ISO 20474-12:2017-07 (E)

Earth-moving machinery - Safety - Part 12: Requirements for cable excavators

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 2

4 Safety requirements and protective measures 3
4.1 General 3
4.2 Operator's station 3
4.2.1 General 3
4.2.2 Roll-over protective structures (ROPS) 3
4.2.3 Operator's protective guard 3
4.3 Operator's controls and indicators 3
4.3.1 Controls for driving and steering 3
4.3.2 Warning indicator 3
4.4 Steering 3
4.5 Swing brakes 4
4.6 Lift system 4
4.6.1 Force-controlled operation (lifting, lowering) 4
4.6.2 Free-fall operation 4
4.6.3 Switchover 4
4.6.4 Boom 4
4.6.5 Ropes 4
4.6.6 Rope drum, rope pulley 5
4.7 Limiting devices 5
4.7.1 Load moment limiting device 5
4.7.2 Lift limiting switch 5
4.7.3 Limit switch for the boom hoist system 5
4.8 Calculation of the lift capacity 5
4.8.1 Calculation method 5
4.8.2 Rated load table for object-handling application 6
4.9 Safety-related parts of the control system 6
4.10 Stability 6
4.10.1 General 6
4.10.2 Stability in different applications 6
4.10.3 Dragline bucket 7
4.10.4 Grab and front shovel 7
4.10.5 Object-handling applications 7
4.11 Cable excavator with electrical power source 7

5 Verificationofsafetyrequirementsandprotectivemeasures 7

6 Information for use 7

Annex A (normative) Requirements for cable excavator swing brakes 9

Annex B (informative) Illustrations 12

Bibliography 15