भारतीय मानक ब्यूरो
(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)
BUREAU OF INDIAN STANDARDS
(Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India)

मानक भवन, 9, बहादुर शाह ज़फर मार्ग, नई दिल्ली – 110002
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Website: www.bis.org.in , www.bis.gov.in

व्यापक परिचालन मसौदा

हमारा संदर्भ: सीईडी 07/टी-71 **25 नवंबर 2024**

तकनीकी समिति: सरंचनात्मक इंजीनियरिंग और सरंचनात्मक अनुभाग विषय समिति, सीईडी 07

प्राप्तकर्ता:

1. **सिविल अभियांत्रिकी विभाग परिषद, सीईडीसी के सभी सदस्य**
2. **सीईडी 07 व उसकी सभी उपसमितियों के सभी सदस्य**
3. **रुचि रखने वाले अन्य निकाय।**

महोदय/महोदया,

निम्नलिखित मानक का मसौदा संलग्न हैं:

प्रलेख संख्या	शीर्षक
सीईडी 07 (26976)WC	**सरंचनात्मक स्टील के फ्रीस्टैंडिंग टॉवर — कार्य संहिता** (आई एस 17740: 2022 का पहला संशोधन) (आई सी एस नंबर: 91.080.13)

कृपया इस मसौदे का अवलोकन करें और अपनी सम्मतियाँ यह बताते हुए भेजे कि यह मसौदा प्रकाशित हो तो इस पर अमल करने में आपको व्यवसाय अथवा कारोबार में क्या कठिनाइयां आ सकती हैं।

सम्मतियाँ भेजने की अंतिम तिथि: 31 दिसंबर 2024

सम्मति यदि कोई हो तो कृपया अधोहस्ताक्षरी को ई-मेल द्वारा ced7@bis.gov.in पर या उपरलिखित पते पर, संलग्न फोर्मेट में भेजें। सम्मतियाँ बीआईएस ई-गवर्नेंस पोर्टल, www.manakonline.in के माध्यम से ऑनलाइन भी भेजी जा सकती हैं।

यदि कोई सम्मति प्राप्त नहीं होती है अथवा सम्मति में केवल भाषा संबंधी त्रुटि हुई तो उपरोक्त प्रलेख को यथावत अंतिम रूप दे दिया जाएगा। यदि सम्मति तकनीकी प्रकृति की हुई तो विषय समिति के अध्यक्ष के परामर्श से अथवा उनकी इच्छा पर आगे की कार्यवाही के लिए विषय समिति को भेजे जाने के बाद प्रलेख को अंतिम रूप दे दिया जाएगा।

यह प्रलेख भारतीय मानक ब्यूरो की वैबसाइट www.bis.gov.in पर भी उपलब्ध हैं।

धन्यवाद।

भवदीय

ह/-
द्वैपायन भद्र
वैज्ञानिक ई एवं प्रमुख, सिविल अभियांत्रिकी विभाग
ई-मेल: ced7@bis.gov.in

सलंग्न: ऊपरलिखित

भारतीय मानक ब्यूरो
(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)
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WIDE CIRCULATION DRAFT

Our Reference: CED 07/T-71 **25 November 2024**

TECHNICAL COMMITTEE: Structural Engineering and Structural Sections Sectional Committee, CED 07

ADDRESSED TO:

1. All Members of Civil Engineering Division Council, CEDC
2. All Members of the CED 7 and its subcommittees
3. All others interested

Dear Sir/Madam,

Please find enclosed the following draft:

Doc No.	Title
CED 07(26976)WC	**Freestanding Towers Using Structural Steel — Code of Practice** (*First Amendment to* IS 17740: 2022) (ICS No. 91.080.13)

Kindly examine the attached draft and forward your views stating any difficulties which you are likely to experience in your business or profession, if this is finally adopted as National Standard.

Last Date for comments: 31 December 2024

Comments if any, may please be made in the enclosed format and emailed at ced7@bis.gov.in or sent at the above address. Additionally, comments may be sent online through the BIS e-governance portal, www.manakonline.in.

In case no comments are received, or comments received are of editorial nature, kindly permit us to presume your approval for the above document as finalized. However, in case comments, technical in nature are received, then it may be finalized either in consultation with the Chairman, Sectional Committee or referred to the Sectional Committee for further necessary action if so desired by the Chairman, Sectional Committee.

The document is also hosted on BIS website www.bis.gov.in.

Thanking you,

Yours faithfully,

Sd/-
Dwaipayan Bhadra
Scientist 'E' & Head, Civil Engineering Department
Email: ced7@bis.gov.in

Encl: As above

FORMAT FOR SENDING COMMENTS ON THE DOCUMENT

[Please use A4 size sheet of paper only and type within fields indicated. Comments on each clause/sub-clause/ table/figure, etc, be stated on a fresh row. Information/comments should include reasons for comments, technical references and suggestions for modified wordings of the clause. **Comments through e-mail to ced7@bis.gov.in shall be appreciated**.

Doc. No.: CED 07(26976)WC **BIS Letter Ref**: CED 07/T-71

Title: Freestanding Towers Using Structural Steel — Code of Practice (*First Amendment to* IS 17740: 2022) (ICS No. 91.080.13)

Last date of comments: **31 December 2024**

Name of the Commentator/ Organization: _____

Clause/ Para/ Table/ Figure No. commented	Comments/Modified Wordings	Justification of Proposed Change

NOTE- Kindly insert more rows as necessary for each clause/table, etc

AMENDMENT NO. 1

TO

IS 17740 : 2022 Isolated Towers, Masts and Poles using Structural Steel — Code of Practice

(*Page* 1, *clause* **1.5**) — Insert the following at the end:

‘1.6 As a minimum, existing structures shall be evaluated in accordance with this standard, regardless of the standard used for the design of the original structure or the last modification, under any of the following changed conditions:

a) A significant change in type, size, or number of appurtenances such as antennas, radios, transmission lines, mounts, platforms, ladders etc.

b) A change in the risk category of a structure to a higher risk category.

c) A change in serviceability requirements (i.e. More stringent twist or sway limitations due to a change involving microwave antennas)

d) A change to the geometry of the structure or to the strength of structural components (i.e. an extension in height of the structure, a change in guying configuration of a guyed mast or a change to structural members resulting in lower strength, etc).

NOTES:

1. Existing structures need not be re-analysed for each revision of this standard unless there are changed conditions as outlined above.
2. The appurtenance change shall be considered significant when strength requirements increase by more than 5 percent for any structural components, in which case the required modification and/or final acceptance shall be determined in accordance with this standard.’

(*Page* 8, *clause* **7.3.1***, Note*) — Delete.

(*Page* 10, *Fig.* 3*, Title*) — Substitute ‘3 AND 4 STAYED MASTS’ *for* ‘4 STAYED CIRCULAR MAST SIMILAR’.

(*Page* 19, *Table* 2*, Note*) — Insert the following after Note 4:

‘**5** Towers and masts shall be designed so that their design strength equals or exceeds the load effects of the factored loads in each of the following limit state combinations:

1. $1.1\ DL + 1.0\ D_g + 1.4\ W_0$
2. $0.9\ DL + 1.0\ D_g + 1.4\ W_0$
3. $1.1\ DL + 1.0\ D_g + 1.0\ D_i + 1.0\ W_i + 1.0\ T_i$
4. $1.1\ DL + 1.0\ D_g + 1.0\ E$
5. $0.9\ DL + 1.0\ D_g + 1.0\ E$

Where,

DL = Dead load of structure and appurtenances, excluding guy assemblies

D_g = Dead load of guy assembles

D_i = Weight of ice due to factored ice thickness

E = Earthquake load
T_i = Load effects due to temperature
W_0 = Wind load without ice
W_i = Concurrent wind load with factored ice thickness'.

(*Page* 25, *clause* **15.2.5**) — Insert the following at the end:

15.2.6 For tubular round members, the diameter to thickness ratio (D/t) shall not exceed 300.

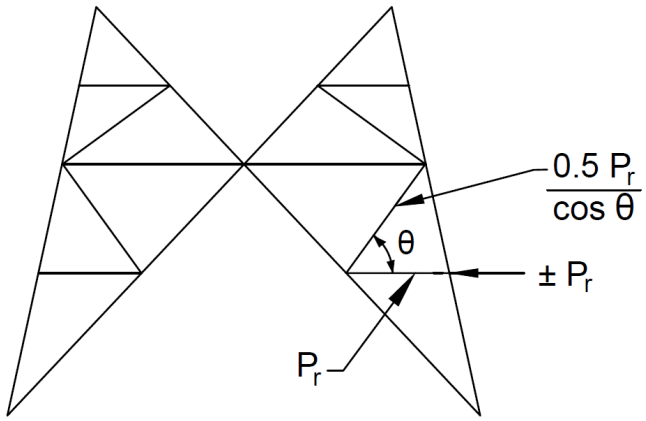
15.2.7 For polygonal members, w/t shall not exceed $2.14\left(\sqrt{\frac{E}{F_y}}\right)$.

15.2.8 Polygonal members with more than 18 sides, shall be considered as round members for strength investigation purposes using a diameter equal to distance across flats.

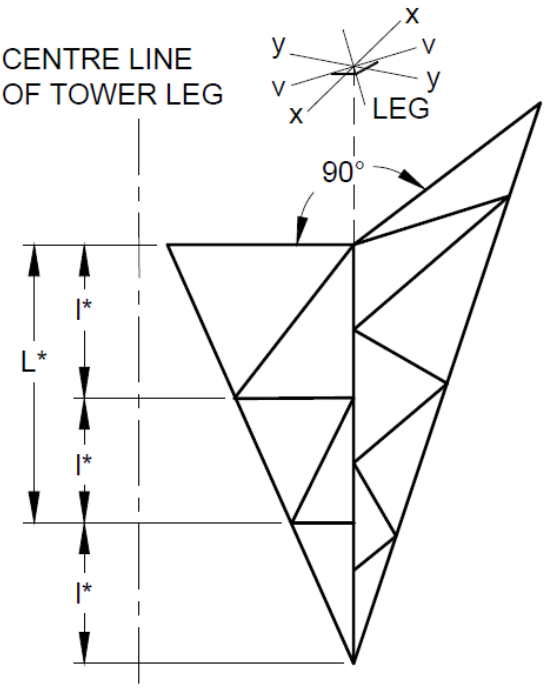
15.2.9 While designing the pole structure, the D/t ratio and w/t ratio, shall be maintained properly to avoid buckling and ovality of the individual sections of the pole structure under load during transportation and handling.

where
D = Diameter of section;
w = Width of side; and
t = Thickness of sheet.

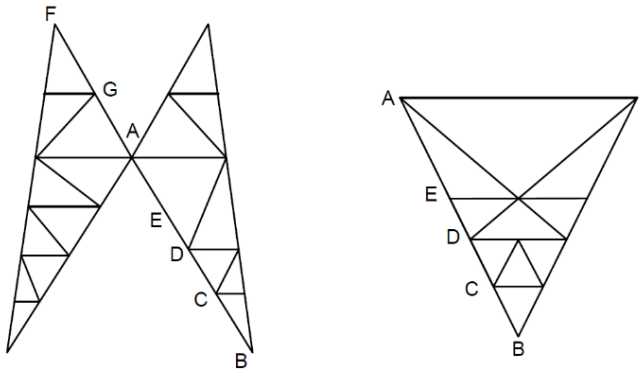
(*Page* 35*, Annex D, Second Row, First Fig.*) — Substitute the following Figure for the existing:



(*Page* 39*, Annex E, Third Row, First Fig.*) — Substitute the following Figure for the existing:



(*Page* 42*, Annex F, Fourth Row First Fig.*) — Substitute the following Figure for the existing:



(*Page* 40, *Table* 5*, Note*) — Substitute ‘120’ *for* ‘150’.

[*Page* 48, *Table* 6*, Note* 7(a)] — Substitute ‘Main leg member = 120’ *for* ‘Main bracing members = 150’.

(*Page* 26, *Annex A*) — Insert the following at appropriate place:

‘IS 802 (Part 6): 2022 ‘Use of structural steel in overhead transmission line towers — Code of practice Part 6 Tower erection’