# ISO 17874-5:2007-02 (E)

## Remote handling devices for radioactive materials - Part 5: Remote handling tongs

## Contents

Page


Foreword ..... iv

Introduction ..... v

1 Scope ..... 1

2 Normative references ..... 1

3 Terms and definitions ..... 2

4 General features and classification ..... 4
4.1 General ..... 4
4.2 Classification and mode of use ..... 4
4.2.1 Horizontal remote handling tongs ..... 4
4.2.2 Vertical remote handling tongs ..... 4
4.3 Kinematics ..... 5
4.3.1 General ..... 5
4.3.2 Horizontal remote handling tongs ..... 5
4.3.3 Vertical remote handling tongs ..... 9

5 Basic selection criteria ..... 11
5.1 General criteria ..... 11
5.2 Particular criteria ..... 12
5.2.1 General ..... 12
5.2.2 Main characteristics of remote handling tongs ..... 12
5.2.3 Installation of horizontal remote handling tongs ..... 13
5.3 Leak-tightness and protection against contamination ..... 15
5.3.1 General ..... 15
5.3.2 Gaiter material ..... 16
5.3.3 Gaiters mounted on interchangeable support rings ..... 16
5.3.4 Leak-tight couplings ..... 18
5.4 Maintenance ..... 18
5.4.1 Removal of remote handling tongs ..... 18
5.4.2 Replacement of gaiters ..... 18
5.5 Shielding ..... 18
5.6 Tongs units ..... 19

6 Examples of special handling tongs ..... 20
6.1 Remote handling tongs for repetitive movements ..... 20
6.2 Articulated remote handling tongs used for delicate work ..... 21

7 Accessories ..... 21

Annex A (normative) Sphere units ..... 22

Annex B (informative) Tongs jaws ..... 24

Annex C (informative) Accessories ..... 26

Annex D (informative) Gaiters for remote handling tongs ..... 29

Annex E (informative) Replacement of gaiters for remote handling tongs ..... 30

Annex F (informative) Relationship between the characteristics of the remote handling tongs and the operating volume ..... 33