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Aerospace — Aircraft control wire rope assemblies — Technical specification

*Aéronautique et espace — Câbles de commandes d'aéronefs, équipés —
Spécification technique*



Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9763 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 12, *Mechanical system parts*.

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Aerospace — Aircraft control wire rope assemblies — Technical specification

1 Scope

This International Standard specifies the characteristics, inspections and test methods as well as the quality assurance requirements for aircraft control wire rope assemblies equipped with swaged end fittings. This International Standard is applicable to control wire rope assemblies as defined in ISO 9762.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 2020-1, *Aerospace — Preformed flexible steel wire rope for aircraft controls — Part 1: Dimensions and loads.*

ISO 9001:1994, *Quality systems — Model for quality assurance in design, development, production, installation and servicing.*

ISO 9002:1994, *Quality systems — Model for quality assurance in production, installation and servicing.*

ISO 9003:1994, *Quality systems — Model for quality assurance in final inspection and test.*

ISO 9737:—¹⁾, *Aerospace — Eye-ends, in corrosion-resistant steel, swaged on aircraft control wire rope — Dimensions and loads.*

ISO 9747:—¹⁾, *Aerospace — Double-shank ball-ends, in corrosion-resistant steel, swaged on aircraft control wire rope — Dimensions and loads.*

ISO 9748:—¹⁾, *Aerospace — Ball-ends, in corrosion-resistant steel, swaged on aircraft control wire rope — Dimensions and loads.*

ISO 9749:—¹⁾, *Aerospace — Stud-ends, in corrosion-resistant steel, swaged on aircraft control wire rope — Dimensions and loads.*

ISO 9759:—¹⁾, *Aerospace — Fork ends, in corrosion-resistant steel, swaged on aircraft control wire rope — Dimensions and loads.*

ISO 9760:—¹⁾, *Aerospace — Fork ends, in corrosion-resistant steel, swaged on aircraft control wire rope for rolling bearings, — Dimensions and loads.*

ISO 9762:—¹⁾, *Aerospace — Aircraft control wire rope assemblies — Combinations and dimensions.*

¹⁾ To be published.

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

3.1 manufacturing batch

quantity of control wire rope assemblies making up the same manufacturing series and of the same composition:

- with wire ropes from the same spool (identical material and diameter);
- with the same definitions for the extremities

3.2 test piece

control wire rope assembly taken at random from a given batch

4 Requirements

4.1 General

The requirements specified by this International Standard are given in Table 1 and, apart from where otherwise specified, they also apply to control wire rope assemblies ready for use. The test temperature shall be, apart from where otherwise specified, ambient temperature. These requirements are to be taken into account along with the conditions which figure in all the other standards or specifications cited in the product or the definition documents for control wire rope assemblies.

Table 1 — Technical requirements and inspections and test methods

No.	Characteristics	Technical requirements	Inspections and test methods	Q ^a	A ^b
4.2	Composition of the control wire rope assembly	In conformity with the code designation specified in ISO 9762.	Visual examination.	×	
4.3	External aspect	No cracks, distortion or burrs shall be allowed. A slight round-edged punch mark shall be allowed on the end fitting. This stamp shall be applied before swaging for the purpose of holding the wire rope in the fitting.	Visual examination.	×	×
4.4	Dimensions of the swaged part	In accordance with Table 2 and Figures 1, 2 and 3.	Usual measuring instruments.	×	×
4.5	Length "L ₁ " of the wire rope inserted into the end fitting	In accordance with Figure 1. After swaging, no trace of the naked wire rope shall appear between the identification mark and the end fitting.	Inspection: — by x-ray examination; or — by applying a reference mark to the wire rope before swaging. The choice of the mark (paint, self-adhesive band or other) is left to the manufacturer.	×	×