ISO 17874-4:2006-01 (E)

Remote handling devices for radioactive materials - Part 4: Power manipulators

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Applications of power manipulators 3

5 General features 4

6 Requirements 4
6.1 General aspects 4
6.2 Materials 6
6.3 Surface treatment 6
6.4 Design features 7
6.5 Electrical equipment 13
6.6 Dimensions of tongs with parallel jaws (standard tongs) 13
6.7 Dimensions of grip hooks 16
6.8 Dimensions of shoulder hooks 17

7 Operating devices and control systems 18
7.1 General 18
7.2 Push-buttons 18
7.3 Operating elements for one motion 19
7.4 Joysticks 19
7.5 Six-motion operating devices 19
7.6 Computer controlled systems 19

8 Manipulator vehicles 20

9 Special tongs and tools 20

10 Testing 22
10.1 General 22
10.2 Acceptance testing 22
10.3 Inspections and tests at regular intervals 22

11 Non-radioactive trial cells 23
11.1 General 23
11.2 Operator training 23
11.3 Manipulator system capability 23
11.4 Error minimization and failure recovery 23
11.5 Reliability assessments and maintenance planning 24

Annex A (normative) Electrical equipment for power manipulators 25

Bibliography 26