Since 1933

BOMBAY METAL EXCHANGE LTD.

Organisation devoted to the promotion of Trade & Industry in Non-ferrous Metals All over India

Date : April 6, 2024

Kind Attn.: Mr. Sanjiv Maini
Head, MTD
Bureau of Indian Standards
Manak Bhawan, 9, Bahadur Shah Zafar Marg,
New Delhi – 110002

Subject: Urgent request for amendment in IS 12444: 2020 for "Copper Wire Rods for Electrical Applications"

Respected Sir,

We sincerely thank you very much for sparing your valuable time today to meet our delegations to discuss the issues related to our product "Copper Wire Rod".

We wish to bring to your kind attention that we are in manufacturing of Copper Wire Rods for Electrical Applications. Many of our member Industries are manufacturing this product as per International Standards ASTM B-49-20 with Grade FRHC (Fire Refined High Conductivity Copper) having UNS No. C11020, C11025 and EN1977. (For your ready reference, the relevant page of ASTM B-49-20 is enclosed herewith)

This grade of Copper Wire Rod is also covered in other International Standards and is manufactured widely in whole world. In India, our combined industrial production of this item is approximately 2 Lakh tons per annum.

The group of organization who are manufacturing this grade of Copper Wire Rods are mentioned as below:

Sr. No.	Organization Name	Contact Person	Contact Number
1	JMW India Pvt. Ltd., Bhiwadi	Mr. Manoj Jain	9810396120
2	Shri Tirupati Enterprises, Bhiwadi	Mr. Ravish Gupta	9899521581
3	Bhawani Metalloys Pvt. Ltd., Bhiwadi	Mr. Akshat Aggarwal	9169999980
4	Matod Industries Pvt. Ltd., Bhiwadi	Mr. Anupam Gupta	9999399581
5	RNT Metals Pvt. Ltd., Bhiwadi	Mr. Archit Jain	9999909345
6	Rajnandini Metals Ltd, Bawal	Mr. Ashok Kalra	7496982921
7	Kanak CCR Ltd, Bhiwadi	Mr. Pramod Chandra	8130111000
8	Waltron, Neemrana	Mr. Nishant Gupta	-
9	Prayas Wire, Delhi	Mr. Ashu Gupta	-
10	Sunlite Recycling Industries Pvt. Ltd., Gujarat	Mr. Nitin Heda	9327828252
11	Parmeshwar Metal Pvt. Ltd., Gujarat	Mr. Shantilal Shah	9879096009
12	HKL Industries LLP, Gujarat	Mr. Bharat Heda	9825036895
13	Maruti Recycling, Gujarat	Mr. Rajendra Shah	9824060450
14	Bhumi Electro India Pvt. Ltd., Gujarat	Mr. Gopal	9825097065

Regd. Office BME House, 88/90, Kika Street, Gulalwadi, Mumbai – 400 004
Tel : 022 22421964 / 49605039 Email – info@bme.in

Since 1933

BOMBAY METAL EXCHANGE LTD.

Organisation devoted to the promotion of Trade & Industry in Non-ferrous Metals All over India

Recently, DPIIT through Quality Control Order (QCO) vide S.O. 4595(E) dated: 17th October, 2023 has brought IS 12444: 2020 under this QCO. We have observed that the FRHC grade is not covered under this Indian Standard. Only two grades "ETP & OFC" are covered.

We request that keeping in view the huge production of FRHC grade in India and its customer demand, this grade should also be incorporated in IS 12444: 2020 through suitable amendment. This will help us to obtain the BIS certification marks licence as per IS 12444: 2020 for our product.

In the view of above, we earnestly request you for taking early action in bringing this said amendment.

Thanking you

Yours sincerely,
BOMBAY METAL EXCHANGE LTD

Sandeep T. Jain
PRESIDENT
93222 22552
president@bme.in

Enclosed: (Page of 3 of ASTM B-49-20)

TABLE 1 Chemical Composition[A]

UNS Number Copper Type	C11000 ETP	C11040 ETP	C10100 OFE[B]	C10200 OF[C]
Copper, min	99.90 %[D] incl silver	99.90 %[E]	99.99 %[E]	99.95 %[D] incl silver
	ppm	ppm	ppm	ppm
Tellurium, max	...	2	2	...
Selenium, max	...	2	3	...
Bismuth, max	...	1.0	1.0	...
Group total, max	...	3	...	...
Antimony, max	...	4	4	...
Arsenic, max	...	5	5	...
Tin, max	...	5	2	...
Lead, max	...	5	5	...
Iron, max	...	10	10	...
Nickel, max	...	10	10	...
Sulfur, max	...	15	15	...
Silver, max	...	25	25	...
Oxygen	...	100–650	5 max	10 max
Maximum allowable total	...	65[F]	...	...
Cadmium, max	...	...	1	...
Phosphorus, max	...	...	3	...
Zinc, max	...	...	1	...
Manganese, max	...	...	0.5	...

Fire-Refined Coppers		
UNS Number Copper Type	C11020 FRHC	C11025 FRHC
Copper, min incl silver	99.90 %[D]	99.90 %[D]
Tellurium, max	...	10
Selenium, max	...	10
Bismuth, max	...	5
Group total, max	...	...
Antimony, max	...	50
Arsenic, max	...	10
Tin, max	...	150
Lead	...	150–450
Iron, max	...	20
Nickel, max	...	150
Sulfur, max	...	20
Silver, max	...	150
Oxygen	...	100–400
Maximum allowable total	...	750[F]
Cadmium, max	...	100
Phosphorus, max	...	...
Zinc, max	...	80
Manganese, max	...	...

[A] See 13.1.2.
[B] From Specification B170 Grade 1 copper or equivalent.
[C] From Specification B170 Grade 2 copper or equivalent.
[D] See 13.1.1.
[E] By difference. See 13.1.2 and 13.1.3.
[F] Not including oxygen.

TABLE 2 Equivalent Resistivity and Conductivity Values[A]

Conductivity at 68 °F (20 °C), % IACS	100.00	101.00
Ω · lb/mile²	875.20	866.53
Ω · g/m²	0.153 28	0.151 76
Ω · c mil/ft	10.371	10.268
Ω · mm²/m	0.017 241 0	0.017 070
μΩ · in.	0.678 79	0.672 07
μΩ · cm	1.7241	1.7070

[A] The equivalent resistivity and conductivity values for 100 % IACS (soft copper) were each computed from the fundamental IEC value (1/58 Ω · mm²/m) using conversion factors each accurate to at least seven significant figures.

8.3.1 A test to reflect propensity towards hydrogen embrittlement shall be performed only on oxygen-free copper.

8.3.2 The specimen shall be tested in accordance with 13.6 and Specification B170.

8.3.3 The specimen, prepared and tested from the OFE (oxygen-free electronic) copper (UNS C10100) listed in Table 1, shall withstand without breaking into two pieces, a minimum of ten (10) reverse bends.