

# ISO 11336-2:2020 (E)

## Large yachts — Strength, weathertightness and watertightness of glazed openings — Part 2: Glazed opening integrated into adjacent structure (elastically bonded to bulkhead or shell) design criteria, structural support, installation and testing

---

### Contents

	Foreword
1	Scope
2	Normative references
3	Terms and definitions
4	Symbols
5	Bonding materials
5.1	General
5.2	Physical characteristics
5.2.1	Flexural modulus
5.2.2	Elongation
5.2.3	Shear modulus
5.2.4	Tensile strength
5.2.5	Shore hardness
5.2.6	Environmental resistance
5.2.7	Long term properties
5.2.8	Preparation of bonding surfaces
5.2.9	Glazing material
5.3	Minimum material properties
6	Bonding arrangement
6.1	Glazing
6.2	General
6.3	Sloped and overhead glazed openings — Bonding in tension
6.4	Insulated glazed units (IGUs)
6.5	Bonding limitations
7	Bonded joint design
7.1	General
7.1.1	Overview
7.1.2	LC1 — Static permanent load only applicable to unsupported system
7.1.3	LC2 — Dynamic load
7.1.4	LC3 — Fatigue load
7.1.5	LC4 — Dynamic load (accounting for accidental internal loads)
7.1.6	Bondline parameters limitations
7.2	Design loads
7.3	Design parameters
8	Bonding installation
8.1	Bonding application guidelines
8.2	Bonding installation procedures
9	Qualification of bonding personnel
10	Survey of bonding

**11 Testing**

- 11.1 Testing of materials**
- 11.2 Proof testing of bonded joint**

**Annex A (informative) Worked example for bondline calculation**

- A.1 Material characteristics**
- A.2 Worked example**
- A.3 Graphs**

**Annex B (informative) Calculation method for bondline parameters with superimposed additional mechanical deflection and different design temperatures of glazing and substrate**

- B.1 Bonding thickness,  $d$**
- B.2 Sealing gap,  $C_{gap}$**
- B.3 Additional geometrical constraints to bondline geometry**

**Annex C (informative) Example bonding procedures**

**Annex D (informative) Special application glazing — Guidance**

- D.1 Underwater glazing**
- D.2 Pool glazing**
- D.3 Polar operations**

**Page count: 36**