containing type road paints for road marking.

**Contents**

1. Application area
2. Nomination
3. Quality requirements
4. Sampling
5. Tests
6. Packing, storage and marking

Pages: 6

Design and resolutions for main urban road traffic moderation.

**Contents**

1. Design of urban road harmonised with the land development plan
2. Urban traffic in new concept in townships
  - 2.1. Present status
  - 2.2. Aspects, principles and tools of traffic planning
3. The bases of design
  - 3.1. The goals of design
  - 3.2. Bases
  - 3.3. Main rules of planning and construction
4. Urban road sections satisfying the prior environmental requirements
5. Road design elements
6. Road construction, materials and tools
7. Design procedure

Pages: 78

Method for determination of traffic flows on the national road network, traffic count execution, traffic count data processing, documentation and information of the result.

### Contents

1. Abstracts
2. Categories of vehicles
3. Principle of traffic count
4. General requirements
5. Personnel and tools
  - 5.1. Employment of traffic count personnel
  - 5.2. Automated traffic count
6. Preparations
  - 6.1. Sections assignment
  - 6.2. Planning of traffic count system
  - 6.3. Assignment of long-term census stations
  - 6.4. Assignment of short-term census stations
  - 6.5. The frequency and duration of the census
  - 6.6. Preparation of manual and automatic count
7. Data gathering
  - 7.1. Manual census execution
  - 7.2. Automatic census execution
  - 7.3. Manual census data transfer to computer
  - 7.4. Check
8. Data processing
  - 8.1. Input and output data
  - 8.2. Data acquisition for central evaluation
  - 8.3. Automatic traffic survey data preparation
  - 8.4. Evaluation of long-term census station's data
  - 8.5. Evaluation of short-term census station's data
  - 8.6. Determination of factors showing the alterations in traffic in a year
  - 8.7. The average daily traffic flow for the entire road network in present year
  - 8.8. Other derived traffic data
  - 8.9. Others
9. Documentation and information service of traffic data
10. International information service

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## ÚT 2-1.113:2001      **Planning of Road Markings**

Regulation of road marking design and road marking application satisfying the traffic safety requirements.

### Contents

- I. Generals
- 1. Abstracts
- 2. Road markings determination by functions
- 3. Goals of road marking
- 4. Necessity and reasonability of road marking
- 5. Application of dimensions of road marking
- 6. The visibility of road marking
- II. Requirements for certain road marking
- 7. Broken line
- 8. Continuous line
- 9. Broken line thickening
- 10. Edge of carriageway marking
- 11. Marking line for dangerous place
- 12. Bicycle lane and route
- 13. Stopping prohibition road marking and parking prohibited road marking
- 14. Zebra road marking
- 15. Crossing bicycle route
- 16. Special dangerous place
- 17. Slowing down road marking
- 18. Area closed to all vehicles
- 19.
- 20. Turning lane road marking
- 21. Labels
- 22. Road sign symbols and other symbols
- 23. Other signs
- 24. Arrangement of road detectors
- 25. Temporary signs
- III. Regulations of sign bound groups
- 26. Certain lanes' sign
- 27. Stopping places
- 28. Bicycle route crossings
- 29. Railway crossings
- 30. Tramway line
- 31. Parking places
- IV. Design, survey, stake-out
- 32. Parts of design

Pages: 60

Selection, design and location of warning, priority, instruction, informative and special informative road signs and their supplementation sign taken into consideration of the traffic and safety aspects. Instructions for road management tasks related to advertisement facilities.

### Contents

1. Specifications
2. General requirements
- 2.1. Regulation of requirements of public road signs (JETSZ)
- 2.2. Documentation and registration
3. Design of road sign
- 3.1. General requirements
- 3.2. Road signs
- 3.3. Supplemental signs
4. Location of road signs along the road
- 4.1. Location of road signs
- 4.2. Order of placing and withdrawing of road signs
- 4.3. Road signs invalidation
5. Warning road signs (A)
- 5.1. Dangerous road bend signs (A-001 – A-004)
- 5.2. Dangerous slope road signs (A-005 – A-006)
- 5.3. Bottleneck (A-007 – A-009)
- 5.4. Convertible bridge (A-010)
- 5.5. Wharf or slope beach (A-011 – A-012)
- 5.6. Uneven road (A-013)
- 5.7. Hump (A-014)
- 5.8. Road block (A-015)
- 5.9. Slippery road (A-016)
- 5.10. Gravel from surface (A-017)
- 5.11. Falling rocks (A-018 – A-019)
- 5.12. Pedestrian crossing (A-020)
- 5.13. Children (A-021)
- 5.14. Bikes (A-022) domestic animals (A-023)
- 5.16. Wild animals (A-024)
- 5.17. Road works (A-025)
- 5.18. Traffic signal (A-026)
- 5.19. Crossing of roads without priority order (A-027)
- 5.20. Crossing of roads with priority order (A-028 – A-036)
- 5.21. Oncoming traffic (A-037)
- 5.22. Crossing with barrier (A-038)
- 5.23. Crossing without barrier (A-039)
- 5.24. Tram (A-040)
- 5.25. Starting of railway crossing (A-041 – A-044)
- 5.26. Premonitory signs of railway crossing (A-045 – A-050)
- 5.27. Low altitude aviation (A-051)
- 5.28. Side-wind (A-052)
- 5.29. Other danger (A-053)
- 5.30. Pedestrians (A-054)
- 5.31. Dangerous shoulder (A-055)
- 5.32. Roundabout sign (A-056)
- 5.33. Jam (A-057)
6. Priority road signs (B)

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## **ÚT 2-1.115:2004      Access to Roadside Properties and Service Facilities**

Standard conditions of contributions of road connections for properties next to the road.

### **Contents**

1. Abstract
- 1.1. "T"-junctions
- 1.2. Classification by area
2. Driveways for gates and parcels
- 2.1. Existing driveways for gates and parcels
- 2.2. New driveways for gates and parcels
3. "T"-junctions
- 3.1. Verification of existing "T"-junctions
- 3.2. Building new "T" junctions
4. Driveway for road side facilities
- 4.1. Generals
- 4.2. Gas station building
- 4.3. Driveway for gas station
- 4.4. Other regulations concerning location and realization of gas station and facilities
- 4.5. Connection with other facilities

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Development of the technical requirements for application and installation of road detectors in the interest of standard vocational routine.

**Contents**

1. Scope of detectors. References.
2. Abstracts
3. Type of detectors
  - 3.1. Inductive loop detector
  - 3.2. Passive infra-red detector
  - 3.3. Ultrasonic detector
  - 3.4. Radar detector
  - 3.5. Piezo detector
  - 3.6. Video image detector
  - 3.7. Ray detector
  - 3.8. Overhead wire detector
  - 3.9. Vehicle follower system (sample identification)
  - 3.10. Vehicle identification systems
4. Inductive loop detector
  - 4.1. Loop detector
  - 4.2. Link between the loop and the receiver equipment
  - 4.3. The principle of evaluation
5. Pedestrian and bicycle push-buttons
  - 5.1. Structure and function of push-buttons
  - 5.2. Application of push-buttons
  - 5.3. Technical requirements
  - 5.4. Test and maintenance

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**ÚT 2-1.118:2000      Forecasting Road Traffic Flows Using Project Method**

Long-term traffic forecast in national road network with extrapolation.

**Contents**

1. Abstracts
2. Application
3. The method of long-term traffic forecast
4. Traffic development factors for the country and counties

Pages: 18

**Contents**

1. Subject
2. Abstracts
3. Principles of crush barrier and traffic control on road work site
  - 3.1. Classification of road works
  - 3.2. Classification of traffic control needed due to road work
  - 3.3. Main aspects of design and location of traffic signs
  - 3.4. The free road width
  - 3.5. Degree of traffic disturbance
  - 3.6. The useful road pavement width
  - 3.7. The existing road pavement width
  - 3.8. Temporary road markings and deflection elements
  - 3.9. The maximum length of blockage
  - 3.10. Determination of capacity of traffic lane in motorways and other two-line roads in case of lane deflection
  - 3.11. Traffic control of roads narrowed to one-lane
  - 3.12. Cancellation, removal of traffic signs
  - 3.13. Dimension of traffic signs
  - 3.14. Permanent road work enclosure, crush barrier and signs
  - 3.15. Road work traffic signs
  - 3.16. Mobile road workplace enclosure and signs
  - 3.17. Tasks to establish mobile workplaces
  - 3.18. Road work at pedestrian crossing
  - 3.19. Time order of outplacement and cancellation of traffic signs and crush barriers at road workplace
  - 3.20. Set back of original state after finishing road work
  - 3.21. Informative road signs about road work data
  - 3.22. Approval of road maintenance organization
  - 3.23. Contents of temporary traffic control plan
4. Temporary traffic control in motorways and semi-motorways
  - 4.1. Traffic restrictions of permanent road workplaces in motorways
  - 4.2. Traffic restrictions of permanent road workplaces in semi-motorways
  - 4.3. Traffic restrictions of mobile road workplaces in motorways
  - 4.4. Traffic restrictions of mobile road workplaces in semi-motorways
  - 4.5. Separation of traffic lanes in case of different cross sections
5. Traffic control in case of road work in rural section
  - 5.1. Permanent road workplaces at two-lane rural roads
  - 5.2. Permanent road workplaces at four-lane rural roads
  - 5.3. Traffic control of mobile road workplaces in rural section
6. Traffic control for road works in urban section
  - 6.1. Traffic control of permanent road workplaces at urban two-lane roads
  - 6.2. Traffic control of permanent road workplaces at urban two-lane roads
  - 6.3. Traffic control of mobile road workplaces at urban roads
7. Tools for road work enclosure and temporary traffic control
  - 7.1. Tools for road work enclosure, temporary traffic lane assignment and traffic control, and instructions for usage
  - 7.2. Applicable signs during road work

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**ÚT 2-1.119:1998      Vademecum of road work enclosure and its temporary traffic control**

Extraction from the Road Technical Regulation No. ÚT 2-1.119:1995

Contents

Pages: 72

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## **ÚT 2-1.120:2003      Traffic Control Equipments. Signal Heads**

Traffic signals and the shape of their symbols, dimensions, colours, and arrangements.

### **Contents**

1. Abstracts
2. General requirements
3. Technical requirements of signal area of traffic signals
4. Technical requirements of symbols of traffic signals
5. Technical requirements of background shields of traffic signals
6. General requirements of arrangements of traffic signals
7. Arrangement of traffic signal with one signal
8. Arrangement of traffic signal with two signals
9. Arrangement of traffic signal with three signals
10. Arrangement of auxiliary traffic signal

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Characters, letters and figures applied on traffic signals, shapes and dimensions.

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1. Abstracts
2. General requirements
- 2.1. Lettering
3. Shapes, dimensions
- 3.1. General features
- 3.2. Height of character
- 3.3. Width of character
- 3.4. Size variety
- 3.5. Character spacing
- 3.6. Word spacing
- 3.7. Line spacing
4. General Latin characters used in Hungarian text
- 4.1. Design of normal characters
- 4.2. Design of narrow characters
- 4.3. Design of wide characters
5. Other Latin characters in certain foreign languages
- 5.1. Design of Croatian characters
- 5.2. Design of Polish characters
- 5.3. Design of German characters
- 5.4. Design of Romanian characters
- 5.5. Design of Slovakian characters
6. Cyril letters
- 6.1. Design of general Cyril characters
- 6.2. Design of other Cyril characters
7. Greek characters
- 7.1. Design of Greek characters
8. Punctuation marks
- 8.1. Design of punctuation marks

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## **ÚT 2-1.124/1M:2002 Public Road Signs. Letters, Digits, Accent and Punctuation Marks of Legends**

The above mentioned technical specification will be altered due to introduction the mark of euro currency introduction.

### **Contents**

1. Supplementation list

Pages: 4

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**ÚT 2-1.125:2001      Public Road Signs. Warning Signs and Their Symbols**

Regulation of shape, inner dimensions and colours of warning signs and symbols of public road signs.

**Contents**

1. Abstracts
2. General requirements
3. Alphabetical index of traffic signs
4. Sheets showing traffic signs

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**ÚT 2-1.126:2001      Public Road Signs. Priority Signs and Their Symbols**

Regulation of shape, inner dimensions and colours of priority signs of public road signs.

**Contents**

1. Abstracts
2. General requirements
3. Alphabetical index of traffic signs
4. Sheets showing traffic signs

Pages: 21

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**ÚT 2-1.127:2001      Public Road Signs. Prohibitory Signs and Their Symbols**

Regulation of shape, inner dimension and colours of prohibition signs of public road signs.

**Contents**

1. Abstracts
2. General requirements
3. Alphabetical index of traffic signs
4. Sheets showing traffic signs

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**ÚT 2-1.128:2001      Public Road Signs. Mandatory Signs and Their Symbols**

Regulation of shape, inner dimensions and colours of mandatory signs of public road signs.

**Contents**

1. Abstracts
2. General requirements
3. Alphabetical index of traffic signs
4. Sheets showing traffic signs

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**ÚT 2-1.129:2001**

**Public Road Signs. Special Regulation Signs and Their Symbols**

Regulation of shape, inner dimensions and colours of special regulations informative signs of public road signs.

**Contents**

1. Abstracts
2. General requirements
3. Alphabetical index of traffic signs
4. Sheets showing traffic signs

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**ÚT 2-1.130:2001      Public Road Signs. Informative Signs and Their Symbols**

Regulation of shape, inner dimensions and colours of informative signs of public road signs.

**Contents**

1. Abstracts
2. General requirements
3. Alphabetical index of traffic signs
4. Sheets showing traffic signs

Pages: 73

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**ÚT 2-1.132:2001      Public Road Signs. Additional Panels and Their Symbols**

Regulation of shape, inner dimensions and colours of additional panels of public road signs.

**Contents**

1. Abstracts
2. Generals
3. Alphabetical index of traffic signs
4. Sheets showing traffic signs

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## **ÚT 2-1.132/1M:2002 Public Road Signs. Additional Panels and Their Symbols**

The above mentioned technical specification must be supplemented starting from page 248 with page No. 3 and 4 of this modification.

### **Contents**

Traffic calming central island

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**ÚT 2-1.134:2001**

**Public Road Signs. Transilluminated Signs and Their Symbols**

Regulation of public transilluminated road sign with plain or hog surface; their shapes, dimensions and colours.

**Contents**

1. Shape, surface, dimension and colour
2. Technical requirements
  - 2.1. Statically requirements
  - 2.2. Dimension tolerances
  - 2.3. Illuminating requirements
  - 2.4. Safety requirements

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**ÚT 1-1.123:2001**

**Technical Regulation on Road Signs [Appendix of the  
Decree No. 4/2001. (I. 31.) KöViM]**

Appendix of decree No. 4/2001. (I. 31.) of The Road Department of Ministry of Transport and Water-  
Management on public road sign dimensions and technical requirements.

**Contents**

1. Material
2. Shape and dimension
3. Dimension tolerance
4. Colour and illumination requirements
5. Safety requirements
6. Statically requirements
7. Other statically requirements
8. Test of surface
9. Shape and dimension and size tolerance tests
10. Colour and illumination tests
11. Safety tests
12. Statically tests
13. Test at building
14. Marking
15. Storage
16. Packaging
17. Transportation

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**ÚT 2-1.131:2002**

**Public Road Signs. Direction and Route Indication Signs and Their Symbols**

Regulation of shape, inner dimension and colours of direction and route indication signs of public road signs, excluding signs for tourism and informative signs on public place.

**Contents**

1. Abstracts
2. General requirements
3. Design of road signs
4. Shape and dimensions of route indication signs and pre-route indication signs
5. Relative distances of direction and route indication signs
6. Referenced national standards and road technical regulations
7. Alphabetical index of signs
8. Sheets showing traffic signs

Pages: 248

Regulation of application system, type, content requirements, allocation, design and colours of direction and route indication signs of public road signs.

### Contents

- I. Definition and base requirements
  - 1. Definition and classification
  - 2. Base requirements
- II. System of markings
  - 3. Principles
  - 4. Features of direction signs
  - 5. Abstracts
  - 6. Application system of direction signs
- III. Aspects of route destination selection
  - 7. Ranking
  - 8. Selection of route destination
  - 9. Determination of distant and near destinations
  - 10. Determination of foreign destinations
  - 11. Land unit marking
- IV. Indication of road destination on certain type of route signs
  - 12. Pre-direction signs and direction signs
  - 13. Route confirmation signs
- V. General requirements of direction signs
  - 14. Pre-route signs and direction signs
  - 15. Route confirmation signs
  - 16. Route identification signs
  - 17. Localization signs
  - 18. Certain pre-route signs
  - 19. Certain allusive signs
- VI. Allocation of direction signs
  - 20. General location requirements
  - 21. Location of pre-direction signs
  - 22. Location of route signs
  - 23. Location of pre-route signs and route signs above road
  - 24. Location of route confirmation signs and route identification signs
  - 25. Route sign at temporary traffic order and traffic diversion
- VII. Planning and design of route signs
  - 26. Planning
  - 27. Legends
  - 28. Arrows
  - 29. Road No. and other inner signs
- VIII. Certain requirements of traffic signs
  - 30. Shape and dimension requirements of traffic signs
  - 31. Illumination requirements of traffic signs
- IX. Approaching and diversion traffic signs
  - 32. Approaching traffic signs of motorway
  - 33. Traffic signs of relief roads
  - 34. Traffic signs of diversion roads
  - 35. Traffic signs of border-crossing point and foreign destination
- X. Other individual hinting systems
  - 36. Tourism traffic signs
  - 37. Bike track signs
  - 38. Signs of premises, organizations and institutes
  - 39. Public informative signs

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**ÚT 1-1.156:2002      Requirements of Public Road Information and Signs System.  
(ÚTIR) [Appendix of 40/2001. (XI. 23.) KöViM decree].**

Appendix of Decree No. 40/2001. (XI. 23.) KöViM

**Contents**

1. Definition and classification
2. Base requirements
3. Base principles
4. Road distinction by category
5. Abstracts

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## **ÚT 2-1.133:1998      Public Road Signs. Tourism Signs and Their Application**

Requirements of tourism signs (symbols, shape, dimensions and colours). Design, application and location.

### **Contents**

1. Abstracts
2. Tourism signs
  - 2.1. Opportunities in marking of tourism targets
  - 2.2. Classification of tourism signs
  - 2.3. Condition of route target marking
  - 2.4. General requirements of tourism signs
3. Requirements concerning certain tourism signs
  - 3.1. Signs concerning sights
  - 3.2. Tourism route signs
  - 3.3. Tourism informative signs
  - 3.4. Place name signs
4. Special requirements of tourism informative signs
  - 4.1. Drawings of tourism informative signs
  - 4.2. Content of sheets showing signs

Pages: 124

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**ÚT 2-1.137:1998**

**Establishment of Rest Areas and Service Facilities at the  
Semi-Motorway Network**

**Contents**

1. Abstracts
2. Base requirements
  - 2.1. Scope of services
  - 2.2. Minimal dimensions of service facilities
  - 2.3. Rest area installation
  - 2.4. Rest area marking
3. Road management approval procedure
  - 3.1. Road management approval procedure in case of building motorways and semi-motorways
  - 3.2. Road management approval procedure in case of motorways and semi-motorways in operation

Pages: 8

These signs give information about the services, institutes, sight, other destinations and street name of the township for pedestrians and cyclists as much as for drivers in order to provide information and relieve their orientation.

### **Contents**

1. Abstracts
2. Purpose and system of public area informative signs
  - 2.1. Hierarchy of public area information system
  - 2.2. Purpose of public area information signs
3. General principles
  - 3.1. Principles of colouration
  - 3.2. Principles of symbols
  - 3.3. Principles of legends
  - 3.4. Principles of design
  - 3.5. Principles of location
  - 3.6. Maintenance
4. Planning of public area information signs
  - 4.1. Street signs
  - 4.2. Informative signs with map
  - 4.3. Target marking signs
5. Application of public area information signs
  - 5.1. General application requirements
  - 5.2. Street signs
  - 5.3. Signs with map
  - 5.4. Target marking signs
6. Location of public area informative signs
  - 6.1. General location requirements
  - 6.2. Street signs
  - 6.3. Informative signs with map
  - 6.4. Target marking signs
7. Symbols of informative signs

Pages: 66

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**ÚT 2-1.141:1998**

**Informative and Direction Sign System of Toll Roads**

Contents

Pages: 22

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## **ÚT 2-1.150:2001      Shape, Size, Colour and Arrangement of Road Markings**

Requirements of road marking concerning shape, dimensions, colours and arrangement.

### **Contents**

1. Abstracts
2. Road markings
3. Requirements of road markings
  - 3.1. General requirements
  - 3.2. Dimensions and dimension tolerances
  - 3.3. Requirements of colours and light
4. Alphabetical index of road markings
5. List of road markings
6. Design of letters, digits and figures in grid

Pages: 57

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## **ÚT 2-1.150/1M:2002 Shape, Size, Colour and Arrangement of Road Markings**

The referenced road technical regulation is to modify by 1. Modifying registration and 2. Supplementation registration.

### **Contents**

1. Catalogue of alterations
2. Supplementation catalogue

Pages: 8

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**ÚT 1-1.149:2001**

**Road Markings Regulations [Decree No. 46/2001. (XII. 20.)  
KöViM about the Alteration of Decree No. 11/2001. (III. 13.)  
KöViM]**

Appendix of decree KöViM No. 3/2001. (I. 31.)

**Contents**

- I. General regulations
  - 1. Base requirements of road marking
- II. Traffic control by road marking
  - 2. Marking the traffic lanes
  - 3. Roads with alternate direction
  - 4. Marks of bicycle routes and lanes
  - 5. Bus lane marking
  - 6. Marks of roads with additional climbing lane
  - 7. Marks of limited speed zones
  - 8. Marks of residence and rest zones
  - 9. Marks at junctions
  - 10. Marks at roundabouts
  - 11. Broken line
  - 12. Pedestrian crossing
  - 13. Stops
  - 14. Railway crossing
  - 15. Stop and waiting
  - 16. Other road marks
- III. Requirements of road marking implementation
  - 17. Establishment of road marks
  - 18. Visibility of road marks
  - 19. Temporary road marks
  - 20. Removal of road marks
  - 21. Road marking bodies
  - 22. Registration
  - 23. Abstracts

Pages: 11

Shape, dimensions, statically and lighting requirements of road elements for blocking and delimitating road and traffic control.

### **Contents**

1. Abstracts
2. Vertical structure elements and markings
  - 2.1. Supporting pillars
  - 2.2.
  - 2.3. Combined road signs
3. Horizontal barrier elements
  - 3.1. The road restricting barrier and the road direction sign
  - 3.2. Chain, string and marking stripe
  - 3.3. "Road up" sign requirements of for shape, dimensions and colours
4. Diversion elements on pavement, or close to road workplace
  - 4.1. Temporary road markings
  - 4.2. Road marking bodies on pavement
  - 4.3. Road marking bodies with vertical signing surfaces
  - 4.4. Deflecting doorsill
  - 4.5. Deflecting curb
  - 4.6. Deflector
5. Other tools
  - 5.1. Deflecting pillars, tanks, cylinders
  - 5.2. Structures with crush energy elimination
  - 5.3. Traffic control semaphore disc
  - 5.4. Temporary traffic light
6. Signing lights for restricted road or danger
  - 6.1. Light types
  - 6.2. Lighting requirements
7. Design and running
8. Other requirements

Pages: 18

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**ÚT 1-1.145:2001**

**Rules of road workplace mark off and safety [Appendix of  
3/2001. (I. 31.) KöViM decree ].**

Appendix of Degree No 3/2001. (I. 31.) KöViM.

**Contents**

- I. General requirements
  - 1. General specifications
  - II. Apply of road signs, road barriers
  - 2. General requirements of road signs application
  - 3. Workplace railing
  - 4. Workplace marking
  - 4.1. Lighting of workplace
  - 4.2. Location of road signs
  - 5. Pre-marking of workplace
  - III. Making temporary traffic lanes
  - 6. Temporary road markings
  - 7. Pavement road marking bodies and other separating elements
  - IV. Bottleneck traffic control
  - 8. Necessity of traffic control
  - 9. Traffic control by signalmen
  - 10. Traffic control by lights
  - V.
  - 11. Temporary traffic control plan
- Attachment

Pages: 19

Technical requirements of variable message road signs which are not included in European Standards

**Contents**

- 1. Abstracts
- 2. Using of ideas
- 3. General requirements
  - 3.1. Signal symbol
  - 3.2. Adaptable colours
  - 3.3. Structure types of adaptable road signs
- 4. Shape of variable message sign
- 5. Plan of symbols and letters
  - 5.1. Dimensions
  - 5.2. Letters design
- 6. House of variable message sign
  - 6.1. The colour of house of variable message sign
  - 6.2. Dew protecting of house
  - 6.3. Frost protecting of house
- 7. Requirements of interfaces

Pages: 20

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**ÚT 2-1.159:2002      Public Road Signal Disc**

Shape, colour and size requirements of semaphore disc for vehicle stopping.

**Contents**

1. Abstract
2. Requirements

Pages: 8

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## ÚT 2-1.201:2004      Road Planning

General road design regulations and special requirements for design of motorway, rural and urban road.

### Contents

1. General road design regulations
  - 1.1. Public road design classification and technical features
  - 1.2. Design data
  - 1.3. Traffic design
  - 1.4. Public road area
  - 1.5. Preparation works for road design
  - 1.6. Alignment
  - 1.7. Cross-section
  - 1.8. Intersections
  - 1.9. Road environmental design
  - 1.10. Other general regulations
  - 1.11. Phases and parts of design, content prescriptions
2. Motorways
  - 2.1. Motorway design classification and technical features
  - 2.2. Design data
  - 2.3. Traffic design
  - 2.4. Motorway area
  - 2.5. Preparation works for motorway design
  - 2.6. Alignment
  - 2.7. Cross-section
  - 2.8. Intersections
  - 2.9. Motorway environmental design
  - 2.10. Other design regulations
3. Rural public roads
  - 3.1. Rural road design classification and technical features
  - 3.2. Design data
  - 3.3. Traffic design of rural roads
  - 3.4. Rural road area
  - 3.5. Preparation works for rural road design
  - 3.6. Alignment
  - 3.7. Cross-section
  - 3.8. Intersections
  - 3.9. Rural road environmental design
  - 3.10. Other design regulations
  - 3.11. Phases and parts of design, content prescriptions
4. Urban roads
  - 4.1. Urban roads design classification and technical features
  - 4.2. Design data
  - 4.3. Traffic design of urban road traffic lane
  - 4.4. Urban road area
  - 4.5. Preparation works for urban road design
  - 4.6. Alignment
  - 4.7. Cross-section
  - 4.8. Intersection
  - 4.9. Road ambient design
  - 4.10. Other general design regulations
  - 4.11. Phases and parts of design, content prescriptions
5. Abstracts

Pages: 144

Strength capacity design of new road pavement's bituminous mixture and strengthening of existing road.

### **Contents**

1. Conditions of use
  - 1.1. General conditions
  - 1.2. Environmental conditions
  - 1.3. References
2. Abstracts
  - 2.1. Design base data
  - 2.2. Earthwork
  - 2.3. Layers of pavement with bituminous mixtures
  - 2.4. Standard pavement structures
3. Base principles of new pavement structure design
  - 3.1. The design base principles
  - 3.2. The course of design
4. Design traffic determination
  - 4.1. The design longevity
  - 4.2. Design traffic determination
  - 4.3. Traffic load grade determination
5. Determination of strengthening module of earthwork
  - 5.1. Conditions of strengthening module determination
  - 5.2. Strengthening the earthwork strength capacity
6. Chose the new standard pavement structure and thickness determination
  - 6.1. Aspects of standard pavement structure chose
  - 6.2. Standard pavements with total bituminous mixture
  - 6.3. Standard pavement structures with unbounded gravel base course
  - 6.4. Standard pavement structures with hydraulic bounded stabilization base course
  - 6.5. Standard pavement structures with concrete base course
  - 6.6. Standard pavement structure bituminous mixture layers and theirs thickness determination within the needed entire thickness
7. Asphalt pavement strengthening with bituminous mixture
  - 7.1. Base ideas
  - 7.2. State evaluation of pavement
  - 7.3. Strengthening sizing
  - 7.4. Chose of strengthening layer
  - 7.5. Method statement requirements in plan
8. Pavement widening base principles
  - 8.1. Preparation
  - 8.2. Thickness of strengthening layer
  - 8.3. Cross-section, drainage

Pages: 32

It gives standard requirements for bicycle facilities satisfying the domestic regulations.

## Contents

1. Introduction
2. Base ideas in connection of bicycle infrastructure
  - 2.1. Bicycle route
  - 2.2. Pedestrian and bicycle route
  - 2.3. Bicycle lane
  - 2.4. Limited speed zone
  - 2.5. Street assigned for bicycle traffic
  - 2.6. Low traffic road suitable for bicycle traffic
3. Traffic control of road or road elements suitable for bicycle traffic
  - 3.1. Traffic control of bicycle road
  - 3.2. Traffic control of bicycle and pedestrian road
  - 3.3. Traffic control of bicycle lane
  - 3.4. Limited speed zone
  - 3.5. Traffic control of road assigned for bicycle traffic
  - 3.6. Traffic control of low traffic road suitable for bicycle traffic
  - 3.7. Other signs recommended for use
4. Bicycle network design aspects
  - 4.1. Network suitable for bicycle traffic
  - 4.2. Network design aspects
  - 4.3. Network design way for bicycle network in urban area
5. Bicycle routes and lanes
  - 5.1. Design elements
  - 5.2. Arrangement of bicycle lanes and parking lanes
  - 5.3. Bicycle lanes design next to bus stop
6. Bicycle traffic in junctions
  - 6.1. General principles
  - 6.2. Main design aspects
  - 6.3. Needed sight distances in bicycle network junctions
  - 6.4. Simple intersections
  - 6.5. Roundabouts
  - 6.6. Signal controlled intersections
  - 6.7. Bicycle crossing at traffic lane
  - 6.8. Linking points of bicycle roads and lanes
7. Drainage of bicycle roads
  - 7.1. Drainage of bicycle facilities
8. Bicycle road pavements
  - 8.1. Bicycle road pavement structure
9. Bicycle crossing at split level junctions, little span prefabricated wood bridges
  - 9.1. Bicycle route over natural or artificial obstacles
  - 9.2. Bicycle traffic on bridges
  - 9.3. Bicycle crossing at split level junctions
10. Parking places for bicycle, standard rates
  - 10.1. Preventing of bicycle stealing
  - 10.2. Determination of needed bicycle number at bicycle parking place
  - 10.3. Bicycle parking places and depositories by parking time and functions
  - 10.4. Bicycle parking place location
11. Public safety and lighting aspects
  - 11.1. Public safety aspects taken into consideration
  - 11.2. Lighting of bicycle facilities
12. Information system
  - 12.1. Informative sign system
  - 12.2. Suggested informative sign at bicycle facilities
  - 12.3. Informative sign for location and direction of bicycle facilities

Pages: 94

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## ÚT 2-1.206:2001      **Design of Roundabouts**

Design of roundabout in urban areas and rural roads.

### Contents

1. Determination, features and dimensions
  - 1.1. Base elements of roundabouts
  - 1.2. Type of roundabouts
2. Use of roundabouts
  - 2.1. Network aspects
  - 2.2. Aspects for safety
  - 2.3. Environmental and other aspects
3. Sizing, geometric design
  - 3.1. Steps of determination of roundabout capacity
  - 3.2. Capacity index evaluation
  - 3.3. Site plan
  - 3.4. Vertical alignment
  - 3.5. Visibility, visibility zone in junction
  - 3.6. Other important factor influence on layout
  - 3.7. Lighting
  - 3.8. Curbs
  - 3.9. Useable lane widening
4. Sign system
  - 4.1. Route signing, and priority signs
  - 4.2. Speed limit signs
  - 4.3. Direction signing (Information system)
  - 4.4. Advance direction signing
  - 4.5. Signs for traffic control of bicycles and pedestrians
  - 4.6. Signs in roundabouts
5. Special resolutions
  - 5.1. Two roundabouts
  - 5.2. Direct turning right lane
  - 5.3. Special long vehicle traffic in roundabout

Pages: 44

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## **ÚT 2-1.209:2003      Design of overtaking and additional climbing lane**

Design of overtaking and climbing lanes.

### **Contents**

Application conditions

1. Design of overtaking sections

1.1. General design regulations

1.2. Base principles of layout

2. Climbing lane(s)

2.1. Conditions of use

2.2. Geometric design

Pages: 20

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## **ÚT 2-1.215:2004      Drainage Planning of Roads**

Road design No. ÚT 2-1.201 Exposition of general regulation including drainage.

### **Contents**

- 1. General design regulations
  - 1.1. The initial state record
  - 1.2. Determination of rainfall and rates of flow
  - 1.3. Drainage system sizing
  - 1.4. Rill crossings, corrections
  - 1.5. Subsurface water
  - 1.6. Environmental context
  - 1.7. Design meetings
  - 1.8. Phases of plans and their parts and content requirements
- 2. Motorways
  - 2.1. Surface and pavement drainage
  - 2.2. Rill crossing
  - 2.3. Determination of rate of flow steamed from relevant rainfall
  - 2.4. Link between structure and its environment
- 3. Rural roads
  - 3.1. Surface and pavement drainage
  - 3.2. Rill crossing
- 4. Urban roads
  - 4.1. Drainage of urban roads

Pages: 48

Base principles of design and build of motorway operation and maintenance centre.

**Contents**

- 1. Abstracts
- 2. Choosing the location
  - 2.1. Motorway O/M Centre in the network
  - 2.2. Long of operational sections and service run
  - 2.3. Parcel area
- 3. Architectural facilities
  - 3.1. Design and build principles
  - 3.2. The centre building
  - 3.3. Truck garage
  - 3.4. Car and adapter garage
  - 3.5. Warehouse
  - 3.6. Salt barn
- 4. Other facilities
  - 4.1. Barnyard
  - 4.2. Gas station at O/M Centre
  - 4.3. Storage places
  - 4.4. Safeguarding and safety tools
  - 4.5. Parking areas
  - 4.6. Flats
  - 4.7. Motorway police location

Pages: 12

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**ÚT 2-1.218:2003**

**Public road traffic parts of Township Settlements Plan.  
Contents requirements (Supplementation of KTSZ)**

**Contents**

- 1. General part
  - 1.1. Aims
  - 1.2. Initial conditions, base principles
- 2.. Detailed requirements
  - 2.1. Design grouping settlements by transport recommendation
  - 2.2. Formal requirement of traffic recommendation of Urban Plan
  - 2.3.. Formal requirement of traffic recommendation of Urban Plan for Capital

Pages: 34

Traffic, safety and electrical requirements of signal controlled intersection concerning design, installation, and operation.

### Contents

#### Part I: Design of traffic control

1. Abstracts
- I. General design regulations
2. Location of traffic light
3. Warning signal
4. Other regulations
- II. Traffic plan
5. Traffic order and geometry
6. Longitudinal size of turning lanes
- III. Regulation technology
7. Phase order
8. Control by constant phase plan
9. Traffic control by vehicle actuation
10. Design of traffic signal coordination
- IV. Other control technologies
11. Traffic signal linked to crossing with flashing light
12. Priority to public transport
13. Traffic control in bottleneck
14. Direction changing signal
15. Speed signal, speed cone
- V. Plan content requirements
16. Contents of plans
17. Traffic plan
18. Signing plan
19. Installation plan
20. Traffic control plan
21. Ready made plan
- Part II: Traffic control installation
- VI. Base step of installation
22. Usual way of installation
- VII. Procurement of permissions and approvals for installation
23. The needed permissions and approvals
- VIII. Progress of construction
24. Conditions of traffic signal installation, altering and expansion
25. Building preparation
26. Assembling and testing works
- IX. Finishing the installation
27. Starting of operation
- III. Traffic control operation
- X. Operation
28. Traffic operation
29. Maintenance tasks
30. Maintenance works and frequency
31. Safety of parts linked to live wire
32. Works under charged state
33. Test of simulated danger
34. Tests after start of operation, altering and expansion

Pages: 38

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**ÚT 1-1.204:2003**

**Traffic Signal Control Regulation (FISZ) [Appendix of  
41/2003. (VI. 20.) GKM decree]**

Appendix of Decree No. 41/2003. (VI. 20.) GKM.

**Contents**

1. Abstracts
2. Requirements of traffic signal equipment
3. The necessity of traffic control installation
4. Plan of signal control
5. Base safety requirements
6. Traffic lights, control ways and signal technology requirements
7. National signals, and signal orders
8. Safety requirements of traffic control equipments
9. Traffic plan of individual intersections
10. Vehicle activated traffic control
11. Control system and network control
12. Tram crossing signal
13. Traffic signal linked to crossing with flashing lights
14. Traffic lights control in bottleneck
15. Direction changing signal
16. Location of traffic lights
17. Main principles of operation
18. Operational data registration and saving
19. Switch on entitlement
20. Switch off entitlement

Pages: 18

General conditions road tunnel building. General aspects related to tunnel planning.

### Contents

1. Application conditions
2. Abstracts
3. General principles of planning
  - 3.1. Tunnel requirements
  - 3.2. General plan ideas
4. Road traffic requirements and its satisfying
  - 4.1. Traffic plan
  - 4.2. Road building
  - 4.3. Traffic control
  - 4.4. Other control
5. General plan of tunnel
  - 5.1. Conception of plan
  - 5.2. Location of tunnel
  - 5.3. The area of tunnel
  - 5.4. Tunnel for river
  - 5.5. Build of entry section and related facilities
  - 5.6. Architect of tunnel
  - 5.7. Other facilities
  - 5.8. Supplemental engineering structures related to river tunnel
6. Structures design
  - 6.1. Aspects of tunnel structures design
  - 6.2. Geology and geotechnical preparation works
  - 6.3. Tunnel building technologies
  - 6.4. Plan of structure details
  - 6.5. Longitudinal equipment elements
  - 6.6. Building materials
  - 6.7. Structure compliance verification
7. Building engineering plan
  - 7.1. Tunnel lighting
  - 7.2. Ventilation
  - 7.3. Energy supply
8. Tools for usual using state
  - 8.1. Tools for emergency
  - 8.2. Fire protection
  - 8.3. Communication of information and the tunnel information system
9. Plan of tunnel operation and maintenance
  - 9.1. Control and governing system of tunnel equipments
  - 9.2. Control centre and its tasks
  - 9.3. The operation
  - 9.4. Maintenance and reconstruction
- F1. Tunnel layout plan
- F2. Tunnel environmental plan

Pages: 58

It deals with asphalt or concrete paved roads which have less traffic than the lower limit of load grade specified in Decree No. ÚT 2-1.202 entitled sizing and strengthening of road paved by asphalt.

**Contents**

1. Condition of use
  - 1.1. General conditions
  - 1.2. Environmental conditions
2. Abstracts
  - 2.1. Axle unit
  - 2.2. Design life
  - 2.3. Design traffic
  - 2.4. Low traffic road
  - 2.5. Traffic load grade
  - 2.6. Earthwork
  - 2.7. Improving layer, protecting layer
  - 2.8. Mechanical stabilization
  - 2.9. Surface dressing
  - 2.10. Cold asphalt
  - 2.11. Paving
3. Design main principle
  - 3.1. Pavement structure
  - 3.2. Design steps
4. Specifying the load grade
5. Soil type determination
6. Chose of improving layer
7. Standard road pavement selection
  - 7.1. Selection aspects of standard road pavement type
  - 7.2. Remarks of wearing course
  - 7.3. Remark of sub base in case of unbounded graded material
  - 7.4. Remark of sub base in case of bounded graded material
8. Checking the frost susceptibility
9. Stage construction

Pages: 12

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## **ÚT 1-1.301:1981      Reduction of Traffic Noise by Road Design Methods**

Procedure for calculation of traffic noise reduction in designing the road and its environment coordination.

### **Contents**

1. Nomination
2. Forecast of road traffic noise
3. Allowable A-weighted noise level in environment of buildings
4. Methods for traffic noise level reduction

Pages: 46

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## **ÚT 2-1.302:2003      Calculation of Traffic Noise**

Forecast calculation of noise level steamed from the traffic (including tram as well) knowing the data of traffic and environmental circumstances; in the phase of design of new road, or reconstruction of road.

### **Contents**

1. Abstracts
2. The calculation applicability and steps
  - 2.1. Calculation steps
  - 2.2. Long term traffic taken into consideration
3. Calculation of noise annoyance in road sections
  - 3.1. Traffic data
  - 3.2. Calculation of reference A-weighted unit noise level belonging to time periods and road sections
  - 3.3. Calculation of resultant A-weighted unit noise level belonging to time periods and road sections
  - 3.4. Corrections

Pages: 26

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## **ÚT 2-1.303:2000      Road noise screens. Realization and maintenance.**

Essential requirements - that are not written in road decrees- of products, build-ups and technologies related to road sphere. Methods of design, producing, transporting, assembling and handover requirements.

### **Contents**

1. Abstracts
2. Realization and application conditions
3. Requirements
4. Structure elements
5. Building materials
6. Noise screen construction
7. Road suitability verification
8. Handover process of noise screen
9. Acoustic maintenance and other test of the existing noise screen

Pages: 46

This specification gives guide for new bridge design, but it contains old, not update resolutions as well, taken the reconstruction works into account.

### **Contents**

1. Abstracts
2. Types of saddles
  - 2.1. Tilting and rolling steel saddles
  - 2.2. Steel calotte saddles
  - 2.3. Pot saddles
  - 2.4. Artificial saddles
3. Main principles of saddle design
  - 3.1. Generally
  - 3.2. Requirements
  - 3.3. Saddle materials
  - 3.4. Statically design of saddles
  - 3.5. Ordering saddles
  - 3.6. Saddle designing
  - 3.7. Selection of saddle type
  - 3.8. Saddle structure
4. Transport, storage, build-in
  - 4.1. General requirements
  - 4.2. Stowage, storage
  - 4.3. Tests before building in
  - 4.4. Build-in
  - 4.5. Records
5. Saddle test
6. Saddle maintenance
7. Typical errors of saddles and theirs reparation
8. Dilatation structures
  - 8.1. Grouping of dilatation structures
  - 8.2. Design and selection aspects of dilatation structures
  - 8.3. Tests of dilatation structures
  - 8.4. Dilatation structures maintenance
  - 8.5. Typical errors of dilatation structures and theirs reparation

Pages: 34

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**ÚT 2-1.403:2000****Bridge-railing. Steel Railing and Safety Elements**

Rail used in steel or concrete curb of road bridges, service sidewalk, pedestrian or bicycle path. The steel rail from profile iron, Its structure, location and screening. Grid against the downfall.

**Contents**

1. Abstracts
2. General requirements
  - 2.1. Bridge rail types, theirs tasks
  - 2.2. Safety risk groups
  - 2.3. Application circumstances
3. Steel rail structure in bridge
4. Profile iron rail structure in bridge

Pages: 12

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**ÚT 2-1.404:2002**

**Code of Road bridges 6. Planning of Works on Existing  
Bridges**

It scopes all of existing and operating permanent or temporary spanning structures (bridge, underpass, duct, protecting pipe, channel, manhole) which part of law concerning road and sidewalk.

**Contents**

1. Bridge geometry
  - 1.1. Clearance
  - 1.2. Size of bridge cross-section
2. Pavement break and joint
3. Bridge deck pavements
4. Rails
5. Drainage
6. Architectural relations

Pages: 7

It scopes all of existing and operating permanent or temporary spanning structures (bridge, underpass, duct, protecting pipe, channel, manhole) which part of law concerning road and sidewalk.

### **Contents**

1. Abstracts
2. Static requirements
  - 2.1. Loadings
  - 2.2. Static requirements
  - 2.3. Deflections
3. Initial data, preparation
  - 3.1. Judging of statically structure
  - 3.2. Acceptable data sources
  - 3.3. Testing units of structure
  - 3.4. Test of structure made from non ageing type of material
  - 3.5. Test of structure in unfavourable environment or made from deteriorative material
4. Qualifying
  - 4.1. Structure in good state
  - 4.2. Structure in bearable state
  - 4.3. Structure in dangerous state
5. Verifying the static requirement
  - 5.1. General requirements
  - 5.2. Verifying based on using practice
  - 5.3. Verifying based on static calculation
  - 5.4. Verifying based on trial load and static calculation
6. Strengthening principles of load bearing structures

Pages: 24

Thickness design, structure and building conditions of pedestrian and bicycle path separated from road traffic.

**Contents**

1. Applicability conditions
2. Abstracts
3. Pavement design
  - 3.1. Design aspects
  - 3.2. Design base data
  - 3.3. Pavements
  - 3.4. Base
  - 3.5. Frost blanket course building
  - 3.6. Standard pavement structures
  - 3.7. Choose of one of the pavement types
  - 3.8. Strengthened sidewalk or bicycle path over carriage gateway
  - 3.9. Drainage resolutions of sidewalk or bicycle path pavements
4. Quality requirements
  - 4.1. General conditions
  - 4.2. Special conditions
  - 4.3. Earthwork
  - 4.4. Pavement base
  - 4.5. Pavements

Pages: 14

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## **ÚT 2-2.103:1998      Maintenance of Asphalt Pavements**

Maintenance activities controlling of asphalt pavements (including hot rolled asphalt, mastic asphalt, macadam and other pavement covered by bituminous bound mixture material).

### **Contents**

1. Abstracts
2. Design aspects
  - 2.1. Base initial conditions of maintenance plan
  - 2.2. Levels of plan
  - 2.3. Low traffic road maintenance plan
3. Maintenance procedures
4. Method statements
  - 4.1. Method statements for conditioning
  - 4.2. Method statements for reconstruction
  - 4.3. Method statements for resurrection

Pages: 48

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**ÚT 3-2.104:1983**

**Road Maintenance Technical Directives. Road Surfaces of  
Concrete, Stone and Artificial Cast Stone Pavements**

Suggestion for maintenance work of concrete, stone and artificial cast stone pavements.

**Contents**

1. Abstracts and nomination
2. Application area
3. Materials
4. Building
  - 4.1. Joint maintenance
  - 4.2. Surface failure repair with cement bound material
  - 4.3. Surface failure repair with plastic mortar
  - 4.4. Surface failure repair with bituminous concrete
  - 4.5. Cracking repair
  - 4.6. Lifting of concrete slabs
  - 4.7. Concrete slabs partial exchange
  - 4.8. Proofing of concrete pavements
  - 4.9. Maintenance of stone and artificial cast stone pavements
  - 4.10. Old concrete pavement repairing with asphalt
5. Quality requirements
6. Tests
7. Qualifying

Pages: 24

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## **ÚT 2-2.107:1998      Filling of Cracks and Joints of Asphalt Pavements**

Cracking repairing and joint sealing and filling with water resistant material in hot rolled asphalt and mastic asphalt pavement under operation.

### **Contents**

1. Application area
2. Abstracts
3. Main principles
4. Construction
  - 4.1. Joint making
  - 4.2. Clearing joint and pre-treatment
  - 4.3. Joint or crack filling with machine and special instrument
5. Quality requirement
  - 5.1. Used materials
  - 5.2. Tests in manufacturing process
  - 5.3. Handover
6. Quality assurance
7. Safety requirements and fire service requirements

Pages: 10

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## **ÚT 2-2.111:1977      Manual Measurement of Pavement Roughness**

Method descriptions for measuring the pavement roughness which have crucial influent on skip resistance of road pavement.

### **Contents**

1. Abstracts
2. Assigning of measuring points
3. General procedure for specifying the sand depth of road surface
4. Road surface sand depth determination at the nominal area touched by pendulum of SRT equipment
5. Skid resistance test with SRT pendulum
6. Specifying the area touched by skidding rubber of SRT pendulum with painted print

Pages: 32

Measurement of longitudinal pavement unevenness with Bump-integrator - measured by the amplitude generated by unevenness, evaluation of measuring, specifying the unevenness index.

### **Contents**

- 1. Abstracts
- 1.1. Real longitudinal profile
- 1.2. Theoretical longitudinal profile
- 1.3. Longitudinal unevenness
- 1.4. Unevenness index
- 1.5. Unevenness-section
- 1.6. Measuring instrument
- 2. Principle of the methods
- 3. Main parts of measuring instrument
- 3.1. The swinging system
- 3.2. Measuring wheel
- 3.3. Tyre
- 4. Requirements for measuring instrument and test car
- 5. Preparation of measuring
- 5.1. Measuring conditions
- 5.2. Measuring instrument installation and checking before test
- 6. Measuring
- 6.1. Measuring track and section identification
- 6.2. Carry-out of test
- 6.3. Storage and transport
- 6.4. Contents of test record
- 6.5. Measuring data processing and evaluation
- 7. Results precision
- 8. Traffic safety requirements

Pages: 20

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**ÚT 2-2.113:2002**

**Measurement of Longitudinal Road Surface Unevenness  
with a Moving Beam Device**

Manual measurement procedure of longitudinal road surface unevenness with ÚT-02 type three wheel unevenness measuring equipment.

**Contents**

1. Usability condition
2. Abstracts
  - 2.1. Summarized unevenness
  - 2.2. The highest summarized unevenness
  - 2.3. Sampling, measuring procedure
  - 2.4. Digital display
  - 2.5. Range
  - 2.6. Numerical data
  - 2.7. Graphical data
  - 2.8. Sum of summarized unevenness
  - 2.9. Work area
  - 2.10. Measuring path
3. Measuring procedure
4. Test
  - 4.1. Preparation
  - 4.2. Measuring
5. Data processing
  - 5.1. Numerical measuring data
  - 5.2. Graphical measuring data
6. Evaluating
  - 6.1. Steps
  - 6.2. Data

Pages: 18

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**ÚT 2-2.114:1990**

**Skid-resistance Testing of Road Surfaces. Measurement with Scrim Testing Vehicle**

Skid-resistance testing of wet road surfaces based on level skin friction factor measuring with Scrim testing vehicle.

**Contents**

1. Abstracts
2. Principle of method
3. Main parts of measuring vehicle
4. Requirements of measuring vehicle
5. Calibration and periodical review of measuring equipment
6. Measuring preparation
  - 6.1. Test conditions
  - 6.2. Measuring vehicle test before test
7. Carry out of test
8. Measuring data report
9. Traffic safety requirements

Pages: 16

Testing longitudinal unevenness, wheel tracking and geometrical data of road surface with RST measuring vehicle.

### Contents

1. Abstracts
2. Description of vehicle, and measuring principle
3. Measuring properties parameters
  - 3.1. Unevenness
  - 3.2. Wheel tracking and cross-section
  - 3.3. Surface structure
  - 3.4. Measuring path
4. Measuring equipment checking and setting
  - 4.1. Measuring points (lighted by laser) distances on the calibration bars
  - 4.2. Laser beam distance from the road surface
  - 4.3. Cross slope and gradient check and setting
  - 4.4. Acceleration measuring equipments check and setting
  - 4.5. Distance measuring check and setting
  - 4.6. Laser cameras calibration
  - 4.7. Checking distance measurements of laser cameras (Test of 40 mm)
  - 4.8. Checking of data disturbance measured by COMBI type laser cameras
  - 4.9. Checking of gyroscope
  - 4.10. Bounce test of unevenness
5. Measuring preparation and carry out
  - 5.1. Measuring plan
  - 5.2. Carry out of measurement
6. Conditions of reproducibility
  - 6.1. Limits for two measurement of wheel tracking in the same section of road
  - 6.2. Limits for two measurement of surface unevenness in the same section of road
7. Test resulted, data transfer for further evaluation
8. Traffic safety requirements of measuring equipment and the measurement

Pages: 21

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## **ÚT 2-2.117:1998      Dynamic Measuring of Bearing Capacity of Pavements**

Regulation of measurement of road bearing capacity test carried out with Falling Weight Deflectometer.

### **Contents**

1. Application field
2. Abstracts
3. KUAB type measuring vehicle
- 3.1. General description

Pages: 52

A procedure which qualifies the state of road surface. This procedure is a series of maintenance engineering combined with special computers and special engineering softwares.

**Contents**

- 1. Object
  - 1.1. The essential of procedure
  - 1.2. Aim of procedure
  - 1.3. The results of application
- 2. Abstracts
- 3. Tools
- 4. The procedure
  - 4.1. The main parts of stage qualification
  - 4.2. The reliability of Roadmaster information
  - 4.3. The qualification of spring state (TAM)
  - 4.4. Measuring of surface errors with Roadmaster-MX road error measuring computers
  - 4.5. Roadmaster data evaluation
  - 4.6. Roadmaster-MX instrument
- 5. Labour safety requirements
- 6. The law state of Roadmaster softwares

Pages: 24

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**ÚT 2-2.119:1998**

**Measuring of Bearing Capacity with Light Falling Weight  
Deflectometer**

Load bearing capacity test with light falling weight deflectometer.

**Contents**

1. Conditions of use
2. Abstracts
3. Test method
4. Test equipments
  - 4.1. Measuring apparatus
  - 4.2. Accessories
  - 4.3. Sampling tools
  - 4.4. Materials
  - 4.5. Using modes of measuring apparatus
5. Tests
  - 5.1. Preparation of test location
  - 5.2. Preparation of test apparatus
  - 5.3. Testing
6. Determination of test results
  - 6.1. Deflection
  - 6.2. Dynamic load bearing modulus
7. Test report
  - 7.1. Contents requirements
  - 7.2. Moulding for test specimen

Pages: 25

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## **ÚT 2-2.120:2000      RST Measurement and Evaluation**

Testing of longitudinal unevenness, wheel tracking, structure and geometrical data of road surface with RST measuring vehicle.

### **Contents**

1. Abstracts
2. Levels of data process and utilization
  - 2.1. The network process level
  - 2.2. The local process level
  - 2.3. Graphical representation of main parameters
3. Evaluation levels
  - 3.1. Test result evaluation modes
  - 3.2. The result using fields

Pages: 20

Control of using dynamic deflectometer in case of individual test, state surveying and test in calibration section.

**Contents**

- 1. Application
- 2. Abstracts
- 2.1. Load bearing, load bearing capacity
- 2.3. Falling weight deflectometer
- 2.4 KUAB type falling weight deflectometer
- 2.5 Test principle
- 2.6 The pavement equivalent modulus
- 2.7. The disc centrepoint deflection
- 2.8 Local modulus
- 3. KUAB measuring equipment
- 4. Assignment of measuring points
- 5. Exploration site assignment
- 6. Measuring mode preparation
- 7. Conditions of test
  - 7.1. Technical conditions
  - 7.2. Measuring period
  - 7.3. Traffic safety conditions
- 8. Testing
- 9. Finishing the test
- 10. Test report
  - 10.1. Parameters
  - 10.2. Pre-processing
  - 10.3. Precision

Pages: 18

The regulation of data process of KUAB dynamic load bearing test data and linking with the databank.

**Contents**

1. Conditions of use
2. Abstracts
  - 2.1. Load bearing
  - 2.2. Average equivalent modulus
  - 2.3. Standard equivalent modulus
  - 2.4. Minimum equivalent modulus
  - 2.5. Maximum equivalent modulus
  - 2.6. Design deflection
  - 2.7. Allowable deflection
  - 2.8. Load bearing rate
  - 2.9. Critical layer
  - 2.10. Life span
  - 2.11. Evaluation section
  - 2.12. Local modulus
  - 2.13. Design traffic
  - 2.14. Specially flexible pavement (macadam)
  - 2.15. Flexible pavement
  - 2.16. Semi-rigid pavement
3. Data process of dynamic load bearing measuring result
  - 3.1. Great scale condition survey
  - 3.2. Falling weight deflectometer for strengthening plan
4. Calculations
  - 4.1. Determination of standard equivalent modulus
  - 4.2. Convert of dynamic deflection
  - 4.3. Design deflection value
  - 4.4. Determination of load bearing rate

Pages: 16

Site test of dynamic density and load bearing of earthworks, gravel layer, unbounded road base with light falling weight deflectometer.

### Contents

1. Conditions of use
2. Abstracts
- 2.1. Dynamic load bearing
- 2.2. Dynamic modulus
- 2.3. Deflection
- 2.4. Load bearing measurement
- 2.5. Static load bearing measurement
- 2.6. Static load bearing modulus
- 2.7. Dynamic load bearing and density measuring
- 2.8. Light falling weight deflectometer
- 2.9. Suitability test of measuring equipment
- 2.10. Measuring data
- 2.11. Test result
- 2.12. Measuring point
- 2.13. Dynamic density measuring
- 2.14. Relative density
- 2.15. Water content correction factor
- 2.16. Dynamic density percent
- 2.17. Falling
- 2.18. Series
3. Test process
4. Test apparatus
- 4.1. Measuring equipment
- 4.2. Accessories
- 4.3. Sampling tools
- 4.4. Materials
- 4.5. Function modes of equipment
5. Tests
- 5.1. Measuring point preparation
- 5.2. Measuring apparatus preparation
- 5.3. Carry out of dynamic load bearing
- 5.4. Carry out of dynamic density and load bearing test
6. Test results
- 6.1. Amplitude of deflection
- 6.2. Dynamic load bearing modulus
- 6.3. Dynamic density percent
7. Test report
- 7.1. Contents requirements

Pages: 22

Maintenance all of bridges and guiding to maintenance of retaining wall and tunnel.

### Contents

1. The idea of maintenance work
2. Bridge maintenance work
  - 2.1. Bridge cleaning
  - 2.2. Carry out of dry cleaning
  - 2.3. Carry out of wet cleaning
  - 2.4. Taking care of greenery in environment of bridges
  - 2.5. Other routine maintenance works
3. Steel bridges and steel structures maintenance works
  - 3.1. Steel bridges and steel structures corrosion protecting
  - 3.2. Riveting joint maintenance
  - 3.3. Bolt joint maintenance
  - 3.4. Strung bolt joint maintenance
  - 3.5. Welded joint maintenance
4. Concrete, reinforced concrete and pre-stressed reinforced concrete bridges maintenance work
  - 4.1. Possible reason of impairment of bridges
  - 4.2. Typical errors of concrete structures
  - 4.3. Concrete error repairing with polymer modified cement bounded mortar or concrete
  - 4.4. Concrete error repairing with resin bounded mortar or concrete
  - 4.5. Concrete error repairing with concrete mortar or concrete
  - 4.6. Blown concrete using in bridge maintenance work
  - 4.7. Cracking filling with resin
  - 4.8. Stressed concrete structures maintenance
  - 4.9. Corrosion protecting of concrete bridges and structure made by concrete
5. Bridge desk maintenance work
6. Wood bridges and its part maintenance work
  - 6.1. General description
  - 6.2. Impairment of built in wood materials
  - 6.3. Determination the level of impairment of built in wood materials
  - 6.4. Maintenance work
7. Stone and brick structures maintenance work
  - 7.1. Most frequent errors
  - 7.2. Joint sealing of stone or brick walls
  - 7.3. Larger surface impairment reparation
8. Other bridge structure elements maintenance
  - 8.1. Saddles, pendulums and swivels
  - 8.2. Expansion structures maintenance
  - 8.3. Edge protecting profile steels, rails, lightning rod, marital signs, railway bridge protecting against smashing, smoke deflections sheets maintenance works
  - 8.4.
  - 8.5. Maintenance cables crossing the bridge
  - 8.6. Slope and river basin maintenance
  - 8.7. Maintenance bench-mark or other geodetic signs on bridge

Pages: 28

Corrosion protecting system making and maintenance for steel road and railway bridges or bridge from other material containing steel structure elements.

### Contents

1. Application field
2. Abstracts
3. Steel bridge exposed to corrosion
  - 3.1. Corrosion category of road bridges
  - 3.2. Average corrosion effect
  - 3.3. High level corrosion
4. General description
5. Bridge cleaning
6. Test and qualifying the corrosion impairment of painting
  - 6.1. Forms, type of impairments
  - 6.2. Testing aspects
  - 6.3. Evaluation modes
  - 6.4. Qualifying the coating system state
7. Type of painting coat systems
  - 7.1. The selection aspects of painting coat system
  - 7.2. Compatibility of painting layers
8. Renovation of painting coat system
  - 8.1. Repairing the painting coat system
  - 8.2. Patch type repairing
  - 8.3. Maintenance coating
  - 8.4. Entire renovation of painting coat system
  - 8.5. Surface reparation
  - 8.6. Painting coat system making
  - 8.7. Carry out of combined painting coat system
  - 8.8. Special corrosion protecting requirements
9. Registration of coating data
9. Quality check and tests
  - 9.1. Sampling and material tests
  - 9.2. Reference areas
  - 9.3. Process checking
  - 9.4. Suitability tests
  - 9.5. Comparing tests
  - 9.6. Test methods
10. Qualifying
11. Labour safety
12. Environment protection

Pages: 32

Design of bridge concrete or reinforced concrete exposed highly aggressive effect, which contains the destructive agent rank and the durable concrete mixture ingredients and requirements.

### **Contents**

1. Application field
2. Abstracts
3. Aggressive environmental effects on road bridge
  - 3.1. Damaging effects
  - 3.2. Concrete corrosion types of road bridges
4. Base principles of designing concrete resistant against aggressive environmental effects
  - 4.1. Properties of durable concrete
  - 4.2. General description
  - 4.3. Cements
  - 4.4. Aggregate
  - 4.5. Useable water for concrete or reinforced concrete
  - 4.6. Admixture
  - 4.7. Factors specifying ingredients of durable concrete
  - 4.8. Alkali silica reaction
  - 4.9. Alkali carbonate reaction
  - 4.10. Calculation of void content of cement stone
  - 4.11. Requirements of concrete
  - 4.12. Design of durable concrete
5. Quality check

Pages: 18

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**ÚT 2-2.204:1999**

**Testing of Road Concrete Layers and Civil Engineering Works by Schmidt-Hammer (Rebound-Hammer) and by Ultrasonic Method**

Testing of concrete, reinforced concrete and pre-stressed reinforced concrete road engineering structures without charring using Schmidt-hammer and ultrasonic.

**Contents**

1. Abstracts
2. Base principle of test methods
  - 2.1. Estimating the mechanical properties with test without charring
  - 2.2. Strength estimating with Schmidt-hammer
  - 2.3. Strength estimating with ultrasonic
  - 2.4. Function field for strength estimation
  - 2.5. Parameter of one individual strength estimation function
  - 2.6. Selection modes for strength estimation function
3. Using conditions
  - 3.1. General conditions
  - 3.2. Using of tests without charring
4. Schmidt-hammer test
  - 4.1. Test apparatus
  - 4.2. Test preparation
  - 4.3. Carry out of test
  - 4.4. Evaluation the test results
5. Ultrasonic test
  - 5.1. Test apparatus
  - 5.2.. Test preparation
  - 5.3. Carry out of test
  - 5.4. Evaluation the test results

Pages: 40

Standard way of bridge protection against vehicles which can cause damages because of their sizes or dangerous load.

### **Contents**

1. Application field
2. Abstracts
- 2.1. The idea of bridge protection
- 2.2. Permission needed traffic
3. Load bearing of bridges
- 3.1. Design load bearing of bridges
- 3.2. Operation load bearing
4. Clearance above and below the bridge
- 4.1. Registered sizes
- 4.2. Bridge geometric suitability
5. Bridge protection in case of dangerous materials transport
6. Registration
7. Bridge protection modes
- 7.1. Possibilities of bridge protection
- 7.2. Checking with measuring
- 7.3. Traffic engineering tools
- 7.4. Protecting gates and related traffic engineering tools
8. Location of traffic engineering sign systems
- 8.1. Location of informative signs supplementations
- 8.2. Sign located near the bridge
- 8.3. Protecting gate traffic engineering location and its symbols

Pages: 14

Secondary corrosion protection of concrete and reinforced concrete structures of road bridges with posterior processes on fresh or settled concrete.

### Contents

1. Conditions of use
- 1.1. Application fields
2. Abstracts
- 2.1. Inner concrete corrosion
- 2.2. Concrete surface protecting systems
- 2.3. Frost
- 2.4. Surface regulation
- 2.5. Sealing coat
- 2.6. Hydrophobization
- 2.7. Road oiling
- 2.8. Carbonation
- 2.9. Corrosion effects of gases
- 2.10. Outer concrete corrosion
- 2.11. Physical corrosion caused by melting material
- 2.12. Polymer cement mortar or concrete
- 2.13. Polymer mortar or concrete
- 2.14. Primary corrosion protection
- 2.15. Secondary, or posterior corrosion protecting
- 2.16. Durable concrete
- 2.17. Reinforced concrete corrosion
- 2.18. Protecting coat
- 2.19. Thin protecting coat
3. General requirements
- 3.1. General principles
- 3.2. Qualification and routine
- 3.3. General requirements of coating system
- 3.4. Useable building materials
4. Coat requirements
- 4.1. Coat types of concrete
- 4.2. Structure of coating system
5. Building regulations
- 5.1. General requirements
- 5.2. Preparation of base coating
- 5.3. Ground coat
- 5.4. Coating building
- 5.5. Labour safety and fire service requirements
- 5.6. Environmental requirements
6. Tests
- 6.1. Needed tests
- 6.2. Base tests
- 6.3. Suitability tests
- 6.4. Tests in manufacturing and building
- 6.5. Qualifying tests
- 6.6. Comparing tests
- 6.7. Test methods
7. Qualifying and warrant

Pages: 24

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## **ÚT 1-2.207:1999      Register and Technical Supervision of Highway Bridges**

Registration and technical supervision of road bridges.

### **Contents**

Decree of the minister of transport, communication and water [No. 1/1999. (I. 14.)] on registration and technical supervision of road bridges

Appendix

Abstracts

Registration and technical supervision of road bridges

1. General requirements

2. Bridge registration

3. Individual bridge registration

4. Bridge group registration

5. Bridge checking

6. Bridge supervision

7. Test of bridge

8. Main test

9. Trial load

10. Closing

Pages: 12

Methods and information required for resolving the tasks written in regulation of bridges registration and technical supervision.

**Contents**

- 1. Bridge registry sheet
  - 1.1. General data
  - 1.2. Data related to building
- 2. Bridge state evaluating
  - 2.1. Substructure
  - 2.2. Superstructure
  - 2.3. Bridge deck
  - 2.4. Bridge accessories
  - 2.5. Bridge's close environment
- 3. Main testing aspects and methods
  - 3.1. Steel structures
  - 3.2. Concrete, reinforced concrete and pre-stressed reinforced concrete structures
  - 3.3. Stone and brick structures
  - 3.4. Foundations
  - 3.5. Saddles, swivels
  - 3.6. Bridge deck, dilatation structure
  - 3.7. Bridge accessories
  - 3.8. Bridge's environment
  - 3.9. Mechanical engineering and electrical equipments
- 4. Plan of trial load
- 5. Main aspects of bridge test before trial load
  - 5.1. General tests ideas
  - 5.2. Detailed tests ideas

Pages: 28

Theory and practice of measuring properties of rigid spans. Standard data acquisition for road operating organizations, mainly for route assignment. The registry open, addition, modifying procedures. All of the information related to traffic engineering in bridges.

## Contents

### Guide

### Application

1. Abstracts
2. Classifying
  - 2.1. Types
  - 2.2. Types by life span
  - 2.3. Types by obstacles
3. Route assignment
  - 3.1. Condition of functioning
  - 3.2. Required data
4. Data gathering
  - 4.1. Local identification
  - 4.2. Geometric data specifying
  - 4.3. Data sheet
5. Data registration
  - 5.1. Computer file and road data bank relation
  - 5.2. Registered data
6. Graphical representation, map display
  - 6.1. Illustration on district road map
  - 6.2. Illustration on urban road map
  - 6.3. Layout
7. Traffic engineering requirements
  - 7.1. Height limit signal
  - 7.2. Protecting gates, other traffic engineering tools
8. Overheighted vehicles traffic
  - 8.1. Law regulation
  - 8.2. Permission procedure
  - 8.3. The practice of route assignment

Pages: 38

Requirement levels and test methods for industrial sodium chloride for using in winter maintenance.

## Contents

### Abstracts

- 1.1. Icing salt
- 1.2. Sampling
- 1.3. Sample
- 1.4. Sample part
- 1.5. Average sample
- 2. Sampling method
  - 2.1. Sampling from material in loose delivered state
  - 2.2. Sampling from material in packed delivered state
  - 2.3. Marking and using of average sample
  - 2.4. Data of sampling method
- 3. Requirements
  - 3.1. General requirements
  - 3.2. Quality requirements
- 4. Tests
  - 4.1. Chloride content determination given in NaCl
  - 4.3. Determination the part of insoluble in water
  - 4.4. Specifying particle size distribution
  - 4.5. Determination the hydrophobic part of the icing salt
  - 4.6. Melting effectiveness of icing salt
  - 4.7. Determination of the heavy metal content
- 5. Qualifying
- 6. Remarking
- 7. Packing
- 8. Delivery
- 9. Storage

Pages: 14

Building, installation, set up and, treatment of plastic net against snow. The snowdrift protection technical problems systematization.

**Contents**

1. Abstracts
2. Plastic net using in snow protection works
3. Types and realization of plastic net
4. Protecting the material of plastic net
5. Spacing distance

Pages: 16

This regulation deals with stability of natural slopes, cuttings, filling slopes, rock slopes and embankment widening. Embankment foundation in unfavourable subsoil, designing earthwork's materials and load bearing capacity and soil water drainage.

### Contents

1. General principles, abstracts
  - 1.1. The regulation contents
  - 1.2. Relation with other regulations
  - 1.3. Design order
  - 1.4. Abstracts
2. The main bases and general rules of design
  - 2.1. Design requirements
  - 2.2. Main data considered in design
  - 2.3. Categorization of task
  - 2.4. The initial ground state exploration, test and conclusion
  - 2.5. Design state specifying
  - 2.6. Planning methods
3. Design categories and contents
  - 3.1. Design order
  - 3.2. Purposes of plan phases and theirs geotechnical requirements
  - 3.3. Content requirements of geotechnical works
4. Slope stability
  - 4.1. General aspects and requirements
  - 4.2. Examining of slope stability and stability improvement options
  - 4.3. Design features of slope types
5. Embankment foundation
  - 5.1. Plan requirements of embankment foundation
  - 5.2. Plan of embankment foundation
  - 5.3. Main principles of embankment foundation plan
6. Plan of embankment material and load bearing
  - 6.1. Main requirements
  - 6.2. General qualifying of earthwork material, and using of earthwork material
  - 6.3. Load bearing design of upper part of earthwork
  - 6.4. Frost protection design of earthwork
  - 6.5. Testing of existing earthwork load bearing and improving
7. Retaining structures
  - 7.1. General design requirements and main principles
  - 7.2. Types of retaining wall and design main ideas
  - 7.3. Restrained end support retaining wall
  - 7.4. Anchored structures
8. Subsoil water drainage
  - 8.1. General requirements
  - 8.2. Special requirements of subsoil water drainage methods
9. Registry of main terms in the text

Pages: 94

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## **ÚT 2-3.103:1998      Radiometric Compaction Measurement**

Radiometric densitometer using water content and volumetric density determination of earthwork, road sub base made from unbounded or cement bounded material.

### **Contents**

1. Application fields
2. Abstracts
3. Measuring idea
  - 3.1. General physical base ideas of measurements
  - 3.2. Measuring principles
  - 3.3. Types of test apparatus
4. Permissions and apparatus certifications needed for measuring
  - 4.1. Authority permissions
  - 4.2. Authority test of test apparatus
  - 4.3. Suitability test
  - 4.4. Measuring uncertainty
  - 4.5. Allowable periodical mistake
5. Carry out of site measuring
  - 5.1. Test equipments and accessories
  - 5.2. Preparation of test location
  - 5.3. Preparation of test apparatus
  - 5.4. Measuring
6. Measuring documentation and evaluation
  - 6.1. Site measuring sheet
  - 6.2. Specifying the compaction test results

Pages: 24

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## **ÚT 2-3.104:2000      Measuring of Highway Embankment Settlement**

Regulation the measuring methods of road embankment deflection.

### **Contents**

1. Application fields
2. Measuring principle
3. Preparation of measuring point
4. Measuring
  - 4.1. Measuring based on levelling
  - 4.2. Measuring based on communicating vessels rule
  - 4.3. Measuring with special electronic equipment
  - 4.4. Measuring with other equipments
5. Measuring data determination

Pages: 10

Concrete pavement structures building, concrete composition designing, quality requirements of concrete pavements. Construction requirements, building regulations, checking and qualifying.

**Contents**

1. Conditions of use
2. Abstracts
3. Earthwork building
  - 3.1. General requirements
  - 3.2. Quality of earthwork
4. Building of road base
  - 4.1. General requirements
  - 4.2. Sub base building
  - 4.3. Separating layer
5. Structure of concrete pavements
  - 5.1. General requirements
  - 5.2. Reinforced concrete pavement
  - 5.3. Thickness of concrete pavement
  - 5.4. Size of concrete slabs
  - 5.5. Joints
6. Concrete wearing course
  - 6.1. Main materials
  - 6.2. Marking of concrete pavement, tensile strength classification
  - 6.3. Composite of concrete pavement
  - 6.4. Suitability test of concrete pavement
  - 6.5. Concrete mixture composition check without suitability test
7. Building requirements
  - 7.1. General requirement
  - 7.2. Concrete materials
  - 7.3. Materials transport, storage and using
  - 7.4. Concrete mixture making
  - 7.5. Concrete transport
  - 7.6. Concrete building in
  - 7.7. Weather environments
  - 7.8. Filling joints
8. Quality requirements
  - 8.1. Materials
  - 8.2. Wearing course concrete
  - 8.3. Quality requirements of concrete pavement
9. Test methods and frequency
  - 9.1. Suitability tests
  - 9.2. Test in manufacturing and quality check tests
10. Qualifying concrete pavement
  - 10.1. Strength of concrete pavement
  - 10.2. Distance factor in concrete pavement
  - 10.3. Thickness of concrete pavement
  - 10.4. Cross-slope of pavement surface
  - 10.5. Evenness of concrete pavement
  - 10.6. Number of cracking concrete pavement

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## **ÚT 2-3.204:1993      Concrete Sub bases for Road Building. Requirements**

Building regulations of road pavement (inc. bicycle and pedestrian path) base made from concrete.  
Technical requirements quality check and qualifying.

### **Contents**

1. Abstracts
2. General requirements
  - 2.1. Conditions and requirements of building
  - 2.2. Materials and concrete mixture composition
  - 2.3. Concrete mixture making
3. Quality requirements
4. Quality check
  - 4.1. Sampling
  - 4.2. Test
5. Qualifying

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Building and qualifying requirements and quality check of stone and cast stone pavements of roads and areas.

### Contents

#### Abstracts

#### 1. Building requirements

##### 1.1. Conditions of buildings

##### 1.2. Building requirements of curbs

##### 1.3. Building requirements of embedding layer

##### 1.4. Grooved ashlar paving building requirements

##### 1.5. Building requirements of

##### 1.6. Building requirements of

##### 1.7. Tampering requirements

##### 1.8. Joints, filling of joints and their requirements

#### 2. Quality requirements

##### 2.1. Requirements independent from quality classification

##### 2.2. Requirements dependent on quality classification

#### 3. Quality check

##### 3.1. General rules of checking

##### 3.2. Sampling

##### 3.3. Test

##### 3.4. Qualifying

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Quality requirements and suitability conditions for protecting and road base layers with or without hydraulic binders, and determination of suitability verification.

**Contents**

- 1. Conditions of use
- 2. Abstracts
- 3. Building requirements
  - 3.1. General building requirements
  - 3.2. Protecting layers
  - 3.3. Road bases
- 4. Quality requirements
  - 4.1. Materials
  - 4.2. Protecting layers
  - 4.3. Road bases
- 5. Sampling and tests
  - 5.1. General rules of checking
  - 5.2. Suitability tests
  - 5.3. Quality and under manufacturing tests
- 6. Qualifying and suitability verification of protecting layer
  - 6.1. Evaluation of suitability
  - 6.2. Qualifying
  - 6.3. Suitability
- 7. Qualifying and suitability verification of base
  - 7.1. Evaluation of suitability
  - 7.2. Qualifying
  - 7.3. Suitability verification

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Base materials selection and layer structure determination of base layers used by road traffic.

**Contents**

1. Conditions of use
2. Abstracts
3. General requirements
  - 3.1. Earthwork preparation and building
  - 3.2. Structure
  - 3.3. Cracking mirror
4. Bases without binders
  - 4.1. Base materials
  - 4.2. Types and base materials
  - 4.3. Quality requirements
5. Bases with hydraulic binder
  - 5.1. Binders
  - 5.2. Soils suitable for stabilization and additives
  - 5.3. Admixtures
  - 5.4. Supplemental materials
  - 5.5. Water
  - 5.6. Mixtures
  - 5.7. Suitability test of mixtures

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## **ÚT 2-3.208:2000      Design Requirements of Concrete Base Courses**

Road concrete base courses design.

### **Contents**

1. Condition of use
2. Abstracts
  - 2.1. Sizing
  - 2.2. Frost limit
  - 2.3. Strength grade
  - 2.4. Joint
  - 2.5. Supplemental material
  - 2.6. Rolled concrete
3. Design requirements
  - 3.1. Materials
  - 3.2. Concrete of base course
  - 3.3. Thickness of base
  - 3.4. Joints
  - 3.5. Edge formation

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Requirements for fresh and solid concrete made from concrete from recovered pavement slabs and used aggregates.

### Contents

1. General principles
2. Abstracts
3. Requirements for concrete recovered from concrete slabs and concrete recovering
  - 3.1. General principles
  - 3.2. Requirements for recoverable concrete
  - 3.3. Recovering concrete from slab
4. Manufacturing the recovered aggregates
  - 4.1. General principles
  - 4.2. Stone chopping machines
  - 4.3. Stone sorter
  - 4.4. Recovered aggregates transport and storage
5. Requirements for recovered aggregates and the fresh concrete composition
  - 5.1. Requirements for recovered aggregates
  - 5.2. Requirements for fresh concrete composition
  - 5.3. Requirements for solid concrete
6. Mix, transport, building in and curing
  - 6.1. Mixing of recovered concrete
  - 6.2. Transport to the site
  - 6.3. Building in
  - 6.4. Building level
  - 6.5. Curing

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Structural design of road concrete pavements slabs without reinforcement.

**Contents**

- 1. Conditions of use
  - 1.1. General requirements
  - 1.2. Environmental requirements
- 2. Abstracts
  - 2.1. Design traffic
  - 2.2. Traffic load grade
  - 2.3. Road pavement concrete
- 3. Base principle of design
  - 3.1. Structure of pavement
  - 3.2. Base principle of design
- 4. Specifying the design traffic
  - 4.1. Life span of design
  - 4.2. Specifying the design traffic
- 5. Load bearing capacity of earthwork
  - 5.1. Specifying the design load bearing
  - 5.2. Increasing the earthwork load bearing
- 6. Selection of standard road structure
  - 6.1. Aspects of selection of standard road structure
  - 6.2. Standard road structure types
  - 6.3. Using requirements of standard road structure type
  - 6.4. Checking for preventing frost and thaw damaging

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Design and construction of pavement structures with concrete blocks for vehicle and pedestrians. Requirements and thickness determination.

### Contents

- 1. Conditions of use
  - 1.1. General requirements
  - 1.2. Environmental requirements
- 2. Abstracts
  - 2.1. General abstracts
  - 2.2. Paving blocks
  - 2.3. Pavement structures
  - 2.4. Materials
  - 2.5. Unit
- 3. Materials
  - 3.1. Concrete paving blocks
  - 3.2. Embedding
  - 3.3. Joint sealing material
  - 3.4. Drain layer and geotextile
  - 3.5. Supplementation with monolith concrete
- 4. Designing
  - 4.1. Using
  - 4.2. Laying pattern
  - 4.3. Road pavement structure
  - 4.4. Surface water drainage
- 5. Structural design
  - 5.1. Main principle
  - 5.2. Design traffic
  - 5.3. Design load bearing of earthwork
  - 5.4. Selection aspects of standard road pavement type
  - 5.5. Standard road pavement types
  - 5.6. Checking for preventing frost and thaw damaging
- 6. Building requirements
  - 6.1. General requirements
  - 6.2. Substructure
  - 6.3. Concrete block paving
- 7. Quality requirements
  - 7.1. Materials
  - 7.2. Stabilizations with or without hydraulic binders
  - 7.3. Concrete road bases
  - 7.4. Concrete blocks and the embedding
- 8. Sampling and test
  - 8.1. General rules of checking
  - 8.2. Suitability tests
  - 8.3. Qualifying and in manufacturing tests
- 9. Qualifying and suitability verification
  - 9.1. Base with or without hydraulic binders
  - 9.2. Concrete base
  - 9.3. Base
  - 9.4. Concrete block paving and embedding
  - 9.5. Concrete block paving
  - 9.6. Suitability verification

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**ÚT 2-3.301:2002**

**Hot Mixtures and Asphalt Pavements Courses for Road  
Constructions**

Design, quality requirements of bituminous concrete with modified bitumen or normal bitumen binder for road pavement. Design and building requirements and building conditions of bituminous concrete.

**Contents**

- 1. Abstracts
- 2. Bituminous concrete for road building
  - 2.1. Base materials
  - 2.2. Hot rolled asphalts
  - 2.3. Mastic asphalt
  - 2.4. Sampling and test methods of bituminous concrete
  - 2.5. Suitability verification of bituminous concrete
- 3. Road pavements' bituminous concrete layers
  - 3.1. Design regulation of bituminous concrete
  - 3.2. Building condition of bituminous concrete
  - 3.3. Sampling and test methods of bituminous concrete layers
  - 3.4. Road pavements' bituminous concrete layers suitability verification
- Appendix

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Road macadam with cut-back bitumen for wearing and base layers, terms, building requirements and technical requirements.

**Contents**

1. Abstracts
2. Application fields
3. Materials
  - 3.1. Aggregates
  - 3.2. Fillers
  - 3.3. Binders and adhesive materials
4. Construction
  - 4.1. Preconditions of building
  - 4.2. General requirements
  - 4.3. Bituminous mixtures for pavements with macadam
  - 4.4. Building of asphalt macadam
  - 4.5. Impregnate crushed material
  - 4.6. Dense bitumen macadam layers
  - 4.7. Bitumen macadam layers
  - 4.8. Mixed dense bitumen macadam layers
  - 4.9. Curing
  - 4.10. Labour safety
5. Quality requirements
  - 5.1. Pavements layers quality requirements independent from classification
  - 5.2. Pavements layers quality requirements dependent on classification
  - 5.3. Quality control
6. Test
7. Qualifying

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**ÚT 2-3.305:1983      Construction of Asphalted Road Structures**

Construction of road pavement from hot mixed bituminous concrete.

**Contents**

1. Abstracts
2. Preparation of building
3. Laying bituminous mixture layers
4. Compaction of bituminous mixture layers
5. Joint to the existing asphalt pavement or other surfaces

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## ÚT 2-3.306:2000      **Surface Dressing**

Surface dressing used as conservation and maintenance material for existing pavement of road network. It is made from chippings spreading and binder spraying. The application areas, preparation, design and quality requirements of surface dressing.

### Contents

- 1. Abstracts
- 1.1. Surface dressing
- 1.2. Types of surface dressing
- 1.3. Denomination of surface dressing
- 2. Use of surface dressing
- 2.1. Surface dressing with cut-back bitumen
- 2.2. Surface dressing with cation-active bitumen emulsion
- 2.3. Special surface dressings
- 3. Requirements concerned the life span of surface dressing
- 3.1. General requirements
- 3.2. Temporary regulations
- 4. Design data service of surface dressing
- 5. Design regulations
- 5.1. Informative quantities
- 5.2. Calculation method of modified binder content
- 6. Requirements
- 6.1. Quality requirements of base materials
- 6.2. Quality requirements of construction
- 6.3. Surface dressing quality requirements
- 7. Quality checking
- 7.1. Sampling, tests
- 8. Cumulative evaluation of quality
- 8.1. Evaluation section
- 8.2. Contents of quality documentation
- 8.3. Cumulative evaluation

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**ÚT 2-3.307:1992**

**Asphalt Mix with Blast Furnace Slag Sand – Road Bottoming  
and Pavements**

Design, manufacturing, quality and qualifying of slag bound asphalt. Slag asphalt building in and quality and qualifying of road pavement containing slag.

**Contents**

1. Traffic controls
2. Design regulations
  - 2.1. Pavement design regulations
  - 2.2. Types of slag asphalts mixtures
  - 2.3. Base materials of slag asphalts mixtures
  - 2.4. Design of slag asphalts mixtures
3. Requirements of slag asphalts mixtures and road pavement layers
  - 3.1. General requirements
  - 3.2. Quality requirements of slag asphalts mixtures
  - 3.3. Quality requirements of slag asphalts mixture layers
  - 3.4. Travel comfort check of wearing course
4. Sampling
5. Tests
6. Qualifying

Pages: 24

Asphalt specimens splitting test and the splitting tensile strength and modulus calculated from the test.

**Contents**

- 1. Abstracts
- 2. Test apparatus and equipments
- 3. Specimen preparation
- 4. Test
- 5. Calculation data
  - 5.1. Splitting tensile strength
  - 5.2. Splitting modulus
  - 5.3. Calculation of complementary data
- 6. Expression of test results
  - F1. Height correction
  - F2. Test report

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**ÚT 2-3.310:2004**

**Base Layers, Pavements and Pothole Repairing Mixtures  
with Cation-active Bitumen Emulsion Binders**

Use of asphalts containing cation-active bitumen emulsion binders, as pothole repairing material or in base layers. Its design, manufacturing, building and qualifying requirements.

**Contents**

1. Condition of use
2. Abstracts
3. General requirements
4. Asphalt mixtures
  - 4.1. Base materials
  - 4.2. Asphalts for base layer and pavement's layer.
  - 4.3. Asphalt for pothole repairing
  - 4.4. Sampling and test
  - 4.5. Suitability verification
5. Asphalt layers
  - 5.1. Design regulations
  - 5.2. Building conditions
  - 5.3. Sampling and test of sample
  - 5.4. Suitability verification
  - 5.5. The pothole repairing suitability verification

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Adhesive test of asphalt layers with shear on the joining plane.

**Contents**

1. The test base principle
2. Abstracts
  - 2.1. The highest shear force
  - 2.2. The highest shearing strain
3. Test equipments
  - 3.1. Press machine
  - 3.2. Displaying tool
4. Test specimen
5. Test method
6. Test result
  - 6.1. The highest shear force
  - 6.2. The highest shearing strain
  - 6.3. Parameters calculated from the test result
7. Test repeatability and reproducibility

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## **ÚT 2-3.315:2003      Surface Dressing (Slurry Seal)**

Surface dressing made from cation-active bitumen emulsion and aggregates. Binders, as pothole repairing material or in base layers. Its design, manufacturing, building and qualifying requirements.

### **Contents**

1. Abstracts, denominations
  - 1.1. Surfacing made by mixing and spreading technology
  - 1.2. Type of mixtures
  - 1.3. Surfacing denomination
2. Application area of surfacing
  - 2.1. Determination base data for using it in the national road network
  - 2.2. Special conditions of using surfacing in the national road network
3. Design requirements
  - 3.1. General requirements
  - 3.2. Building in material quantities
  - 3.3. Useable base materials for mixture producing
  - 3.4. Design requirements of mixture types
4. Quality requirements
  - 4.1. Quality requirements of mixtures
  - 4.2. Quality requirements of building
  - 4.3. Quality requirements of ready surfacing
  - 4.4. Determination of the degree of quality decreasing
5. Measurements, tests
  - 5.1. Measurements
  - 5.2. Tests

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**ÚT 2-3.316:2001**

**Continuous Determination of Pavement Hardness by PTS  
Measurement**

Pavement hardness determination and evaluation with quasi-dynamic measuring with a special mobile equipment.

**Contents**

1. Conditions of use
2. Abstracts
3. Testing equipment
  - 3.1. Parts of equipment
  - 3.2. Accessories
4. Test procedure
  - 4.1. Test preparation
  - 4.2. Carry out of test
  - 4.3. Computer measuring program
5. Test results
  - 5.1. Calculation of test results
  - 5.2. Contents of test report
6. Traffic safety requirements

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**ÚT 2-3.317:2002**

**Determination of maximum density using the method of metal pycnometer.**

Maximum density determination of loose bituminous mixtures or pavement layer's bituminous mixtures, using metal specific gravity bottle method.

**Contents**

1. Abstracts
2. Base principle of test method
3. Test apparatus
4. Prepare of test specimen
  - 4.1. Preparation of loose bituminous mixture
  - 4.2. Preparation of core sample
5. Test method
  - 5.1. Determination of specific gravity bottle volume
  - 5.2. Mass and volume determination of asphalt sample
6. Test result calculation
7. Test repeatability and reproducibility
  - 7.1. Repeatability
  - 7.2. Reproducibility

Pages: 10

Spans as a part of highways: bridge, culvert, protecting pipe, public utility channel, manhole, retaining wall, traffic sign supporting beam designing.

### Contents

- I. General regulation of bridge design
  - 1. General regulations
  - 2. General design requirements
    - 2.1. Base data of design
    - 2.2. Plan types
    - 2.3. Approval of building plan
  - 3. General arrangement and sizes of highway bridges
    - 3.1. Location of bridge supporting
    - 3.2. Chose of structural system
    - 3.3. Clearance above the bridge deck
    - 3.4. Clearance below the bridge
    - 3.5. Building water level
  - 4. General rules of geometry
    - 4.1. Substructures
    - 4.2. Saddles and beams
    - 4.3. Bridge dilatations and joints
    - 4.4. Bridge pavements
    - 4.5. Protecting the curb
    - 4.6. Rails, noise barrier, bird protection
    - 4.7. Water insulation and drainage
    - 4.8. Public utility pipes
    - 4.9. Protection of concrete or reinforced concrete overpass on electrified railway line
    - 4.10. Bridge lighting
    - 4.11. Lightning rod, protective grounding
    - 4.12. Accessibility of bridges and structural elements
- II. Static calculation of bridges
  - 1. Main principle of static calculation
  - 2. Loads and effects
    - 2.1. Constant or long lasting loads and effects
    - 2.2. Variable loads and effects
    - 2.3. Service loads
    - 2.4. Ultimate load for fatigue
    - 2.5. Extreme loads
  - 3. Static requirements
    - 3.1. General requirements
    - 3.2. Verification of load bearing
    - 3.3. Fatigue test
    - 3.4. Check of cracking limiting
    - 3.5. Stability check
    - 3.6. Deformation check
    - 3.7. Building states check
    - 3.8. Grouping of load for ultimate state
  - 4. Other requirements
    - 4.1. Super elevation balancing the substructure deflection
    - 4.2. Scaffolding super elevation
    - 4.3. Super elevation balancing the support deflections
- III. Design of steel highway bridges
  - 1. Materials
    - 1.1. Structural steels
    - 1.2. Wrought iron parts
    - 1.3. Casts
    - 1.4. Welding joint
    - 1.5. Stressing bolts
    - 1.6. Rivets
    - 1.7. Bolts
    - 1.8. Artificial rubber, teflon
    - 1.9. Other materials
  - 2. Load forces and effects, material properties
    - 2.1. Load forces and effects
    - 2.2. Material properties
  - 3. Static calculation bases
    - 3.1. Span and network
    - 3.2. Cross-section sizes
  - 4. Verification of load bearing
  - 5. Fatigue test
  - 6. Geometric rules
    - 6.1. General geometric rules
    - 6.2. General rules of formation of welded structures
    - 6.3. Detailed geometric rules

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#### IV. Design of concrete, reinforced concrete and pre-stressed reinforced concrete bridges

1. Materials
2. Loading movement and deflection taken into account in static calculation
3. Dimensions and assumptions taken into account in static calculation
4. Load bearing verification
  - 4.1. Load bearing requirements
  - 4.2. Checking based on upper limit load
  - 4.3. Checking based on allowable stress
  - 4.4. Checking of concrete and light reinforced concrete
  - 4.5. Checking of pre-stressed reinforced concrete
  - 4.6. Rigid reinforced structure
5. Other requirements for static calculation
  - 5.1. Fatigue test
  - 5.2. Crack limiting
  - 5.3. Checking of deformations
6. Geometric rules

#### V. Design of composite highway bridges

1. Materials
  - 1.1. Concrete
  - 1.2. Steel
  - 1.3. Steel bar
  - 1.4. Shafts and spirals
  - 1.5. Laying mortar
  - 1.6. Flexible sealing
2. General design regulations
3. Loading forces, effects and deflections taken into account in static calculation
  - 3.1. Loading forces, effects
  - 3.2. Deformation properties
4. Dimensions and assumptions taken into account in static calculation
  - 4.1. Span and network
  - 4.2. Effective width of slab, stress distribution
  - 4.3. Base assumption useable in static calculation
5. Load bearing verification
6. Other requirements

#### VI. Wood highway bridges

1. Materials
  - 1.1. Woods
  - 1.2. Joint structures materials
  - 1.3. Protecting materials
2. Loading forces, effects and deflections taken into account in static calculation
3. Dimensions and assumptions taken into account in static calculation
4. Load bearing verification
  - 4.1. Ultimate loading
  - 4.2. Limit loading
  - 4.3. Limit stresses
5. Other requirements for static calculation
  - 5.1. Checking of deformation
6. Geometric rules

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**ÚT 2-3.411:2004**

**Design Specifications of Highway Bridges 1. General Rules  
for Accomplishment**

General rules of highway bridges erection.

**Contents**

1. Types of plans, their aims and contents
2. Accessibility of bridges and accessories
  - 2.1. Approach road
  - 2.2. Entries
  - 2.3. Anchoring
  - 2.4. Requirements of entry, gates and covering
  - 2.5. Clearance for checking and maintenance
  - 2.6. Passable caves accessories
  - 2.7. Tools for check and maintenance work
  - 2.8. Requirements of mobile tools linked to bridges for check and maintenance works

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**ÚT 2-3.412:2004**

**Design Specifications of Highway Bridges 2. Structural  
Analysis**

Static calculation of highway bridges.

**Contents**

1. Earth load and earth stress taken into consideration in load of pipe and frame
2. Vehicle load distribution by wheel mass
3. Urban tram loads
4. Vehicle loads for determination of existing bridges load bearing
5. Vertical loads by Standard No. MSZ ENV 1991-3

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Design of highway steel bridges.

### Contents

1. Material selection for welded steel structures
  - 1.1. Base principle of selection
  - 1.2. Chose the steel quality
2. Orthotropic slab structures
  - 2.1. The frame's working cross-section
  - 2.2. The twist effect taken into consideration
  - 2.3. Load bearing test of orthotropic slabs
  - 2.4. Effective width working together with rib
3. Stability tests
  - 3.1. Centred press stud
  - 3.2. Eccentric press stud
  - 3.3. Arch buckling
  - 3.4. Side rigidity
  - 3.5. Buckling test of bended structures
  - 3.6. Stability test of orthotropic slabs
  - 3.7. The possibility of buckling taken into consideration
4. Cables of suspended and pres-stressed steel bridges
  - 4.1. High strength cables and accessories
  - 4.2. Materials
  - 4.3. General requirements
  - 4.4. Statically dimensioning of suspended and pres-stressed cable structures
  - 4.5. Fatigue
  - 4.6. Vibrations caused by wind
  - 4.7. Corrosion protecting
5. Fatigue
  - 5.1. Fatigue test base principle, ultimate fatigue loading
  - 5.2. Fatigue test
6. Geometric form rules
  - 6.1. Structures
  - 6.2. Structure elements and joints
  - 6.3. Saddles

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Design regulation of concrete, reinforced concrete and pre-stressed reinforced concrete bridges.

### Contents

1. Materials
  - 1.1. General requirements
  - 1.2. Steels
  - 1.3. Binders
  - 1.4. Aggregates
  - 1.5. Admixtures
  - 1.6. Concretes
  - 1.7. The grout material
  - 1.8. Concrete method statement
2. Loading movement, deformations taken into account in the static calculation
  - 2.1. Shrinkage
  - 2.2. Creep
  - 2.3. Steel material's resilience modulus
  - 2.4. Concrete resilience and deformation modulus
  - 2.5. tri-axial stress
  - 2.6. Calculation of deformation
  - 2.7. Stress loss of pre-stressed reinforced concrete
  - 2.8. Working together of different aged or different strength ranked concrete
3. Dimensions and assumptions using in static calculation
  - 3.1. Span
  - 3.2. The effective height of beam
  - 3.3. Cross-section of T-beam
  - 3.4. Slabs
  - 3.5. Beam structures
  - 3.6. Columns, cross-sections
  - 3.7. Arch structures
  - 3.8. Swivels and structural beams
  - 3.9. Special requirements of pre-stressed reinforced concrete
4. Verification of load bearing requirements
  - 4.1. Load bearing requirements
  - 4.2. Axial loadings
  - 4.3. Tangential loadings
  - 4.4. Local loadings
  - 4.5. Surfacing bond
  - 4.6. Test based on allowable stress
  - 4.7. Test of concrete and light reinforced concrete
  - 4.8. Test of pre-stressed reinforced concrete
5. Other requirements of static calculation
  - 5.1. Fatigue test
  - 5.2. Pre-stressed reinforced concrete tests in different phases of construction
  - 5.3. Crack limiting
  - 5.4. Deformation check
  - 5.5. Preventing the rigid break
6. Geometric design rules
  - 6.1. Protecting reinforced concrete structures
  - 6.2. Reinforcing steel bar
  - 6.3. Slab
  - 6.4. Beam
  - 6.5. Column
  - 6.6. Saddles, swivels and structural beams
  - 6.7. Desk joints
  - 6.8. Drag bar
  - 6.9. Prefabricated structure elements
  - 6.10. Other special requirements of pre-stressed reinforced concrete
  - 6.11. Structure with rigid reinforcing steel bar

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Detailed design regulation of highway composite bridges.

**Contents**

- 1. Monolith reinforced concrete slab
  - 1.1. The minimum thickness of reinforced concrete slab
  - 1.2. Bidirectional reinforced slab
  - 1.3. Slab with longitudinal reinforcement strutting pre-stressed
- 2. Prefabricated reinforced concrete slab
  - 2.1. Seat of prefabricated reinforced concrete slab
  - 2.2. Connection between prefabricated reinforced concrete slabs
- 3. Steel structure
- 4. Joint elements
  - 4.1. Teeth
  - 4.2. Shafts
- 5. Verification of load bearing
  - 5.1. Test of composite frame
  - 5.2. Test of connecting joint
  - 5.3. Slab check

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Building requirements of concrete, reinforced concrete structural parts of highway bridges and other engineering structures (culverts, retaining walls etc.).

### Contents

1. General requirements
- 1.1. Base conditions of construction
- 1.2. Quality assurance
2. The concrete
- 2.1. Base materials of concrete
- 2.2. Concrete mixture design
- 2.3. Concrete mixture manufacturing
- 2.4. Concrete qualifying
3. Reinforcing steel bars
- 3.1. Steel bars in concrete
- 3.2. Materials
- 3.3. Rigid steel bars
4. Grout mortars
- 4.1. Materials of grout mortars
- 4.2. Test of grout mortar
5. Building of concrete, reinforced concrete structure
- 5.1. Scaffolding and blinds
- 5.2. Workspace storage, processing and build in of reinforcement steel bars
- 5.3. Concrete building in and curing
- 5.4. Scaffold removal and stripping
- 5.5. Concrete surfacing repair
6. Requirements of pre-stressed structures
- 6.1. General requirements
- 6.2. Steel wires, hasps
- 6.3. Injection
- 6.4. Prestressing bars
- 6.5. Skid cable system
7. Requirements of prefabricated structures
- 7.1. General requirements
- 7.2. Materials of prefabricated concrete structures
- 7.3. Manufacturing, lifting and storage
- 7.4. Handover conditions of pre-stressed bridge beams
- 7.5. Transport, storage
- 7.6. Building in
8. Requirements of structures with rigid reinforcing elements
9. The ready structure handover and qualifying
- 9.1. General rules of checking
- 9.2. Requirements independent from quality level
- 9.3. Requirements dependent on quality level
- 9.4. Qualifying

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Producing and assemble requirements of steel or other material bridges under the scope of Regulation No. ÚT 2-3.401 "Highway bridge design", including steel structural parts of any other bridges.

**Contents**

1. General requirements
  - 1.1. Design documentation
  - 1.2. Plan review and modification
  - 1.3. Producing and assemble processes
  - 1.4. Site diary
  - 1.5. The constructor
  - 1.6. Test laboratories, experts
  - 1.7. The building process supervision
  - 1.8. Construction
2. Materials
3. Manufacturing
  - 3.1. General manufacturing requirements
  - 3.2. Manufacturing assemble
  - 3.3. Shape and dimension tolerances
  - 3.4. Corrections
4. Assembling
5. Welded joints
  - 5.1. Person responsible for welding
  - 5.2. Welding plan
  - 5.3. Pre-test of the method statement
  - 5.4. Obtuse angle welding
  - 5.5. Corner joint
  - 5.6. Welders
  - 5.7. Welding
  - 5.8. Level
6. Pre-stressed bolt joints
7. Rivet and bolt joints
  - 7.1. General requirements of rivet joints
  - 7.2. General requirements of bolt joints
  - 7.3. Tolerances
8. Tests
  - 8.1. Materials
  - 8.2. Check of manufacturing shape and sizes
  - 8.3. Assembling shape check
  - 8.4. Test of welded joints
  - 8.5. Test of prestressed bolt joints
  - 8.6. Test of riveting and bolt joints
  - 8.7. Trial load
  - 8.8. Evaluating
9. Qualifying

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**ÚT 2-3.405:2003**

**Road Bridge Construction 3. Building of the Wooden Bridges  
and Scaffoldings**

Construction requirements of temporary or persistent bridges made from wood totally or partially. Requirements of assembling, concreting or other work scaffoldings and starlings functioning as engineering structures.

**Contents**

- 1. Conditions of building
  - 1.1. Wooden bridges building conditions
  - 1.2. Scaffoldings general building conditions
  - 1.3. Materials
- 2. Building requirements
  - 2.1. Wooden bridges construction
  - 2.2. Bridge scaffolding construction
- 3. Quality check
  - 3.1. Qualifying of wooden bridges
  - 3.2. Qualifying of bridge scaffolding

Pages: 14

Protecting the curbs, pedestrian paths and desk of bridges against the water and salt. Protecting with insulation and the desk or pedestrian path pavements with asphalt.

## Contents

1. Abstracts
- 1.1. Bridge deck
- 1.2. Insulation system
- 1.3. Pavement system
- 1.4. Deck drainage
- 1.5. Sealing strip
- 1.6. Joint
- 1.7. Joint filling material
- 1.8. Sand depth
- 1.9. Test
- 1.10. Application technology
- 1.11. Manufacturing technology
- 1.12. Building technology
2. Design base principles
- 2.1. General principles
- 2.2. Design principles of bridge deck insulation system
- 2.3. Design of bridge deck pavement
- 2.4. Design of bridge deck pavement and insulation
3. General requirements
- 3.1. Insulation making conditions
- 3.2. Skill and routine
- 3.3. General requirements of bridge deck
- 3.4. General requirements of insulation system
- 3.5. General requirements of pavement system
- 3.6. Edge and joint making
- 3.7. General requirements of pedestrian or bicycle paths and bridge curbs
- 3.8. Drainage
- 3.9. Bridge accessories built in
4. Construction materials
- 4.1. General requirements
- 4.2. Foundation materials
- 4.3. Tack coat bitumen
- 4.4. Normal insulating paper with bitumen
- 4.5. Cement insulation improved by polymer
- 4.6. Mastic insulation
- 4.7. Modified bitumen insulation
- 4.8. Insulating paper with modified bitumen
- 4.9. Flexible polymer insulation
- 4.10. Mixtures of protecting asphalt and asphalt concrete
- 4.11. Joint sealing compound, sealing stripes with bitumen
5. Construction
- 5.1. General requirements of construction
- 5.2. Concrete surface building and foundation
- 5.3. Sticking with bitumen
- 5.4. Insulation
- 5.5. Special protecting layer
- 5.6. Protecting asphalt layer
- 5.7. Binder and wearing courses
- 5.8. Joints in the protecting layer or pavement layers
- 5.9. Bridge accessories built in
6. Joint part of insulation and pavements layers to bridge structure elements or to bridge accessories
- 6.1. Bridge curb or pedestrian curb detail parts
- 6.2. Joining to gully
- 6.3. Joining to dilatation structure
- 6.4. Crossing the hidden dilatation structure
- 6.5. Crossing the immobile saddle joint
- 6.6. Crossing the fake continuous structure
- 6.7. Joining parts of bridge and road pavement
- 6.8. Design of drain system of bridge pavement
7. Test
- 7.1. Needed tests
- 7.2. Base tests
- 7.3. Suitability tests
- 7.4. Tests in manufacturing and building
- 7.5. Qualifying documents
- 7.6. Comparing tests

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- 7.7. Test methods
  - 8. Qualifying, warrant
  - 9. Labour safety and fire service requirements

Pages: 67

Protecting the curbs, pedestrian paths and desk of bridges against the water and salt. Protecting with insulation and the desk or pedestrian path pavements with asphalt.

### Contents

1. Abstracts
- 1.1. The bridge deck and the insulation system
- 1.2. Adherence protecting element
- 1.3. Strengthening disc
- 1.4. Adherence protecting element with drain ability
2. Conditions of building insulate
- 2.1. Using of bituminous paper
- 2.2. Location of bridge accessories
- 2.3. Making the surface of receiving layer for bridge deck
- 2.4. Weather conditions
- 2.5. Preconditions of starting insulation work
3. The insulation materials, qualifying, transporting and storage
- 3.1.
- 3.2. Epoxide ground coat
- 3.3. Tack bitumen
- 3.4. Bituminous papers
- 3.5. Other materials
4. Layer structure building principles
- 4.1. Layers of insulation and pavement
- 4.2. Location of adherence protecting element with drain ability
5. Insulation building
- 5.1. General regulations
- 5.2. Insulation on pedestrian track and on the lane next to it
- 5.3. Insulation under pedestrian concrete
- 5.4. Insulation in case of curb
- 5.5. Insulation joining to gully with upper inlet
- 5.6. Insulation in the environment of dilatation structure
- 5.7. Bridge insulation at the end of superstructure
- 5.8. Insulation joining to lighting column or pylons
- 5.9. Insulation joining to manhole in pedestrian path
6. Repairing of Damages during work process
7. Checking, qualifying
- 7.1. Product storage and preparation
- 7.2. Working
- 7.3. The ready insulation
- 7.4. Qualifying
8. Protecting the ready insulation
9. Servicing, resurrection
- 9.1. Servicing
- 9.2. Resurrection
10. Labour safety and fire service

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Concrete corrosion test of concrete, reinforced concrete and stressed reinforced concrete bridges and other engineering structures. Test of carbonization, chloride penetration depth and chloride content.

### **Contents**

1. General requirements
- 1.1. Application area of concrete corrosion tests
2. Conditions of test carry out
- 2.1. Site tests
- 2.2. The necessary chemicals
- 2.3. Measuring solutions
- 2.4. Result precisions
3. Sampling
- 3.1. Sampling tools
- 3.2. Assignment of sampling locations
- 3.3. Sampling methods
- 3.4. Sampling report
4. Test specimens preparation
5. Tests carry out
- 5.1. Test of carbonization
- 5.2. Determination of chloride penetration depth
- 5.3. Site test of chloride content with Quantab method
- 5.4. Water solvent chloride content determination of concrete, mortar or its components with direct potentiometrical method
- 5.5. Chloride ion concentration determination with using 0,1 mol/l silver nitrate solution with potentiometrical endpoint signal
6. Test report
- 6.1. Result expression of site tests
- 6.2. Laboratory tests

Pages: 18

Design regulations, building requirements of waterproof insulation and pavement systems. Joint solutions of waterproof and pavement and its quality requirements in case of resin based insulation layers.

**Contents**

1. Abstracts
- 1.1. Steel bridge deck
- 1.2. Waterproof insulation system
- 1.3. Asphalt pavement system
2. Design principles of waterproof insulation and pavement system
3. General requirements
  - 3.1. General requirements related to steel bridge waterproof and pavement building works
  - 3.2. General requirements of steel bridge deck
  - 3.3. General requirements of insulation system
  - 3.4. General requirements of pavement structure
4. Detail requirements
  - 4.1. Steel bridge deck
  - 4.2. Sprayed or painted resin based insulation
  - 4.3. Protecting asphalt
  - 4.4. Insulation system
  - 4.5. Wearing course
  - 4.6. Joint sealing compounds, bituminous sealant stripes
5. Joining of insulation and pavement system
  - 5.1. Insulation joining to curb
  - 5.2. Joint filling system joining to curb
  - 5.3. Insulation system joining to gullies
  - 5.4. Pavement system joining to gullies
  - 5.5. Insulation system joining to dilatation structure
  - 5.6. Pavement system joining to dilatation structure
  - 5.7. Joining to other assemblies
  - 5.8. Joining to environment of structure recess
  - 5.9. Joining to tram railway track
6. Quality assurance, tests
  - 6.1. Base tests
  - 6.2. Preparation works and tests
  - 6.3. Material sampling and tests
  - 6.4. Process control and check
  - 6.5. Tests for verification of suitability
  - 6.6. Comparing tests
  - 6.7. Other tests
  - 6.8. Test methods
7. Qualifying
8. Labour safety and fire service

Pages: 41

Working pit building, supporting and drainage at bridge construction.

**Contents**

- 1. Design documentation of working pit
- 2. Drainage
  - 2.1. General requirements
  - 2.2. Dewatering
  - 2.3. Soil water level decrease
- 3. Limitation of the open working pit
  - 3.1. Slope limitation of working pit
  - 3.2. Working pit limitation with shotcrete and soil anchoring
  - 3.3. Working pit shoring
  - 3.4. Working pit limitation with sheet pile wall
  - 3.5. Slot wall foundation building
  - 3.6. Round dam building
  - 3.7. Jet-grouting
- 4. Concrete work under water
  - 4.1. Description of the method
  - 4.2. Application area
  - 4.3. Designing
  - 4.4. Building
  - 4.5. Check
  - 4.6. Handover

Pages: 18

Highway bridge foundation construction with.

### Contents

1. Foundation methods
2. Flat foundation
  - 2.1. Description of method
  - 2.2. Application area
  - 2.3. Design
  - 2.4. Construction
  - 2.5. Checking
  - 2.6. Handover
3. Driven pile foundation
  - 3.1. Prefabricated driven concrete pile
  - 3.2. Wood piles
  - 3.3. Steel pipes and profiles
  - 3.4. Piles made with soil extrusion
4. Drilled piles
  - 4.1. Piles with supported holes
  - 4.2. CFA type piles
5. Other deep foundations built with special technology
  - 5.1. Jet-grouting
  - 5.2. Well and frame foundations
6. Trial loads and other tests
  - 6.1. Static trial load
  - 6.2. Dynamic trial load
  - 6.3. statnamicly trial load
  - 6.4. Trial load with divided pile
  - 6.5. Seismically integrity test

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**ÚT 2-3.501:1984**

**Viscosity Determination of Road Bitumen by Rotational  
Viscosi-meter**

Dynamic viscosity determination of road bitumen's in different temperatures and shear speed with rotation functioning Remotest RV-2 viscosimeter. Cinematic viscosity calculation.

**Contents**

1. Abstracts
2. Test principle
3. Test apparatus and chemicals
4. Sample preparation
5. Test method description
6. Test result calculation
7. Test result expression
8. Test report

Pages: 12

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## **ÚT 2-3.502:2002      Modified Bitumen**

Requirements of modified bitumen for road building and maintenance.

### **Contents**

1. Abstract
2. Products types
3. Quality requirements
4. Sampling
5. Denomination
6. Pack, transport, storage and marking

Pages: 10

Elastic recovery test method of modified bitumen.

**Contents**

1. Abstract
2. Base test principle
3. Test apparatus
  - 3.1. Ductilometer
  - 3.2. Knockdown mould
  - 3.3. Thermometer
  - 3.4. Spatula
  - 3.5. Ultrathermostat
  - 3.6. Parting agent materials
  - 3.7. Bathing liquid
4. Test
  - 4.1. Test preparation
  - 4.2. Test carry out
  - 4.3. Calculation of test results
  - 4.4. Test tolerance

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## **ÚT 2-3.504:2002      Cationic Bitumen Emulsions. Requirements**

Requirements of cationic bitumen emulsion for road building and maintenance

### **Contents**

1. Application area
2. Product types denomination and marking
  - 2.1. Bitumen emulsion types by breaking time
  - 2.2. Bitumen emulsion types by emulsion manufacturing technology
  - 2.3. Bitumen emulsion types by bitumen content
  - 2.4. Bitumen emulsion types by bitumen type in manufacturing
  - 2.5. Denomination
  - 2.6. Marking
3. Requirements
4. Storage and transport

Pages: 10

Cationic bitumen emulsion tests introduction:

Bitumen content, viscosity with tar viscosimeter, retained fraction test, storage time test, breaking time test and adhesiveness test.

### Contents

1. Abstracts
2. Determination of bitumen content of cationic bitumen emulsion
  - 2.1. Dean–Starke distillation method
  - 2.2. Method of mass loss
3. Viscosity of cationic bitumen emulsion determined with tar viscosimeter
  - 3.1. Method principle
  - 3.2. Sampling
  - 3.3. Tools and materials
  - 3.4. Preparation of the specimen
  - 3.5. Preparation of the apparatus
  - 3.6. Test method
  - 3.7. Result calculation
  - 3.8. Test precision
  - 3.9. Test report
4. Retained fraction determination of cationic bitumen emulsion
  - 4.1. Test principle
  - 4.2. Sampling
  - 4.3. Tools and materials
  - 4.4. Test method
  - 4.5. Test carry out
  - 4.6. Result calculation
  - 4.7. Test precision
  - 4.8. Test report
5. Storage time determination of cationic bitumen emulsion
  - 5.1. Test principle
  - 5.2. Sampling
  - 5.3. Tools and materials
  - 5.4. Test method
  - 5.5. Result calculation
  - 5.6. Test precision
  - 5.7. Test report
6. Breaking time determination of cationic bitumen emulsion
  - 6.1. Test principle
  - 6.2. Sampling
  - 6.3. Tools and materials
  - 6.4. Test preparation
  - 6.5. Test method
  - 6.6. The result
  - 6.7. Test precision
  - 6.8. Test report
7. Laboratory adhesiveness test of cationic bitumen emulsion
  - 7.1. Test principle
  - 7.2. Sampling
  - 7.3. Tools and materials
  - 7.4. Test preparation
  - 7.5. Test method
  - 7.6. Test result expression
  - 7.7. Test precision
  - 7.8. Test report
8. pH test of cationic bitumen emulsion
9. Bitumen content determination of bitumen emulsion

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## **ÚT 2-3.506:2002      Cold Patching Materials**

Design of cold patching mixture, which can be used after a certain storage time in low weather temperature. Manufacturing, building in and qualifying.

### **Contents**

- 1. Conditions of use
  - 1.1. Usability dependent on pavement type and the way of pothole work
  - 1.2. Conditions of use and storage
- 2. Abstracts
  - 2.1. Pothole
  - 2.2. Pothole work
  - 2.3. Temporary pothole
  - 2.4. Long term pothole
  - 2.5. Post compacted pavement
  - 2.6. Non post compacted pavement
  - 2.7. Pothole mixtures with special binder
  - 2.8. Annual average daily traffic
  - 2.9.
  - 2.10. Sealing coat
- 3. General requirements
  - 3.1. Design and requirement
  - 3.2. Storage
  - 3.3. Turning over
  - 3.4. Building in
- 4. Professional requirements
  - 4.1. General requirements
  - 4.2. Quality requirements

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Road base Building Crushed Stone and Gravel Materials physical tests, clarity requirements and quality order.

**Contents**

1. Abstracts
2. Quality requirements and categorization
  - 2.1. Physical requirements of stone
  - 2.2. Grading structure requirements
  - 2.3. Clarity requirements
3. Sampling
4. Tests
  - 4.1. Test of stone physical requirement exist
  - 4.2. Particle size analysis
  - 4.3. Clarity test
5. Qualifying
  - 5.1. General aspects of qualifying
  - 5.2. Qualifying in aspects of stone physical properties
  - 5.3. Qualifying in aspects of particle size
  - 5.4. Qualifying in aspects of clarity
  - 5.5. Quality documentation
6. Denomination
  - 6.1. General aspects of denomination
  - 6.2. Crushed stone denomination
  - 6.3. Crushed material denomination
  - 6.4. Special grading individually designed crushed material denomination
7. Storage, stowage, transport

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**ÚT 2-3.602:1989**

**Mineral Filler for Asphalted Mixtures**

Requirements of filter material for bituminous mixture, tests and qualifying.

**Contents**

1. Abstracts
2. Quality requirements
3. Tests
4. Sampling
5. Qualifying

Pages: 6

Fly ash and slurry ash tests, having suitable grading, pouzzolanic properties, homogenous composite and satisfying the chemistry and physical requirements.

### Contents

- 1. Conditions of use
  - 1.1. General conditions
  - 1.2. Environmental conditions
- 2. Abstracts
  - 2.1. Pouzzolanes
  - 2.2. Ash
  - 2.3. Acid type ash
  - 2.4. Alkaline type ash
  - 2.5. Treated ash
  - 2.6. Slurry ash
  - 2.7. Active lime donors
  - 2.8. Dry ash
  - 2.9. Product types
- 3. Chemistry requirements
- 4. Physical requirements
- 5. Pouzzolane requirements
- 6. Sampling
  - 6.1. Sampling before transport
  - 6.2. Sampling from batch
  - 6.3. Type examination
  - 6.4. Batch test
- 7. Transport, storage
  - 7.1. Power station ash transport
  - 7.2. Power station ash storage
  - 7.3. Power station ash denomination
- 8. Chemical test
  - 8.1. Sampling preparation
  - 8.2. Active lime content determination
  - 8.3. Active CaO content determination of lime donor liquids
- 9. Physical tests
  - 9.1. Relative surface determination
  - 9.2. Density and bulk density determination
- 10. Pouzzolane tests
  - 10.1. Pouzzolane activity tests
  - 10.2. Strength determination of pouzzolane mixture
  - 10.3. Pasty bodies volume changing determination

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Joint sealants for planned joints or cracking on road.

**Contents**

1. Application area
2. Abstracts
3. Types and classification of joint sealing compounds
  - 3.1. Types of joint sealing compounds
  - 3.2. Classification of joint sealing compounds
4. Requirements
  - 4.1. Density
  - 4.2. Softening point test
  - 4.3. Penetration
  - 4.4. Liquidation
  - 4.5. Overheat resistant ability test
  - 4.6. Deformation ability
  - 4.7. Flexible shape preserve
  - 4.8. Fuel resistant ability
5. Sampling
6. Product testify

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**ÚT 2-3.702:1990**

**Quality Requirements and Tests of Concrete Curing  
Materials for Road Bridges**

Quality requirements and test methods of vapour proof curing compounds for road and bridge concrete.

**Contents**

1. Abstracts
2. General requirements
3. Quality requirements
  - 3.1. Density
  - 3.2. Viscosity
  - 3.3. Drying time
  - 3.4. Flashing point
  - 3.5. Vapour proof ability
  - 3.6. Roughness
4. Sampling
5. Test
  - 5.1. Density test
  - 5.2. Viscosity measuring with consistometer
  - 5.3. Drying time test
  - 5.4. Flashing point test
  - 5.5. Vapour proof ability test
  - 5.6. Roughness test
6. Qualifying
7. Marking

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**ÚT 2-3.703:1999**

**Laboratory Tests of Adhesivity, Parallel to Surface of  
Insulating Materials of Road Bridges**

Laboratory test of adhesive strength of insulations parallel to bridge surface of concrete bridge deck.

**Contents**

1. Test principle
2. Abstracts
3. Test apparatus
  - 3.1. Press machine
  - 3.2. Displaying equipment
  - 3.3. Calliper
  - 3.4. Scale
4. Sampling preparation for test
  - 4.1. Bituminous paper insulation
  - 4.2. Insulation materials from resin, bitumen and cement
5. Specimen making
6. Carry out of test
7. Test result
  - 7.1. Maximum shear force
  - 7.2. Adhesive strength parallel to the surface
8. Test repeatability and reproducibility

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**ÚT 2-3.704:1999**

## **Laboratory Tests of Heat Enduring Capability of Insulating Materials Applying on Road Bridges**

Laboratory test for heat enduring capability of Insulating materials applied on road bridges with concrete slabs.

### **Contents**

1. Abstracts
2. Test apparatus
  - 2.1. Drying oven and frost chamber
  - 2.2. Pulling machine
  - 2.3. Bending form
  - 2.4. Permittivity test equipment
3. Sampling and specimen making
  - 3.1. Insulating material from bituminous paper
  - 3.2. Insulation material from resin and cement
4. Sampling storage
  - 4.1. Heat endurance during fabrication
  - 4.2. Periodical heat changing endurance
5. Specimen making
6. Carry out of test
  - 6.1. Visual inspection
  - 6.2. Maximum pulling force and maximum deformation
  - 6.3. Bending in low temperature
  - 6.4. Permittivity
7. Test result expression
  - 7.1. Maximum tension force and maximum deformation
  - 7.2. Ability to bend in low temperature
  - 7.3. Water permeability
8. Evaluation of heat enduring ability

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**ÚT 2-3.705:1999**

**Laboratory Tests of Insulating Systems Applying on Road  
Bridges with Concrete Superstructures. Test of Heat  
Enduring Capability**

Laboratory test of heat enduring capability of insulation system applied on concrete slab road bridges.

**Contents**

1. Abstracts
2. Test apparatus
  - 2.1. Drying oven and frost chamber
  - 2.2. Ripping machine
  - 2.3. Shear strength test machine
  - 2.4. Water permittivity test apparatus
3. Sampling and specimen making
  - 3.1. Sampling
  - 3.2. Specimen making
4. Specimen storage and preparation
5. Tests
  - 5.1. Visual inspection
  - 5.2. Adhesive strength perpendicular to surface
  - 5.3. Adhesive strength parallel to surface
  - 5.4. Water permissibility test
6. Test results
  - 6.1. Adhesive strength perpendicular to surface
  - 6.2. Adhesive strength parallel to surface
  - 6.3. Water permittivity
7. Evaluation of heat enduring ability

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Demolished road material useable for road building or strengthening and related works.  
Determination of use condition for demolished materials.

### Contents

1. Base principles
2. Abstracts
3. Design issues
  - 3.1. Preliminary information
  - 3.2. Demolishing and utilization plan
4. Types and classification of demolished road materials
  - 4.1. Classification of demolished materials
  - 4.2. Demolished asphalt
  - 4.3. Demolished concrete
  - 4.4. Other demolished and mixed materials
5. Cases of utilization of demolished road materials
6. Demolishing
  - 6.1. General requirements
  - 6.2. Checking and tests
7. Treating and test of demolished road materials
  - 7.1. Test of demolished road materials
  - 7.2. Immediate remix at the site of demolishing workspace
  - 7.3. Remix after storage at the site of demolishing workspace
  - 7.4. Demolished materials not used at the site of demolishing workspace
8. Demolished materials storage
9. Reuse and utilization of demolished road materials
  - 9.1. General requirement
  - 9.2. Utilization of demolished asphalt, secondary reuse
  - 9.3. Utilization of demolished concrete, secondary reuse
  - 9.4. Utilization of other demolished materials, secondary reuse
1. Appendix. Waste material register use
2. Appendix. Waste material management base principles
  - 2.1. General rules of waste material management
  - 2.2. Obligations of the owner and creator of waste materials
  - 2.3. Waste management
  - 2.4. Waste utilization
  - 2.5. Dangerous waste material

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## **ÚT 2-1.131/1M:2004 Public Road Signs. Direction and Route Indication Signs and Their Symbols**

Road Technical Regulation No. ÚT 2-1.131:2002 has to be supplemented with pages 5 to 42 of this modification.

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## **ÚT 2-1.157/1M:2004 Public Road Signs. Planning, Applying and Placing of Direction Signs**

Road Technical Regulation No. ÚT 2-1.157:2002 has to be modified with written in Modification No.1 and Supplementation No. 2.

### **Contents**

- 1. Modification register
- 17. Place name road sign
- 19. Individual allusive signs
- 32. Signs leading to motorway
- 2. Supplementation register

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## **ÚT 2-1.125/1M:2004 Public Road Signs. Warning Signs and Their Symbols**

In the pages 10 and 59 of Road Technical Regulation No. ÚT 2.1.125:2001, the "Wild animals" should be changed to "Animals loose living".

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## **ÚT 2-1.129/1M:2004 Public Road Signs. Special Regulation Signs and Their Symbols**

Road Technical Regulation No. ÚT 2-1.129:2001 has to be supplemented after page 122 with pages 5 to 14 of this modification.

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## **ÚT 2-1.130/1M:2004 Public Road Signs. Informatory Signs and Their Symbols**

Road Technical Regulation No. ÚT 2-1.130:2001 has to be supplemented after page 72 with pages 5 to 16 of this modification.

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## **ÚT 2-1.132/2M:2004 Public Road Signs. Additional Panels and Their Symbols**

Road Technical Regulation No. ÚT 2-1.132:2001 has to be supplemented after Modification No. 1 with pages 5 to 30 of this modification.

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**ÚT 1-1.160:2004**

**Public Road Signs. Planning, Applying and Placing of the Signs**

Appendix of 83/2004. (VI. 4.) GKM decree of Economic and Transportation Ministry

**Contents**

I. Chapter: Generals  
II. Warning signs  
III. Priority signs  
IV. Prohibitory signs  
V. Instruction signs  
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