



**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY 12176

REV. NO. 01

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BRASS WIRES FOR GENERAL ENGINEERING PURPOSE

1.0 SCOPE:

This specification covers the requirements of brass wires for general engineering purposes.

2.0 APPLICATION:

General engineering purposes.

3.0 COMPLIANCE WITH NATIONAL STANDARD

IS: 4413 (Gr.CuZn37 - Condition O)

4.0 CONDITION OF DELIVERY:

- 4.1** The material shall be supplied in annealed condition (O) with clean, smooth and uniform in shape.
- 4.2** Dimensions and tolerance shall be as per the requirements specified in the order.
- 4.3** The material shall be supplied in straight lengths of 1.0 – 1.5 metres.

5.0 FREEDOM FROM DEFECTS:

- 5.1** The material shall be clean, smooth, and uniform in shape and free from detrimental segregation, cracks, twists and kinks.
- 5.2 Finish:** The material shall be finished by cold working and annealing operation so as to produce the required temper (O), surface finish and dimensional tolerances as mentioned in the order.

6.0 CHEMICAL COMPOSITION:

The chemical composition of the material shall be as per Grade: CuZn37 (IS 4413) with lead content restricted to 0.10 % maximum.

7.0 MECHANICAL PROPERTIES:

One sample from each lot (i.e. per melt /heat treatment batch of each size) shall be tested for tensile test as per IS 1608 or any other reputed equivalent standard and following properties shall be achieved.

| Condition | Tensile Strength, MPa Minimum | Elongation % Minimum |
|--------------|----------------------------------|-------------------------|
| Annealed (O) | 325 | 35 |

Revisions: Revised Cl. 4.0, 5.0, 6.0 and 7.0.

Issued :

**STANDARDS ENGINEERING & IPR
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8.0 RETEST:

As per IS 4413.

9.0 TEST CERTIFICATES:

The supplier shall submit 5 copies of test certificates in English giving the following information.

1. BHEL Order No.
2. Drawing No. (If applicable)
3. Product specification
4. Batch No. (indicating melt no.)
5. Weight along with the sizes
6. Supplier's reference and Name.
7. Process of manufacture
8. Result of chemical analysis & tensile test
9. Heat treatment cycle followed
10. Dimensional inspection report
11. Any other test (As per the order)

10.0 PACKING:

Material shall be suitably packed to avoid damage during transit and storage.

11.0 MARKING:

Suitable metallic tags and labels with marking made on them to show the grade and temper condition of the material.

Each bundle shall be legibly marked with the following information.

1. BHEL Order No.
2. Size (or applicable Drawing number)
3. Batch No.
4. Weight
5. Supplier's reference and Name