

# ISO 19843:2018 (E)

## Rolling bearings — Ceramic bearing balls — Determination of strength by notched ball test

---

### Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Symbols
5	Test description
6	Equipment and testing devices
6.1	Loading device
6.2	Testing machine
6.3	Measuring devices
6.3.1	General
6.3.2	Micrometer for external measurement
6.3.3	Mechanical dial gauge
6.3.4	Light microscope
6.3.5	Measuring gauge for the determination of the ligament thickness
6.4	Grinding machine
6.5	Psychrometer
6.6	Dryer
7	Preparation of the notched ball
7.1	Number of test pieces $n$
7.2	Diameter determination
7.3	Preparation of the notch
7.3.1	General
7.3.2	Notch geometry
7.4	Cleaning
8	Test procedure
8.1	Measurement of notch parameters
8.2	Mechanical testing
9	Evaluation
10	Potential uncertainties and deviations
11	Test report
Annex A	(normative) Function tables for prefactor $f$
Annex B	(normative) Comparability of notched ball strength results
Annex C	(informative) V-block system for preparation of the notch
Annex D	(informative) Positioning aid

**Annex E (informative) Example of a test report for determination of the notched ball strength**

**Annex F (normative) Notch root damage due to machining**

**Annex G (informative) Proposed initial testing speed for the cross head**

**Page count: 32**