भारतीय मानक

Indian Standard

IS 7857 : 2024

विमान — ईंधन नोजल ग्राउंडिंग प्लग और सॉकेट — विशिष्टि

(ISO 46 : , संशोधित)

(पहला पुनरीक्षण)

Aircraft — Fuel Nozzle Grounding Plugs and Sockets — Specification

(ISO 46 : , MOD)

(First Revision)

ICS 49.100

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
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May 2024 **Price Group 4**

Air and Space Vehicles Sectional Committee, TED 14

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Air and Space Vehicles Sectional Committee had been approved by the Transport Engineering Division Council.

This standard was first issued in 1975. This revision has been taken up with a view to incorporating the modifications found necessary as a result of experience gained on the use of this standard. Also, in this revision, the standard has been brought into the latest style and format of Indian Standard, and references to Indian Standards wherever applicable have been updated. Bureau of Indian Standards certification marking clause has been modified to align with the revised *Bureau of Indian Standards Act*, 2016.

The composition of the Committee responsible for the formulation of this standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

AIRCRAFT — FUEL NOZZLE GROUNDING PLUGS AND SOCKETS — SPECIFICATION

(First Revision)

1 SCOPE

This standard specifies the requirements for grounding plugs to be attached by cable to the nozzles of aircraft refuelling tankers. It also covers sockets to be provided in the aircraft for the accommodation of the plugs and the minimum length, minimum diameter, maximum resistance and material of the grounding cable.

2 REFERENCES

This standard does not contain any cross reference.

3 REQUIREMENTS

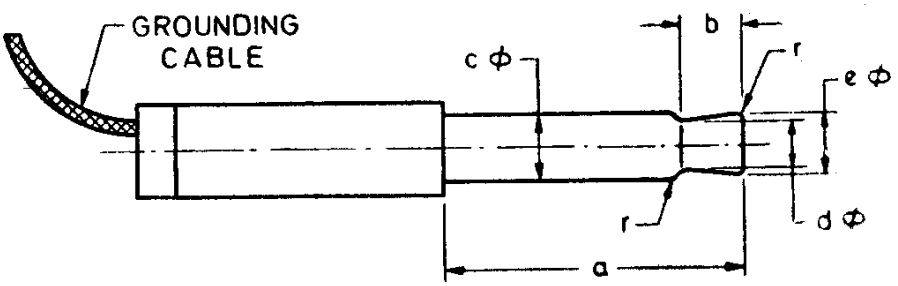
3.1 Plugs

The dimensions of aircraft-fuel nozzle grounding plugs attached by cable to the nozzles of refuelling tankers and requirements for grounding cable shall be as given in Fig. 1.

3.2 Sockets

The grounding sockets provided on aircraft shall be suitable to accommodate plugs of dimensions (*see* Fig. 1).

3.2.1 The bore of the socket shall have a diameter of $6.38\ ^{+0.05}_{-0}$ mm of the socket shall incorporate a device to ensure a good electrical contact when the plug is fully engaged in the socket such that the overall resistance of the grounding socket/cable assembly does not exceed 0.005 ohm when tested between the aircraft structure adjacent to the grounding socket and the refuelling nozzle.



Minimum length of cable	:	1.4 m
Maximum diameter of cable	:	1.6 mm
Material of cable	:	Steel-zinc or tin coated
Maximum resistance of cable	:	0.005 ohms

Dimensions

a : 30.2 mm
b : 6.4 mm
c : 6.3 mm ± 0.05 mm
d : 475 mm ± 0.13 mm
e : 6.15 mm ± 0.076 mm
r : 1.6 mm

FIG. 1 AIRCRAFT FUEL NOZZLE GROUNDING PLUG

4 MARKING

4.1 BIS Certification Marking

Each aircraft-fuel nozzle grounding plugs and sockets may also be marked with the Standard Mark. The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations made there under. The details of conditions under which the license for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Air and Space Vehicles Sectional Committee, TED 14

Organization	*Representative(s)*
In Personal Capacity (*204 Aawas Apartments, Bhaikaka Nagar, Rhaltej Road, Opp. Party Plot, Thaltej, Ahemdabad*)	SHRI DILIP B. BHATT **(*Chairperson*)**
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Aeronautical Development Agency, Bengaluru	SHRI D. K. P. SINHA SHRI RAMMOHAN V. KAKI (*Alternate*)
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Indian National Space Promotion and Authorisation Centre (IN-SPACe), Ahmedabad	SHRI PARAGJYOTI GARG
Indian Space Research Organization, Bengaluru	DR A. K. ANIL KUMAR SHRI MANISH SAXENA (*Alternate*)
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In Personal Capacity (*1034 Gitanjali Layout, 1st Main 2nd Cross, Hal Iii Stage, Bengaluru*)	SHRI MANOHAR SIDANA
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Member Secretary
SHRI SHIVAM AGGARWAL
SCIENTIST 'C'/DEPUTY DIRECTOR
(TRANSPORT ENGINEERING), BIS

Bureau of Indian Standards

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the website-www.bis.gov.in or www.standardsbis.in.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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