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IS 2049 (1978): Colour code for the identification of wrought steels for general engineering purposes [MTD 4: Wrought Steel Products]



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“Knowledge is such a treasure which cannot be stolen”

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IS : 2049 - 1978
(Reaffirmed 1998)

Indian Standard

**COLOUR CODE FOR
THE IDENTIFICATION OF WROUGHT STEELS
FOR GENERAL ENGINEERING PURPOSES**

(First Revision)

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**BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002**

Indian Standard

COLOUR CODE FOR THE IDENTIFICATION OF WROUGHT STEELS FOR GENERAL ENGINEERING PURPOSES

(*First Revision*)

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(*Continued on page 2*)

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IS : 2049 - 1978

(Continued from page 1)

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Indian Standard

COLOUR CODE FOR
THE IDENTIFICATION OF WROUGHT STEELS
FOR GENERAL ENGINEERING PURPOSES
(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 20 November 1978, after the draft finalized by the Metal Standards Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 This standard was first published in 1963. On the basis of experience gained, it has been decided to revise the standard. Table 8 has been modified to bring it in line with IS : 1570 (Part V)-1972*. Reference to relevant Indian Standards where colour code may be applicable has also been made and their titles are given in Appendix A.

0.3 This code has been prepared with a view to establishing a uniform system of colour coding for easy identification of wrought steels for general engineering purposes. Apart from achieving uniformity in the system of colour coding at present being followed by various organizations in the country this system would enable easy identification of stocks thus preventing any mix-up of the different types and grades of wrought steels for general engineering purposes.

0.4 To make the code as comprehensive as possible and to prevent any confusion that might arise with the production of increased varieties of steel, the system of colour coding is based on the classification given in IS : 1570-1961†. As the bulk production of steel in the country falls within the categories covered under Schedules I, II and III, a very simplified coding has been recommended for these schedules.

*Schedules for wrought steels for general engineering purposes: Part V Stainless and heat resisting steels (*first revision*).

†Schedule for wrought steels for general engineering purposes.

IS : 2049 - 1978

0.5 The following major modifications and additions have been made in this revision:

- a) In order to avoid mix-up of off grade material with those conforming to the specification, it has been felt necessary to provide a separate colour code for off grade material.
- b) The colour codes specified for various steels have been brought in line with those being followed by the users and manufacturers to the extent possible.
- c) No colour code has been specified for material conforming to IS : 226-1975*, since it comprises over 70 percent of the total production of steel. This would lead to considerable economy in the use of paint.
- d) Separate colour codes have been provided for steels conforming to IS : 2830-1975†, IS : 2831-1975‡, IS : 1977-1975§ and other Indian Standards which constitute a substantial tonnage of total steel production.
- e) Distinct colour codes have been specified to identify copper containing grades.

0.6 Material with surface defects should be classed under defective and should be colour coded as indicated in 5.4.1, 5.4.2 and 5.4.3.

0.7 The colour coding included in the standard is not mandatory, but shall be adopted when so specifically required by the purchaser.

0.8 The steel designations given in this standard conform to IS : 1762 (Part I)-1974|| but for the sake of convenience old designations have also been given within brackets.

1. SCOPE

1.1 This standard prescribes a scheme of colour coding based on the classification of steels given in IS : 1570-1961¶.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in relevant parts of IS : 1956** shall apply.

*Specification for structural steel (standard quality) (*fifth revision*).

†Specification for carbon steel billets, blooms and slabs for re-rolling into structural steel (standard quality) (*first revision*).

‡Specification for carbon steel billets, blooms and slabs for re-rolling into structural steel (ordinary quality) (*second revision*).

§Specification for structural steel (ordinary quality) (*second revision*).

||Code for designation of steels: Part I Based on letter symbols (*first revision*).

¶Schedules for wrought steels for general engineering purposes.

**Glossary of terms relating to iron and steel (Issued in eight parts).

3. PAINTS

3.1 Appropriate quality of paints conforming to relevant Indian Standards, where they exist, shall be used for colour marking.

3.2 It is recommended that the paints used should produce a glossy finish as far as possible.

4. COLOURS

4.1 Only primary colours shall normally be used for identification of wrought steels for general engineering purposes.

4.1.1 However, in view of the large number of colour shades required to distinguish and identify the steels, it may be necessary to use colours other than primary colours. Recommendations regarding shades of colours that may be used are given in Table 1. Colours used should be as near to the specified colour shade as possible.

TABLE 1 DISTINCT SHADES OF COLOURS TO BE USED FOR CODING

SL No.	COLOUR	SHADE NO. AND ITS DESCRIPTION ACCORDING TO IS : 5-1978*
(1)	(2)	(3)
1.	Aluminium paint	Aluminium colour† (see IS : 2339-1963‡)
2.	Black	Black†
3.	Blue	166 French blue
4.	Brown	410 Light brown
5.	Green	217 Sea green
6.	Grey	631 Light grey
7.	Orange	557 Light orange
8.	Pink	442 Light salmon pink
9.	Red	537 Signal red
10.	Violet	796 Dark violet
11.	White	Cream white†
12.	Yellow	309 Canary yellow

*Colours for ready mixed paints and enamels (*third revision*).

†Not included in IS : 5-1978.

‡Specification for aluminium paint for general purposes, in dual container.

5. IDENTIFICATION

5.0 The system of colour coding consists of a primary colour band (base colour) and other colour bands.

5.1 Primary Colour — Schedules I, II, III and V have been assigned one primary colour each. In view of the large number of steels in Schedules IV and VI, more than one primary colour has been allotted to each schedule. The primary colours allotted to each schedule are indicated in Table 2.

TABLE 2 PRIMARY COLOURS FOR SCHEDULES

SCHEDULE (1)	COLOUR(S) (2)
Schedule I	Grey
Schedule II	Black
Schedule III	Brown
Schedule IV	Red, blue, green, yellow, orange, white
Schedule V	Pink
Schedule VI	Aluminium paint and violet

5.2 Colour Bands

5.2.1 First and second colour bands are used to distinguish between various steels belonging to the same schedule. The width of the second colour band shall be approximately half of first colour band.

5.3 Additional Colour Coding — Additional colour for condition of supply and tolerance if agreed to between the supplier and the purchaser shall be done as given in 5.3.1 and 5.3.2.

5.3.1 The condition of supply may be indicated by providing suitable letter coding superimposed on the colour band(s). The following letters may be used to indicate condition of material:

- T5 = Annealed
- T3 = Normalized
- T14 = Hardened and tempered
- S6 = Cold drawn/cold rolled

5.3.2 If necessary, the tolerance category of the product may be indicated by employing suitable colour or letter coding.

5.4 The system of colour coding as prescribed in this code and as applicable to different grades of steels given in IS : 1570-1961* and IS : 1570 (Part V)-1972† is given in Tables 4 to 9. Colour codes for specific categories of popular grades of steels are given in Table 3.

5.4.1 Defective material should be dabbed with red paint.

*Schedules for wrought steels for general engineering purposes.

†Schedules for wrought steels for general engineering purposes: Part V Stainless and heat resisting steels (*first revision*).

5.4.2 Off grade high carbon steel should be dabbed with pink paint.

5.4.3 Mild steel off grade material should be dabbed with white paint.

TABLE 3 COLOUR CODE FOR SPECIFIC CATEGORIES OF STEELS

(Clauses 5.4, 6.1, 6.2, 6.3, 6.4 and 6.5)

STANDARD No.	STEEL DESIGNATION New (OLD)	BASE COLOUR (Dot)	FIRST COLOUR BAND (Dot)
(1)	(2)	(3)	(4)
IS : 226	Fe410-S (St 42-S)	No colour code shall be applied	—
IS : 226	Fe410-Cu-S (St42CuS)	Grey dot on end and surface	—
IS : 961*	Fe570-HT (St 58-HT)	Grey	White
IS : 961*	Fe 540-W-HT (St55-HTW)	Grey	Yellow
IS : 1079*	O-1079	Grey	Orange
	D-1079	Grey	Black
	DD-1079	Grey	Brown
	EDD-1079	Grey	Violet
IS : 1977	Fe310-0 (St32-0)	Blue dot	—
IS : 1977	Fe410-0 (St42-0)	Dark brown dot	—
IS : 2002*	Grade 1	Grey	Pink
	Grade 2A	Grey	Green
	Grade 2B	Grey	Red
IS : 2062	Fe410-W (St42-W)	Green dot on one end	—
	Fe410-Cu-W (St42-W)	Green dot on one end and surface	—
IS : 2830	Fe410-SB1 (St42-SB1)	Grey dot on one end	—
or	Fe410-Cu-SB1 (St42-SBC1)	Grey dot on end and surface	—
IS : 6914	Fe410-SB2 (St42-SB2)	Green dot on one end	—
	Fe410-Cu-SB2 (St42-SBC2)	Green dot on end and surface	—
	Fe410-SB3 (St42-SB3)	Orange dot on one end	—
	Fe410-Cu-SB3 (St42-SBC3)	Orange dot on end and surface	—
IS : 2831	Fe310-OB (St32-OB)	Blue dot on one end	—
or	Fe310-Cu-OB (St32-OBC)	Blue dot on end and surface	—
IS : 6915	Fe410-OB (St42-OB)	Dark brown dot on one end	—
	Fe410-Cu-OB (St42-OBC)	Dark brown dot on end and surface	—
IS : 2879	—	Yellow dot on one end	—

NORM 1 — For standards except those marked with asterisk (*) only dots shall be used for the purpose of colour coding. However, colour bands may be used in the case of sheet, plate and strip (see Fig. 3 and 4).

NORM 2 — In the case of copper-containing grades, the colour should be painted on the adjoining surface of product besides the full section. In the case of plate, sheet and strip, the copper containing grades may be painted across the corner of the top surface (see Fig. 2 and 4).

**TABLE 4 COLOUR CODE FOR SCHEDULE I
(STEELS SPECIFIED BY TENSILE PROPERTIES BUT WITHOUT
DETAILED CHEMICAL COMPOSITION)**

(Clauses 5.4, 6.1, 6.2, 6.3, 6.4 and 6.5)

STEEL DESIGNATION [See IS : 1762 (Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
Fe 290 (St 30)	Grey	Aluminium paint	White	—
Fe 310 (St 32)	Grey	Aluminium paint	Red	IS : 432
Fe 330 (St 34)	Grey	Aluminium paint	—	IS : 1079, 5986
Fe 360 (St 37)	Grey	Aluminium paint	Yellow	IS : 1079, 3503, 5272, 5986
Fe 380 (St 39)	Grey	Aluminium paint	Orange	
Fe 410 (St 42)	Grey	Blue	—	IS : 432, 1079, 1148, 2100, 3039, 3503, 5986
Fe 430 (St 44)	Grey	Blue	White	IS : 3503, 8500
Fe 460 (St 47)	Grey	Blue	Red	IS : 1149, 3503
Fe 490 (St 50)	Grey	Blue	Pink	IS : 1079, 3503, 8500
Fe 510 (St 52)	Grey	Green	White	IS : 1079, 2100, 5986
Fe 540 (St 55)	Grey	White	Red	IS : 8500
Fe 570 (St 58)	Grey	White	Yellow	IS : 432, 8500
Fe 620 (St 63)	Grey	White	Green	—
Fe 650 (St 66)	Grey	White	Orange	IS : 8500
Fe 770 (St 78)	Grey	White	Pink	—
Fe 870 (St 88)	Grey	White	Violet	—

*Code for designation of steels: Part I Based on letter symbols (*first revision*).

**TABLE 5 COLOUR CODE FOR SCHEDULE II
(CARBON STEELS WITH SPECIFIED CHEMICAL COMPOSITION AND
RELATED MECHANICAL PROPERTIES)**

(*Clauses 5.4, 6.1, 6.2, 6.3, 6.4 and 6.5*)

STEEL DESIGNATION [See IS : 1762 (Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
4C2 (C04)	Black	White	Grey	—
5C3 (C05)	Black	White	Red	IS : 4882, 4397
7C3 (C07)	Black	White	Pink	—
10C4 (C10)	Black	White	Grey	IS : 1812, 2879, 4432
14C6 (C14)	Black	White	Blue	IS : 2073, 4432, 5489
15C4 (C15)	Black	White	Orange	IS : 1812
15C8 (C15Mn75)	Black	Red	—	IS : 1875, 2004, 2100, 4432, 6967
20C8 (C20)	Black	Yellow	—	IS : 1875, 2004, 2073
25C4 (C25)	Black	White	Yellow	—
25C8 (C25Mn75)	Black	Violet	—	IS : 1875, 2004, 2073, 3930, 5517, 6967
30C8 (C30)	Black	Green	—	IS : 1875, 2004, 2073, 3930, 5517, 6967
35C8 (C35Mn75)	Black	Brown	—	IS : 1875, 2004, 2073, 3930, 5517
40C8 (C40)	Black	White	Brown	IS : 7283, 5517, 7226
45C8 (C45)	Black	—	—	IS : 1875, 2004, 2073, 2507, 3261, 3930, 5517
50C8 (C50)	Black	Green	White	IS : 5517
50C12 (C50Mn1)	Black	Violet	White	—
55C6 (C55)	Black	Brown	White	IS : 2507, 3885, 3930, 7226, 8054, 8055
55C (C55Mn75)	Black	White	—	IS : 1875, 2073, 3445, 5517, 7494
60C6 (C60)	Black	Orange	—	IS : 8055
65C6 (C65)	Black	Aluminium paint	—	IS : 1875, 2004, 2073, 2507, 4072, 8055
70C6 (C70)	Black	Green	Yellow	IS : 2507, 4072, 7226, 8055
75C6 (C75)	Black	Green	Pink	IS : 2507, 3885, 8054
80C6 (C80)	Black	Green	Grey	IS : 2507, 4072, 7226, 8055
85C6 (C85)	Black	Yellow	White	IS : 2507, 7226
98C6 (C98)	Black	Yellow	Red	IS : 2507, 3195, 7226, 8052
113C6 (C113)	Black	Yellow	Pink	IS : 3195, 8052

*Code for designation of steels: Part I Based on letter symbols (*first revision*).

TABLE 6 COLOUR CODE FOR SCHEDULE III (CARBON AND CARBON-MANGANESE FREE CUTTING STEELS WITH SPECIFIED CHEMICAL COMPOSITION AND RELATED MECHANICAL PROPERTIES)

(*Clauses 5 4, 6.1, 6.2, 6.3, 6.4 and 6.5*)

STEEL DESIGNATION [See IS : 1762 (Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
10C8S11 (10S11)	Brown	White	—	IS : 1812, 4431, 4432
14C14S14 (14Mn1S14)	Brown	Green	—	IS : 7283, 4431, 4432
25C12S14 (25Mn1S14)	Brown	Blue	—	IS : 4431
40C10S18 (40S18)	Brown	Grey	—	IS : 4431, 5517
13C10S25 (13S25)	Brown	—	—	IS : 7283, 4431
40C15S12 (40Mn2S12)	Brown	Yellow	—	IS : 3930, 4431, 5517

*Code for designation of steels: Part I Based on letter symbols (*first revision*).

TABLE 7 COLOUR CODE FOR SCHEDULE IV ALLOY STEELS (OTHER THAN STAINLESS AND HEAT-RESISTING STEELS) WITH SPECIFIED CHEMICAL COMPOSITION AND RELATED MECHANICAL PROPERTIES

(*Clauses 5.4, 6.1, 6.2, 6.3, 6.4 and 6.5*)

STEEL DESIGNATION [See IS : 1762 (Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
A. Spring Steels				
36Si7 (37Si2Mn90)	Green	—	—	IS : 4367, 4368
55Si7 (55Si2Mn90)	Green	White	—	IS : 2507, 3195, 3431, 3885, 4072, 4368, 8051, 8052, 8054, 8055
50Cr4 (50Cr1)	Green	Blue	—	IS : 2507, 3930
50Cr4V2 (50Cr1V23)	Green	Yellow	—	IS : 2507, 3431, 3930, 4368, 7479, 8051, 8052

*Code for designation of steels: Part I Based on letter symbols (*first revision*).

(*Continued*)

**TABLE 7 COLOUR CODE FOR SCHEDULE IV ALLOY STEELS
(OTHER THAN STAINLESS AND HEAT-RESISTING STEELS) WITH
SPECIFIED CHEMICAL COMPOSITION AND RELATED
MECHANICAL PROPERTIES — *Contd***

STEEL DESIGNATION [See IS : 1762 (Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
B. Low Tensile Heat Treatable Steels				
20Mn6 (20Mn2)	Red	White	—	IS : 2100, 2041, 4367, 4368, 5517, 6967
27Mn6 (27Mn2)	Red	Brown	—	IS : 5517
37Mn6 (37Mn2)	Red	Blue	—	IS : 3930, 4367, 4368, 5517
47Mn6 (47Mn2)	Red	Violet	—	IS : 3930
35Mn6Mo3 (35Mn2Mo28)	Red	Yellow	—	IS : 3930, 5517
35Mn6Mo4 (35Mn2Mo45)	Red	Green	—	IS : 3930, 5517
C. Medium Tensile Heat Treatable Steels				
40Cr4 (40Cr1)	Blue	—	—	IS : 3930, 4367, 4368, 5517, 7479
40Ni6Cr4Mo2 (40NiCr1Mo15)	Blue	Brown	—	IS : 3930, 5517
35Ni5Cr2 (35Ni1Cr60)	Blue	Red	—	IS : 3930, 4367, 4368, 5517
55Cr3 (55Cr70)	Blue	White	—	IS : 5517
D. High Tensile Heat Treatable Steels				
40Cr13Mo10V2 (40Cr3Mo1V20)	Yellow	Aluminium paint	—	IS : 5517
40Cr4Mo3 (40Cr1Mo28)	Yellow	—	—	IS : 3930, 4367, 4368, 5517, 7494
40Ni6Cr4Mo2 (40NiCr1Mo15)	Yellow	Red	—	IS : 3930, 5517, 7494
40Cr7Al10Mo2 (40Cr2Al1Mo18)	Yellow	Black	—	IS : 5517

*Code for designation of steels: Part I Based on letter symbols (*first revision*).

(*Continued*)

**TABLE 7 COLOUR CODE FOR SCHEDULE IV ALLOY STEELS
(OTHER THAN STAINLESS AND HEAT-RESISTING STEELS) WITH
SPECIFIED CHEMICAL COMPOSITION AND RELATED
MECHANICAL PROPERTIES — *Contd***

STEEL DESIGNATION [See IS : 1762(Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
40Ni6Cr4Mo3 (40Ni2Cr1Mo28)	Yellow	Blue	—	IS : 3930, 3445, 4367, 4368, 5517
31Ni10Cr3Mo6 (31Ni3Cr65Mo55)	Yellow	Brown	—	IS : 3930, 4367, 5517
30Ni6Cr5 (30Ni4Cr1)	Yellow	Green	—	IS : 4367, 5517
40Ni10Cr3Mo6 (40Ni3Cr65 Mo55)	Yellow	White	—	IS : 4368, 5517
40Ni14 (40Ni3)	Yellow	Violet	—	IS : 3930, 3445, 5517
<i>E. Case Hardening Steels</i>				
11Mn6 (11Mn2)	White	Yellow	Red	IS : 4432
15Cr3 (15Cr65)	White	Blue	—	IS : 4432, 4367, 4368
16Ni3Cr2 (16Ni80Cr60)	White	Green	—	IS : 4432
16Ni4Cr3 (15Ni1Cr80)	White	Pink	—	IS : 4432
15Ni5Cr4Mo1 (15NiCr1Mo12)	White	Brown	—	IS : 4367, 4368, 4432
15Ni7Cr4Mo2 (15Ni2Cr1Mo15)	White	Orange	—	IS : 4368, 4432
16Ni8Cr6Mo2 (16NiCr2Mo20)	White	Violet	—	IS : 4367, 4368, 4432
20Ni7Mo2 (26Mn2Mo25)	White	Yellow	—	IS : 4432, 5489
13Ni13Cr3 (13Ni3Cr80)	White	Red	—	IS : 4367, 4358, 4432
15Ni16Cr5 (15Ni4Cr1)	White	Blue	Red	IS : 4367, 4368, 4430, 4432
20NiCrMo2 (20Ni55Cr50Mo20)	White	Grey	—	IS : 4432, 5489, 6967
17Mn5Cr4 (17Mn1Cr95)	White	Black	—	IS : 4367, 4368, 4432, 5489
20MnCr5 (20MnCr1)	White	—	—	IS : 4367, 4368, 4432

*Code for designation of steels: Part I Based on letter symbols (*first revision*).

(*Continued*)

**TABLE 7 COLOUR CODE FOR SCHEDULE IV ALLOY STEELS
(OTHER THAN STAINLESS AND HEAT-RESISTING STEELS) WITH
SPECIFIED CHEMICAL COMPOSITION AND RELATED
MECHANICAL PROPERTIES — *Contd***

STEEL DESIGNATION [See IS : 1762 (Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
F. Ball Bearing Steels				
103Cr4 (103Cr1)	Grey	—	—	IS : 4398
103Cr6 (103Cr2)	Grey	Green	—	IS : 4398
105Cr5 (105Cr1Mn60)	Grey	Yellow	—	IS : 2507, 3195, 3431, 3930, 4398
G. Creep Resisting Steels				
10Mo6 (10Mo55)	Orange	Black	—	—
20Mo6 (20Mo55)	Orange	Blue	—	IS : 2041
33Mo6 (33Mo55)	Orange	Green	—	—
21Cr4Mo3 (21Cr1Mo28)	Orange	Red	—	IS : 4367, 4368
07Cr4Mo6 (07Cr90Mo 55)	Orange	White	—	IS : 4367
15Cr4Mo6 (15Cr90Mo55)	Orange	Aluminium paint	—	IS : 2611
40Cr5Mo6 (40Cr1Mo60)	Orange	Red	—	—
10Cr9Mo10 (10Cr2Mo1)	Orange	Green	—	IS : 4367, 4368
15Cr13Mo6 (15Cr3Mo55)	Orange	Yellow	—	IS : 5517
25Cr20Mo6 (25Cr5Mo55)	Orange	Brown	—	IS : 4367, 4368, 5517, 7494
10Cr20Mo6 (10Cr5Mo55)	Orange	Violet	—	—
20Cr20Mo6 (20Cr5Mo55)	Orange	Grey	—	—
35Cr5Mo6V2 (35Cr1Mo65V25)	Orange	Pink	—	—

*Code for designation of steels: Part I Based on letter symbols (*first revision*).

**TABLE 8 COLOUR CODE FOR SCHEDULE V [See IS : 1570 (Part V)-1972*]
HIGH ALLOY STEELS, STAINLESS AND HEAT RESISTING STEELS**

(Clauses 5.4, 6.1, 6.2, 6.3, 6.4 and 6.5)

STEEL DESIGNATION [See IS : 1762 (Part I)- 1974†]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
X04Cr13 (04Cr13)	Pink	Blue	—	IS : 6527, 6528, 6529, 6603, 6911
X12Cr13 (12Cr13)	Pink	Orange	—	IS : 6527, 6528, 6529, 6603, 6911
X20Cr13 (20Cr13)	Pink	Green	—	IS : 6529, 6603, 6911
X30Cr13 (30Cr13)	Pink	Red	—	IS : 6529, 6603, 6911
X40Cr13 (40Cr13)	Pink	Grey	—	IS : 6529, 6603, 6911
X05Cr17 (05Cr17)	Pink	Black	—	IS : 5522, 6527, 6528, 6529, 6603, 6911
X15Cr16Ni2 (15Cr16Ni2)	Pink	Violet	—	IS : 6529, 6603, 6911
X105Cr18Mo (105Cr18Mo50)	Pink	Brown	—	IS : 6529, 6603, 6911
X02Cr18Ni11 (02Cr18Ni11)	Pink	Blue	White	IS : 6527, 6528, 6529, 6603, 6911
X04Cr15Ni11 (04Cr18Ni11)	Pink	—	—	IS : 5522, 6527, 6528, 6529, 6911, 6603
X07Cr18Ni9 (07Cr18Ni9)	Pink	Aluminium paint	—	IS : 5522, 6527, 6528, 6529, 6603, 6911
X10Cr17Ni7 (10Cr17Ni7)	Pink	Blue	Orange	IS : 6527, 6528, 6529, 6603, 6911
X04Cr18Ni10Ti (04Cr18Ni18Ti20)	Pink	White	—	IS : 6529, 6603, 6911
X04Cr18Ni10Nb (04Cr18Ni10Nb40)	Pink	Black	White	IS : 6529, 6603, 6911
X04Cr17Ni12Mo2 (04Cr17Ni12Mo2)	Pink	Yellow	—	IS : 5522, 6527, 6528, 6529, 6603, 6911
X02Cr17Ni12Mo2 (02Cr17Ni12Mo2)	Pink	Green	White	IS : 6527, 6528, 6529, 6603, 6911
X04Cr17Ni12Mo2 (04Cr17Ni12Mo2Ti20)	Pink	Orange	White	IS : 6529, 6603, 6911
X10Cr17Mn6Ni4N (10Cr17Mn6Ni4N20)	Pink	Red	White	IS : 6527, 6528, 6529, 6603, 6911
X15Cr25N (15Cr25N20)	Pink	Grey	White	—
X15Cr25Ni13 (15Cr25Ni13)	Pink	Violet	White	—
X20Cr25Ni20 (20Cr25N20)	Pink	Brown	White	—
X45Cr9Si4 (45Cr9Si4)	Pink	Green	Blue	IS : 7494
X80Cr20Si2Ni1 (80Cr20Si2Ni1)	Pink	Red	Yellow	IS : 7494

*Schedules for wrought steels for general engineering purposes: Part V Stainless and heat resisting steels (*first revision*).

†Code for designation of steels: Part I Based on letter symbols (*first revision*).

**TABLE 9 COLOUR CODE FOR SCHEDULE VI
(CARBON AND ALLOY TOOL STEELS)**

(Clauses 5.4, 6.1, 6.2, 6.3, 6.4 and 6.5)

STEEL DESIGNATION [See IS : 1762 (Part I)- 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
50T8 (T50)	Aluminium paint	—	—	IS : 3749
55T8 (T55)	Aluminium paint	White	—	IS : 3749
60T6 (T60)	Aluminium paint	White	Blue	IS : 3749, 5518
65T5 (T65)	Aluminium paint	White	Green	IS : 3749
70T6 (T70Mn <u>65</u>)	Aluminium paint	White	Red	IS : 3749
75T6 (T75)	Aluminium paint	White	Yellow	IS : 3749
80T6 (T80Mn <u>65</u>)	Aluminium paint	White	Violet	IS : 3749
85T6 (T85)	Aluminium paint	White	Orange	IS : 3749
70T3 (T70)	Aluminium paint	White	Black	IS : 3749, 3930
80T3 (T80)	Aluminium paint	White	Grey	IS : 3749
90T3 (T90)	Aluminium paint	Orange	—	IS : 3749
103T3 (T103)	Aluminium paint	Orange	White	IS : 3749
118T3 (T118)	Aluminium paint	Orange	Blue	IS : 3749
133T3 (T133)	Aluminium paint	Red	White	IS : 3749
T80V2 (T80V <u>23</u>)	Aluminium paint	Red	Green	IS : 3749
T90V2 (T90V <u>23</u>)	Aluminium paint	Red	Blue	IS : 3749
T103V2 (T103V <u>23</u>)	Aluminium paint	Orange	Green	IS : 3749
T118Cr4 (T118Cr <u>45</u>)	Aluminium paint	Orange	Grey	IS : 3749

*Code for designation of steels: Part I Based on letter symbols (*first revision*).

(Continued)

**TABLE 9 COLOUR CODE FOR SCHEDULE VI
(CARBON AND ALLOY TOOL STEELS) — Contd**

STEEL DESIGNATION [See IS : 1762 (Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
T133Cr4 (T133Cr <u>45</u>)	Aluminium paint	Orange	Blue	IS : 3749
T55Cr3 (T55Cr <u>70</u>)	Aluminium paint	Orange	Violet	IS : 3749
T45Cr5Si3 (T45Cr1Si <u>95</u>)	Aluminium paint	Pink	—	IS : 3749
T55Cr3V2 (T55Cr70V <u>15</u>)	Aluminium paint	Pink	Green	IS : 3749
T50Cr4V2 (T50Cr1V <u>23</u>)	Aluminium paint	Pink	Red	IS : 3749
T105Cr5 (T105Cr <u>1</u>)	Aluminium paint	Pink	Brown	IS : 3749
T105Cr5Mn (T105Cr1Mn <u>60</u>)	Aluminium paint	Pink	Yellow	IS : 3749
T90Mn6WCr2 (T90Mn2W50Cr <u>45</u>)	Aluminium paint	Blue	—	IS : 3749, 4430
T55Si7 (T55Si2Mn <u>90</u>)	Aluminium paint	Blue	White	IS : 3749
T55Si7Mo3 (T55Si2Mn90Mo <u>33</u>)	Aluminium paint	Blue	Green	IS : 3749
T60Ni5 (T60Ni <u>1</u>)	Aluminium paint	Blue	Yellow	IS : 3749, 5518
T40Ni14 (T40Ni <u>3</u>)	Aluminium paint	Blue	Red	IS : 3749
T30Ni16Cr5 (T30Ni4Cr <u>1</u>)	Aluminium paint	Blue	Brown	IS : 3749, 4430
T55Ni6CrMo3 (T55Ni2Cr65Mo <u>30</u>)	Aluminium paint	Green	White	IS : 3749, 4430
T40Ni6Cr4Mo3 (T40Ni2Cr1Mo <u>28</u>)	Aluminium paint	Green	Yellow	IS : 3749
T31Ni10Cr3Mo6 (T31Ni3Cr65Mo <u>55</u>)	Aluminium paint	Green	Blue	IS : 3749
T40Ni10Cr3Mo6 (T40Ni3Cr65Mo <u>55</u>)	Aluminium paint	Green	Orange	IS : 3749

*Code for designation of steels: Part I Based on letter symbols (first revision).

(Continued)

**TABLE 9 COLOUR CODE FOR SCHEDULE VI
(CARBON AND ALLOY TOOL STEELS) — Contd**

STERL DESIGNATION [See IS : 1762 (Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
T35Cr20Mo14V3 (T35Cr5Mo1V30)	Aluminium paint	Green	Pink	IS : 3748
T35Cr20Mo14V11 (T35Cr5MoV1)	Aluminium paint	Green	—	IS : 3748
T35Cr20Mo14W6V3 (T35Cr5MoW1V30)	Aluminium paint	Red	—	IS : 3748
T40W8Cr5V2 (T40W2Cr1V18)	Aluminium paint	Red	Orange	IS : 3749, 5651
T50W8Cr5V2 (T50W2Cr1V18)	Aluminium paint	Red	Yellow	IS : 3749, 5651
T105W6CrV2 (T105W2Cr60V25)	Aluminium paint	Black	—	IS : 3749
T110W6Cr4 (T110W2Cr1)	Aluminium paint	Black	White	IS : 3749
T140W15Cr2 (T140W4Cr50)	Aluminium paint	Black	Green	—
XT160Cr12 (T160Cr12)	Aluminium paint	Black	Blue	IS : 3749
XT215Cr12 (T215Cr12)	Aluminium paint	Black	Red	IS : 3749, 4430
XT33W9Cr3V (T33W9CrV35)	Aluminium paint	Brown	—	IS : 3748, 5651
XT55W15Cr3V (T55W14Cr3V45)	Aluminium paint	Brown	White	IS : 3748
XT70W14Cr4V (T70W14Cr4V75)	Aluminium paint	Brown	Blue	—
XT123W14Co5V4 (T123W14Co5V4)	Aluminium paint	Brown	Green	—
XT70W18Cr4V1 (T70W18Cr4V1)	Aluminium paint	Brown	Red	IS : 5651, 7291
XT75W18Co6Cr4VMo1 (T75W18Co6Cr3V1 Mo75)	Aluminium paint	Brown	Pink	IS : 7291
XT75W18Co10Cr4V2 Mo1 (T75W18Co10Cr4V2 Mo1)	Aluminium paint	Brown	Violet	—

*Code for designation of steels: Part I Based on letter symbols (first revision).

(Continued)

**TABLE 9 COLOUR CODE FOR SCHEDULE VI
(CARBON AND ALLOY TOOL STEELS) — Contd**

STEEL DESIGNATION [See IS : 1762 (Part I) - 1974*]	BASE COLOUR	FIRST COLOUR BAND	SECOND COLOUR BAND	REFERENCE TO INDIAN STANDARD
(1)	(2)	(3)	(4)	(5)
XT83MoW6Cr4V2 (T83MoW6Cr4V2)	Aluminium paint	Yellow	—	IS : 7291
10T4 (T10)	Aluminium paint	Yellow	Green	IS : 4430
T15Cr3 (T15Cr65)	Aluminium paint	Yellow	Blue	IS : 4430
T10Cr20Mo8V2 (T10Cr5Mo75V23)	Aluminium paint	Yellow	Black	IS : 4430
T16Ni3Cr2 (T16Ni80Cr60)	Aluminium paint	Yellow	Pink	IS : 4430
T15Ni5Cr4Mo1 (T15NiCr1Mo12)	Aluminium paint	Yellow	Red	IS : 4430
T16Ni8Cr6Mo2 (T16NiCr2Mo20)	Aluminium paint	Yellow	Violet	IS : 4430

*Code for designation of steels: Part I Based on letter symbols (*first revision*).

6. APPLICATION

6.1 The base colour band shall normally be (with the exception of Table 3) painted on the full cross section of the product. The first and second bands, where applicable, as specified in Tables 3 to 9, shall be painted as stripes on the base colour. The first band shall be wider and the second band shall be narrower. The wider bands shall be approximately equal to twice the narrower band. A gap approximately equal to the width of the narrower band shall be maintained between the successive bands.

6.2 Bars, Rods, Tubes and Sections — If the material is bundled, the appropriate colour bands as given in Tables 3 to 9 shall be applied on one end of the product in the form of a band. Notwithstanding the provisions of 6.2, the colour code has to be applied to each and every product greater than 25 mm diameter or size in the case of alloy and high carbon steel and greater than 32 mm in the case of mild steel (*see* Fig. 5).

NOTE — Additional colour coding as given in 5.3 may also be painted if agreed to between the manufacturer and the purchaser.

6.2.1 In case of tubes, the colour bands shall be painted on the body of the products as well as on the ends (*see* Fig. 6).

6.3 Blooms, Billets, Ingots, Slabs, etc — The appropriate colour bands as specified in Tables 3 to 9 shall be painted at one end (*see* Fig. 7 and 8).

6.4 Sheets and Plates — When stacked one over the other, the full colour code where applicable, as specified in Tables 3 to 9, shall be painted on one end or side of the stack whichever is convenient (*see* Fig. 9).

6.5 Strips — When stacked one over the other, the full colour band where applicable, as specified in Tables 3 to 9, shall be painted on one end of the stack (*see* Fig. 10). When the strip is in the form of a coil, appropriate colour code, if applicable, as specified in Tables 3 to 9, shall be painted at the face or side of the coil preferably at two locations (*see* Fig. 10 and 11).

6.6 Wires and Wire Rods — When supplied in straight length, the colour coding shall be done as in the case of bars and sections (*see* 6.2). When supplied in coil form, the colour coding shall be done as in the case of strip (*see* Fig. 12).

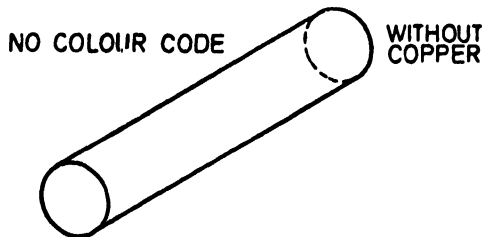


FIG. 1 COLOUR CODING OF STRUCTURALS AND BARS
(MATERIAL Fe410S TO IS : 226).

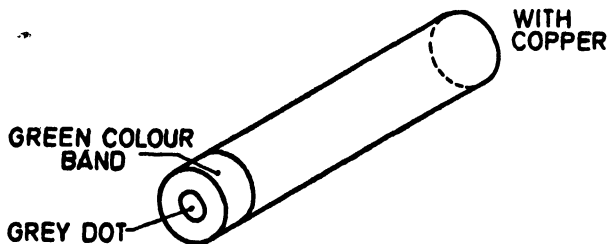
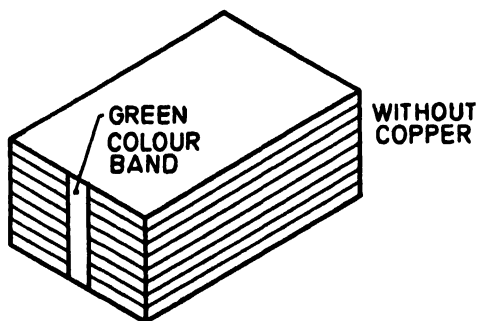
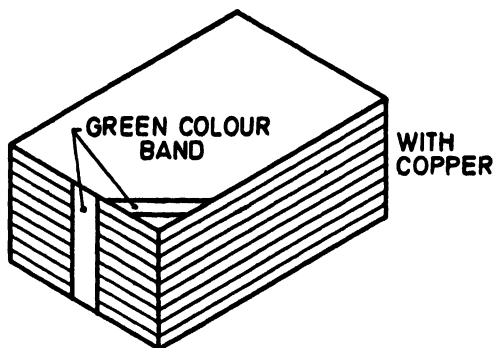


FIG. 2 COLOUR CODING OF STRUCTURALS AND BARS
(MATERIAL Fe410CuS TO IS : 226)

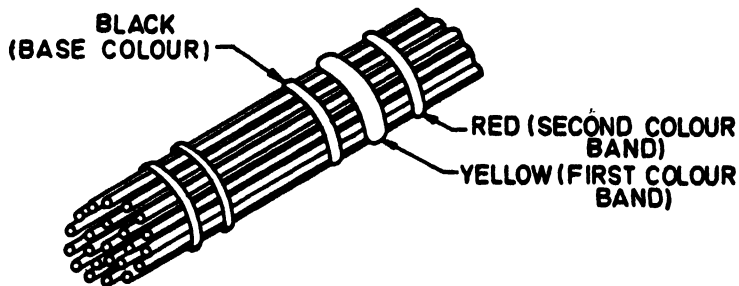
NOTE — A dot of minimum diameter of 25 mm shall be painted at one end of the product by dabbing the paint with a suitable size brush. For products below 32 mm size, the colour code should be painted in the form of a band on one side of the product (*see* Fig. 1 and 2).



**FIG. 3 COLOUR CODING OF SHEET, STRIP OR PLATE
(MATERIAL Fe410W TO IS : 2062)**

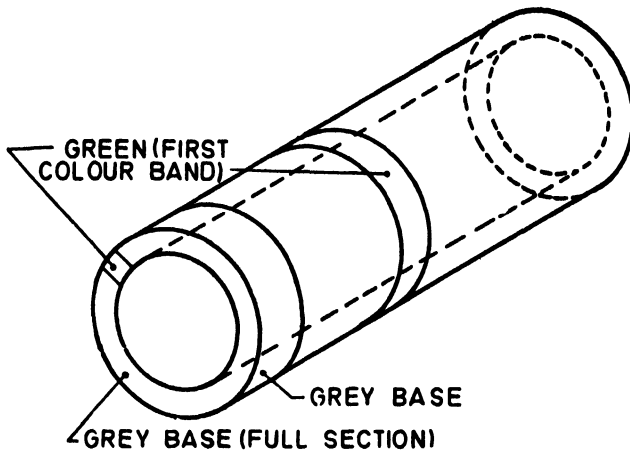


**FIG. 4 COLOUR CODING OF SHEET, STRIP OR PLATE
(MATERIAL Fe410CuW TO IS : 2062)**

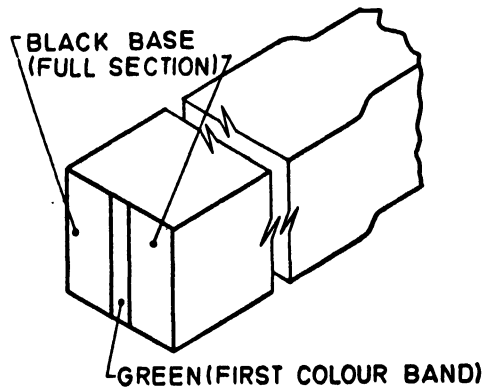


NOTE — Colour code should be painted on one side of the bundle in the form of a band as shown.

**FIG. 5 COLOUR CODING OF SMALL RODS IN BUNDLES
(MATERIAL 98C6 ACCORDING TO IS : 3195-1975)**



**FIG. 6 COLOUR CODING OF TUBE
(MATERIAL 103Cr6 ACCORDING TO IS : 4398-1972)**



**FIG. 7 COLOUR CODING OF BILLETS, BLOOMS, SLABS, ETC
(MATERIAL 30C8 ACCORDING TO IS : 1875-1978)**

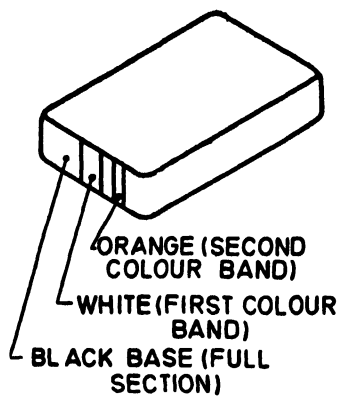


FIG. 8 COLOUR CODING OF SLAB
(MATERIAL 15C4 ACCORDING TO IS : 1570-1961)

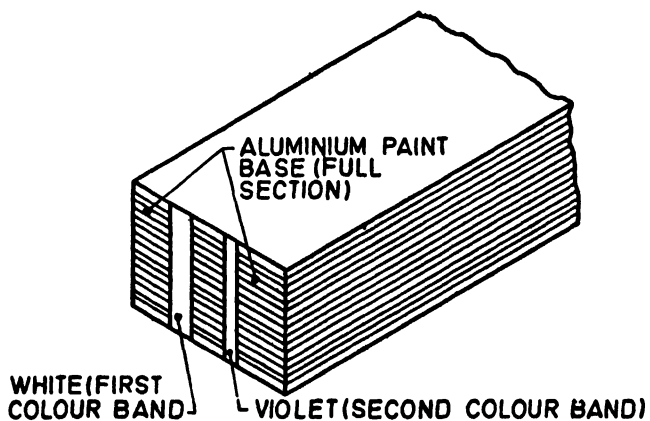


FIG. 9 COLOUR CODING OF A PILE OF SHEET/PLATES
(MATERIAL 85T6 ACCORDING TO IS : 1570-1961)

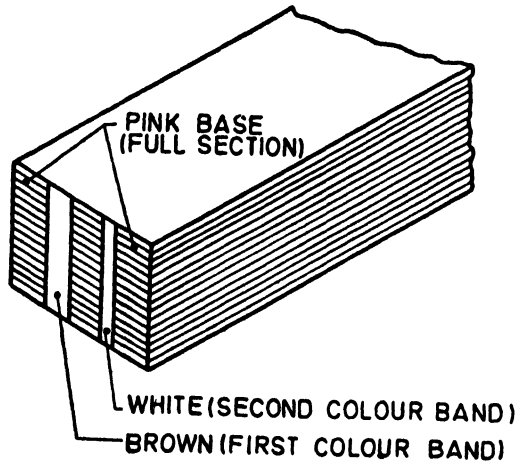


FIG. 10 COLOUR CODING OF A PILE OF STRIPS
[MATERIAL X20Cr25Ni20 ACCORDING TO IS : 1570 (Part V)-1972]

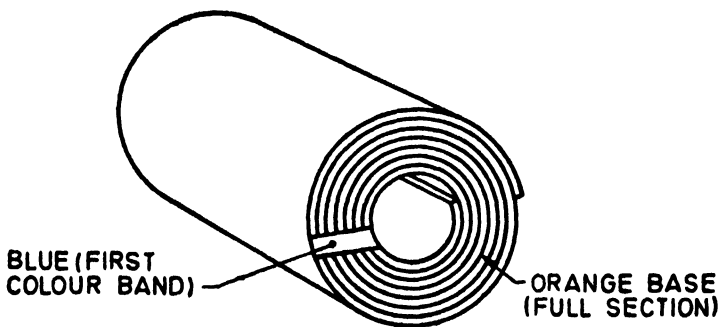
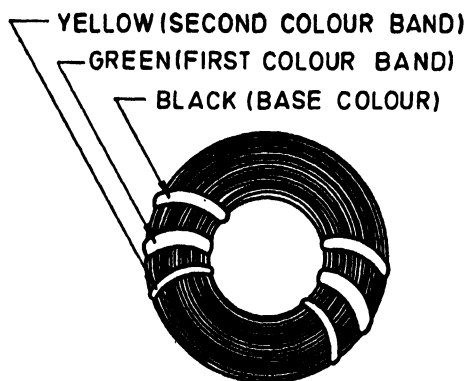


FIG. 11 COLOUR CODING OF STRIP IN COIL FORM
(MATERIAL 20Mo6 ACCORDING TO IS : 1570-1961)



**FIG. 12 COLOUR CODING OF WIRE OR WIRE ROD IN COILS
(MATERIAL 70C6 ACCORDING TO IS : 1570-1961)**

APPENDIX A

(Clause 0.2)

TITLES OF INDIAN STANDARDS WHERE COLOUR CODE MAY BE APPLICABLE

IS:

- 226-1975** Specification for structural steel (standard quality) (*fifth revision*)
- 432** Specification for mild steel and medium tensile steel bars and hard-drawn steel wire for concrete reinforcement
- 432 (Part I)-1966** Mild steel and medium tensile steel bars (*second revision*)
- 432 (Part II)-1966** Hard drawn steel wire (*second revision*)
- 961-1975** Specification for structural steel (high tensile) (*second revision*)
- 1079-1973** Specification for hot-rolled carbon steel sheet and strip (*third revision*)
- 1148-1973** Specification for rivet bars up to 40 mm for structural purposes (*second revision*)

IS:

- 1149-1973** Specification for high tensile rivet bars for structural purposes (*second revision*)
- 1812-1973** Specification for carbon steel wire for manufacture of wood screws (*first revision*)
- 1875-1978** Specification for carbon steel billets, blooms, slabs and bars for forgings (*fourth revision*)
- 1977-1975** Specification for structural steel (ordinary quality) (*second revision*)
- 2004-1978** Specification for carbon steel forgings for general engineering purposes (*second revision*)
- 2041-1962** Specification for steel plates for pressure vessels
- 2062-1969** Specification for structural steel (fusion welding quality) (*first revision*)
- 2100-1970** Specification for steel billets, bars and sections for boilers (*first revision*)
- 2507-1973** Specification for cold-rolled steel strip for springs (*first revision*)
- 2831-1975** Specification for carbon steel billets, blooms and slabs for re-rolling into structural steel (ordinary quality) (*second revision*)
- 2879-1975** Specification for mild steel for metal arc welding electrode core wire (*second revision*)
- 3039-1965** Specification for structural steel (shipbuilding quality)
- 3195-1975** Specification for steel for the manufacture of volute and helical springs (for railway rolling stock) (*first revision*)
- 3431-1975** Specification for steel for the manufacture of volute helical and laminated springs for automotive suspension (*first revision*)
- 3445-1966** Specification for forged steel rolls
- 3503-1966** Steel for marine boilers, pressure vessels and welded machinery structures
- 3748-1978** Specification for tool and die steels for hot work (*first revision*)
- 3749-1978** Specification for tool and die steels for cold work (*first revision*)
- 3885 (Part I)-1977** Specification for steel for the manufacture of laminated springs (railway rolling stock): Part I Flat sections (*first revision*)
- 3885 (Part II)-1969** Specification for steel for the manufacture of laminated springs (railway rolling stock): Part II Rib and groove sections
- 3930-1966** Specification for flame and induction hardening steels

IS : 2049 - 1978

IS:

- 4367-1967** Specification for alloy and tool steel forgings for general industrial use
- 4368-1967** Specification for alloy steel billets, blooms and slabs for forgings for general engineering purposes
- 4397-1972** Specification for cold-rolled carbon steel strips for ball and roller bearing cages (*first revision*)
- 4398-1972** Specification for carbon-chromium steel for the manufacture of balls, rollers and bearing races (*first revision*)
- 4430-1979** Specification for mould steels (*first revision*)
- 4431-1978** Specification for carbon and carbon-manganese free cutting steels (*first revision*)
- 4432-1967** Specification for case hardening steels
- 4882-1968** Specification for low-carbon steel wire for rivets for use in bearing industry
- 5272-1969** Specification for carbon steel sheets for integral coaches
- 5489-1969** Specification for carburising steels for use in bearing industry
- 5517-1978** Specification for steels for hardening and tempering (*first revision*)
- 5522-1978** Specification for stainless steel sheets, coils and circles for utensils and hospitalware (*first revision*)
- 5651-1970** Specification for steel for pneumatic tools
- 5986-1970** Specification for hot-rolled steel plates and flats for cold-forming and flanging operations
- 6528-1972** Specification for stainless steel wire
- 6914-1973** Specification for carbon steel cast billet ingots for rolling into structural steel (standard quality)
- 6915-1973** Specification for carbon steel cast billet ingots for rolling into structural steel (ordinary quality)
- 6967-1973** Specification for steel for electrically welded round link chains
- 7226-1974** Specification for cold-rolled, medium high carbon and low alloy steel strip for general engineering purposes
- 7283-1974** Specification for hot-rolled bars for production of bright bars
- 7291-1974** Specification for high speed tool steels
- 7494-1974** Specification for steel for valves for internal combustion engines

IS:

- 8051-1976** Specification for steel ingots and billets for the production of volute, helical and laminated springs for automotive suspension
- 8052-1976** Specification for steel ingots and billets for the production of volute and helical springs (for railway rolling stock)
- 8054-1976** Specification for steel ingots and billets for the production of laminated springs (railway rolling stock)
- 8055-1976** Specification for steel ingots and billets for the production of spring washers
- 8500-1977** Specification for weldable structural steel (medium and high strength qualities)

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Seth Bhawan, 2nd Floor, Behind Leela Cinema, Naval Kishore Road, LUCKNOW 226001 21 89 23

NIT Building, Second Floor, Gokulpat Market, NAGPUR 440010 52 51 71

Patliputra Industrial Estate, PATNA 800013 26 28 08

First Floor, Plot Nos. 657-660, Market Yard, Gultekdi, PUNE 411037 426 86 59

'Sahajanand House' 3rd Floor, Bhaktinagar Circle, 80 Feet Road, RAJKOT 360002 37 82 51

T.C. No. 14/1421, University P. O. Palayam, THIRUVANANTHAPURAM 695034 32 21 04

*Sales Office is at 5 Chowringhee Approach, P.O. Princep Street, CALCUTTA 700072 237 10 85

†Sales Office is at Novelty Chambers, Grant Road, MUMBAI 400007 309 65 28

‡Sales Office is at 'F' Block, Unity Building, Narashimaraaja Square, BANGALORE 560002 222 39 71

AMENDMENT NO. 1 NOVEMBER 1980

TO

IS:2049-1978 COLOUR CODE FOR THE IDENTIFICATION OF
WROUGHT STEELS FOR GENERAL ENGINEERING PURPOSES

(First Revision)

Alteration

(Page 9, Table 5, col 5, sixth entry) - Substitute
'IS:1812, IS:2255 and IS:8057' for 'IS:1812'.

Addenda

(Page 18, clause 6.1) - Add the following new
clause after 6.1:

'6.1.1 In case of plates, sheets and coils, base colour may also be applied in the form of a band instead of painting full section. The first and second colour bands need not be superimposed on the base colour but may be applied as successive bands away from the base colour separated by a gap approximately equal to the width of the narrower band.'

(Pages 25 and 27, Appendix A) - Add the following new matter at the appropriate places:

'2255-1977 Specification for mild steel wire rod for the manufacture of machine screws (by cold heading process) (*second revision*).

8057-1976 Specification for steel ingots and billets for the production of wire rod for the manufacture of machine screws (by cold heading process).'

(SMDC 1)