



C.P. 16 – 162, 062510 – BUCUREȘTI

tel. 021.4113617, fax 021.4114280

e-mail: office@matrixrom.ro, www.matrixrom.ro

Construction machines

Cuprins

- 1 INTRODUCTION
 - 1.1 SUBJECT OF THE COURSE
 - 1.2 MAIN COMPETENCES OBTAINED AFTER THE COURSE COMPLETION
 - 1.3 GENERAL CLASSIFICATION OF THE CONSTRUCTION MACHINES – STAS 4184-85
- 2 GENERAL INFORMATION
 - 2.1 TYPES OF DRIVES
 - 2.2 EXERCISES
- 3 EXCAVATORS
 - 3.1 DEFINITION
 - 3.2 CLASSIFICATION
 - 3.3 FIELD OF USE
 - 3.4 MINI HYDRAULIC EXCAVATOR
 - 3.5 WALKING EXCAVATOR
 - 3.6 BACKHOE LOADER/EXCAVATOR
 - 3.7 DRAGLINE
 - 3.8 TRACK-MOUNTED HYDRAULIC EXCAVATOR WITH TELESCOPIC ARM
 - 3.9 EXERCISES
- 4 THE WASTE MANAGEMENT
 - 4.1 THE DECONSTRUCTION OF A BUILDING
 - 4.2 CLASSIFICATION OF THE DEMOLITION EQUIPMENTS
 - 4.3 CLASSIFICATION OF THE SHREDDING DEMOLITION WORKING TOOLS
 - 4.4 CHARACTERISTICS AND FUNCTIONALITY OF THE HYDRAULIC HAMMERS

- 4.5 CHARACTERISTICS AND FUNCTIONALITY OF THE HYDRAULIC HAMMERS
- 4.6 PERFORMANCE REQUIREMENTS FOR THE HYDRAULIC HAMMERS
- 4.7 STABILITY CALCULATION FOR THE HYDRAULIC HAMMER
- 4.8 UNIVERSAL DEMOLITION SHEARS
- 4.9 DEMOLITION GRABS
- 4.10 STABILITY CALCULATION FOR THE SHEAR
- 4.11 STABILITY CALCULATION FOR THE UNIVERSAL DEMOLITION SHEAR
- 4.12 STABILITY CALCULATION FOR THE DEMOLITION GRAB
- 5 CONSTRUCTION OF THE CRAWLER EXCAVATORS FOR DEMOLITION JOBS
- 5.1 CONTINUOUS EXCAVATION MACHINES
- 6 DOZERS
- 6.1 DEFINITION
- 6.2 FIELD OF USE
- 6.3 DOZERS CLASSIFICATION
- 6.4 DOZERS PRODUCTIVITY
- 7 RIPPERS
- 7.1 EXERCISES
- 8 MOTOR GRADERS AND SCRAPERS
- 8.1 INTRODUCTION
- 8.2 DEFINITION
- 8.3 CLASSIFICATION
- 8.4 EXERCISES
- 9 SCRAPERS
- 9.1 DEFINITION
- 9.2 CLASSIFICATION
- 9.3 PRODUCTIVITY
- 9.4 EXERCISES
- 10 LOADERS
- 10.1 DEFINITION
- 10.2 CLASSIFICATION
- 10.3 LOADERS WITH BUCKET PRODUCTIVITY
- 10.4 STABILITY CALCULATION

- 10.5 EXERCISES
- 11 SOIL AND ASPHALT COMPACTION EQUIPMENT
 - 11.1 DEFINITION
 - 11.2 COMPACTION MACHINES CLASSIFICATION
 - 11.3 COMPACTION CONTROL
 - 11.4 MACHINES WITH SHOCK COMPACTION (STAMPERS)
 - 11.5 VIBRATING PLATE
- 12 LIFTING MACHINES
 - 12.1 DEFINITION
 - 12.2 CLASSIFICATION
 - 12.3 SITE ELEVATORS
 - 12.4 CRANES
 - 12.5 WHEELED CRANES
 - 12.6 CRITERIA IN ORDER TO CHOOSE THE CRANE TYPE
 - 12.7 GRAPPLES
 - 12.8 HYDRAULIC GRAPPLES
 - 12.9 EXERCISES
- 13 DEEP FOUNDATIONS MACHINES
 - 13.1 INTRODUCTION
 - 13.2 PNEUMATIC RAMS
 - 13.3 SLURRY WALLS EXECUTION MACHINES

- 14 MACHINES FOR PREPARING, TRANSPORTING AND CASTING CONCRETE AND MORTAR MIXTURES
 - 14.1 CLASSIFICATION
 - 14.2 CONCRETE PLANT
- 15 BIBLIOGRAPHY