## ISO 8249:2018 (E)

# Welding — Determination of Ferrite Number (FN) in austenitic and duplex ferritic-austenitic Cr-Ni stainless steel weld metals

### Contents

Foreword

#### Introduction

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Principle

#### 5 Calibration

- 5.1 Coating thickness standards
- 5.2 Magnet
- 5.3 Instruments
- 5.4 Calibration curve
- 6 Standard method for covered electrode test pads
  - 6.1 Dimensions of weld metal test specimens
  - 6.2 Depositing weld metal test specimens
  - 6.3 Measuring
  - 6.3.1 Surface finishing
  - 6.3.2 Individual measurements
  - 6.3.3 Reporting

#### 7 Standard methods for test pads of other processes and for production welds

- 7.1 Standard method for test pads for other weld metals
- 7.2 Production welds
- 8 Other methods

9

- 8.1 Methods
- 8.2 Maintaining calibration
- Procedures used to prepare secondary standards for delta ferrite in austenitic stainless steel weld metal

#### Annex A (informative) Manufacture of secondary standards by strip cladding

- A.1 Materials
- A.1.1 Base metal
- A.1.2 Welding consumables
- A.2 Welding procedures
- A.3 Machining and marking
- A.3.1 Cutting programme
- A.3.2 Dimensions, tolerances, surface finish
- A.3.3 Marking for standard identification
- A.4 Chemical composition
- A.5 Marking for FN measuring point location
- A.6 FN measuring instruments and calibration
- A.6.1 General
- A.6.2 Instruments used
- A.6.3 Magnet strength checks
- A.6.4 Ferrite Number calibration

- A.7 Measuring procedure on secondary standards
- A.7.1 Instruments and operators
- A.7.2 Demagnetization
- A.7.3 Measurements on each ferrite standard
- A.7.4 Data recording and analysis
- A.7.5 Presentation of results

Annex B (informative) Manufacture of secondary standards by centrifugal chill casting

- B.1 Materials
- B.2 Machining and marking
- B.3 FN measuring instruments and calibration
- B.4 Measuring procedure on secondary standards
- B.4.1 Instruments and operators
- B.4.2 Demagnetization
- B.4.3 Measurements on each ferrite standard
- B.4.4 Data recording and analysis
- B.4.5 Presentation of results

Page count: 27