

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

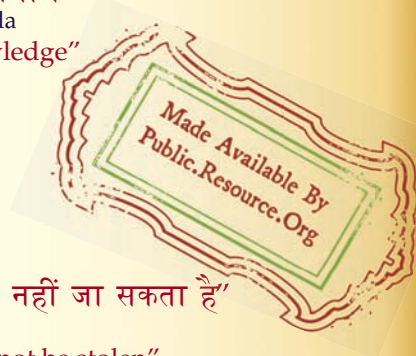
IS 2379 (1990): Colour code for identification of pipe lines [MED 17: Chemical Engineering Plants and Related Equipment]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



भारतीय मानक
पाइप लाइनों की पहचान के लिए रंग-संकेत
(पहला पुनरीक्षण)

Indian Standard

PIPELINES — IDENTIFICATION — COLOUR
CODE

(*First Revision*)

First Reprint OCTOBER 1992

UDC 621'643'006'8 : 621 - 777'6

© BIS 1991

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

March 1991

Price Group 5

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards on 27 March 1990, after the draft finalized by the Chemical Engineering Plants and Related Equipment Sectional Committee had been approved by the Heavy Mechanical Engineering Division Council.

Lack of uniformity of colour coding of pipelines in industrial installations has often been responsible for destruction of property and injury to personnel due to faulty manipulations of valves, particularly when outside agencies, like fire-fighting squads, are called in. Uniformity of colour marking promotes greater safety, lessens the chances of error and reduces hazards involved in the handling of material inside the pipelines.

Identification of the particular contents of the pipelines is achieved by imposing suitable colour bands on the ground colour. Lettering, as a mode of identification, is also recommended for chemical industry as this will reduce the possibility of mistakes in identification. Lettering may include the contents by name, chemical formula, or by unmistakable and commonly understood abbreviations.

This standard was first published in 1963. The present revision is based on the prevailing practices in the industry. In this revision use of legends have been recommended for various types of hazards. Hydrocarbon, Naptha and some more chemicals and allied products have been included in the standard. The title of the standard is also revised to bring it in line with the latest guidelines.

In the formulation of this standard assistance has been derived from the following publications:

- | | |
|-----------------|--|
| BS 1710 : 1984 | Specification for identification of pipelines and services. British Standards Institution. |
| ASA A 13.1-1981 | Scheme for the identification of piping systems, American National Standards Institute. |

Indian Standard

PIPELINES — IDENTIFICATION — COLOUR CODE

(First Revision)

1 SCOPE

This Indian standard covers the colour scheme for the identification of the contents of pipelines carrying fluids in domestic and public buildings and such industrial installations where a specific colour code does not exist.

1.1 For the purpose of this standard, piping systems shall include pipes of any kind and in addition fittings, valves, and pipe coverings. Supports, brackets or other accessories are specifically excluded from application of this standard.

1.2 This standard is not applicable to pipelines buried underground or used for electrical services.

2 REFERENCES

2.1 The following Indian standards are necessary adjuncts to this standard:

| IS No. | Title |
|-------------|--|
| 5 : 1978 | Colours for ready mixed paints and enamels (<i>third revision</i>) |
| 2339 : 1963 | Aluminium paint for general purposes, in dual container |

3 TERMINOLOGY

3.0 For the purpose of this standard, the following definitions shall apply.

3.1 Hazard

Risk involved to life, health, or property due to the poisonous nature of combustibility or other causes of dangerous substances.

3.2 Lettering

Painting, labelling, stencilling or otherwise indicating the contents of a pipeline.

3.3 Identification of Pipelines

A scheme consisting of a colour code or lettering or a combination of both intended for the identification of the contents of the pipelines.

3.4 Pipes and Pipelines

Any fluid-carrying media in the form of pipes, or conduits, with their coverings; this excludes media used for the pneumatic conveyance of solids.

4 PAINTS

4.1 Appropriate quality of paints conforming to relevant Indian Standards, shall be used for colour marking.

4.2 It is recommended that the paints used should produce a glossy finish.

5 COLOURS

5.1 In order to identify the contents of the pipelines, a large number of colour shades are required. Recommendation regarding shades of colours that may be used are given in IS 5 : 1978.f

6 IDENTIFICATION

The system of colour coding consists of a ground colour and colour bands superimposed on it.

6.1 Ground Colours

The ground colour identifies the basic nature of the fluid carried (*see* Fig. 1) and also distinguishes one fluid from another, for example water from oil. The various ground colours are indicated in Table 1.

6.1.1 Ground colour shall be applied throughout the entire length for uninsulated pipes, for insulated pipes, on the metal cladding or on the pipes of material such as non-ferrous metals, austenitic stainless steel, plastic, etc, ground colour coating of minimum 2 m length or of adequate length, not to be mistaken as colour band, shall be applied.

6.2 Colour Bands

Colour bands are superimposed on the ground colour (*see* Fig. 2) to distinguish:

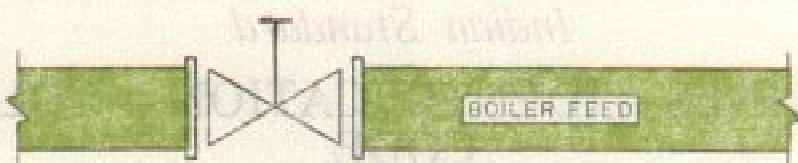
- One kind or condition of a fluid from another kind or condition of the same fluid, or
- One fluid from another but belonging to the same group, for example carbon monoxide from coke oven gas or diesel fuel from furnace fuel.

7 APPLICATION

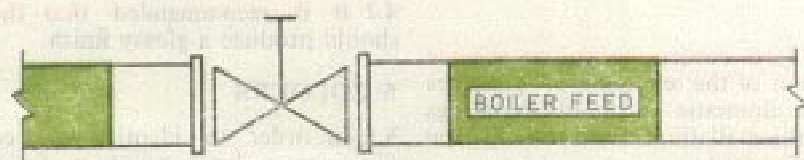
7.1 Ground Colour

Colours as given in Table 1 shall be applied in one of the following ways:

- Throughout the entire length (*see* Fig. 1A);
- As a colour coating of adequate length, (but in no case less than 300 mm) so that it is not mistaken for a colour band (*see* Fig. 1B);
- As a colour panel;
- On a label attached to the pipe; or
- By the use of coloured adhesive tapes of suitable material.



1A Ground Colour—Applied to Full Section



1B Ground Colour—Applied to a Portion Only

FIG. 1 GROUND COLOUR

Table 1 Ground Colours
(Clauses 6.1 and 7.1)

| Substance | Colour |
|---|----------------------|
| Water | Sea green |
| Steam | Aluminium to IS 2339 |
| Mineral, vegetable and animal oils, combustible liquids | Light brown |
| Acids | Dark violet |
| Air | Sky blue |
| Gases | Canary yellow |
| Alkalies | Smoke grey |
| Other liquids/gases which do not need identification | Black |
| Hydrocarbons/organic compounds | Dark admiralty grey |

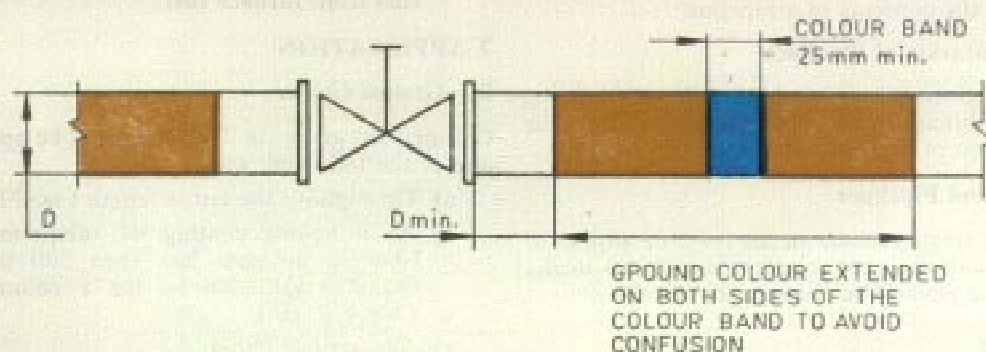


FIG. 2 COLOUR BAND SUPERIMPOSED ON GROUND COLOUR

7.2 Wherever the ground colour is not applied throughout the entire length, it shall be applied near valves, junctions, joints, service appliances, bulkheads, walls, etc (see Fig. 3).

7.2.1 When colour bands are superimposed on the ground colour, the ground colour shall extend sufficiently on both sides of the colour bands to avoid confusion (see Fig. 2 and 3).

7.3 Colour Bands

They shall be superimposed on ground colour at the following location:

- At battery limit points;
- Intersection points and change of direction points in piping ways;
- Other points such as midway of each piping way, near valves, junction joints of service appliances, walls, on either side of pipe culverts;
- For long stretch yard piping at 50 m interval; and
- At start and terminating points.

7.3.1 Colour bands shall be arranged in the sequence shown in Tables 2 to 5, and the sequence follows the direction of flow (see Fig. 3). For example, Fig. 3 shows the colour code for a pipe carrying freon where the light grey and dark violet colour bands have sequence numbers 1 and 2.

7.3.2 The relative proportional widths of the first colour band to the subsequent bands shall be 4 : 1 (see Fig. 3).

7.3.3 As a rule minimum width of colour band shall conform to the following Table:

| Nominal Pipe Size | Width L (mm) |
|--------------------------|--------------|
| 80 NB and below | 25 |
| Over 100 NB up to 150 NB | 50 |
| Over 200 NB up to 300 NB | 75 |
| Over 350 NB | 100 |

For insulated pipes, nominal pipe size means the outside diameter of insulation.

7.4 Valves shall be painted with the same colour as the main pipelines except when the pipeline has been provided with the safety colour, the valves shall be painted red, for fire fighting; yellow, with black diagonal stripes, for warning of danger; and french blue in conjunction with the green basic colour, to denote pipes carrying fresh water, either potable or non-potable.

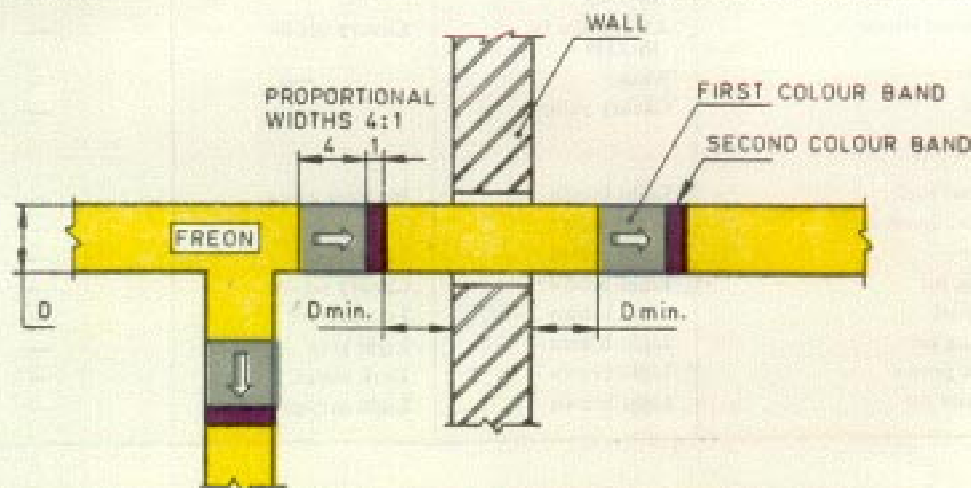
7.5 The colour coding as prescribed in this standard and as applicable to pipelines for general services, pipelines conveying industrial gases hydrocarbons and naptha and pipelines conveying medical gases are given in Tables 2, 3, 4 and 5 respectively.

7.6 All uninsulated pipes having temperatures above 100°C (Heat resistant Aluminium painted) need not be identified with colour bands. As special case if required colour bands may be applied using Teflon Tape.

8 HAZARDS

8.1 When it is desired to indicate that a pipeline carries a hazardous material, a panel of colour of suitable width (minimum 100 mm) as given below shall be superimposed on the ground colour at suitable intervals:

- Slightly Radioactive Hazards* — A base colour of jasmine yellow with black dots suitably superimposed (see Fig. 4A);
- Highly Radioactive Hazards* — A base colour of light orange with cross diagonal stripes of black colour, suitably superimposed (see Fig. 4B); and
- Other Hazards* — Equal diagonal stripes of black and golden yellow colours (see Fig. 4C). Different legends for various types of hazards other than radioactivity like that for flammable or explosive materials, chemically active or toxic materials, etc, may be indicated by lettering.



NOTE — Arrows indicate the direction of flow.

FIG. 3 COLOUR BANDS ON GROUND COLOUR—FLUID CARRIED, FREON

Table 2 Colour Code for General Services
(Clauses 7.5 and 9.1)

| Contents | Ground Colour | First Colour Band | Second Colour Band |
|---|----------------------|-------------------|--------------------|
| WATER: | | | |
| Cooling | Sea green | French blue | — |
| Boiler feed water | Sea green | Gulf red | — |
| Condensate | Sea green | Light brown | — |
| Drinking | Sea green | French blue | Signal red |
| Treated | Sea green | Light orange | — |
| Fire water | Fire red | Crimson red | — |
| Central heating below 60°C | Sea green | Canary yellow | — |
| Central heating 60°C to 100°C | Sea green | Dark violet | — |
| Central heating above 100°C | Sea green | Dark violet | Signal red |
| Cold water down service from storage tanks | Sea green | French blue | Canary yellow |
| Domestic, hot | Sea green | Light grey | — |
| Hydraulic power | Sea green | Black | — |
| Sea, river, untreated | Sea green | White | — |
| Filtered water | Sea green | Light brown | — |
| Soft water | Sea green | Light brown | Signal red |
| Warm water | Sea green | Light grey | Canary yellow |
| Chilled water | Sea green | Black | Canary yellow |
| Sprinkle and hydrant water | Sea green | White | Signal red |
| Waste water | Sea green | Canary yellow | Signal red |
| AIR: | | | |
| Compressed, up to and including 15 kg/cm ² | Sky blue | — | — |
| Compressed to over 15 kg/cm ² | Sky blue | Signal red | — |
| Plant air | Sky blue | Silver grey | — |
| Instrument air | Sky blue | French blue | — |
| Dry vacuum | White | — | — |
| Wet vacuum | White | Dark violet | — |
| Very high pressure steam | Aluminium to IS 2339 | Signal red | — |
| High pressure steam | Aluminium to IS 2339 | French blue | — |
| Medium pressure steam | Aluminium to IS 2339 | Gulf red | — |
| Low pressure steam | Aluminium to IS 2339 | Canary yellow | — |
| Drainage | Black | — | — |
| Town gas | Canary yellow | — | — |
| OILS: | | | |
| Light diesel fuel | Light brown | Brilliant green | — |
| High speed diesel fuel | Light brown | — | — |
| Paraffin oil | Light brown | Signal red | — |
| Quenching oil | Light brown | Canary yellow | — |
| Furnace fuel | Light brown | French blue | — |
| Lubricating oil | Light brown | Light grey | — |
| Hydraulic power | Light brown | Dark violet | — |
| Transformer oil | Light brown | Light orange | — |

Table 3 Colour Code for Industrial Gases
(Clauses 7.5 and 9.1)

| Contents | Ground Colour | First Colour Band | Second Colour Band |
|---|---------------|-------------------|--------------------|
| Ammonia | Canary yellow | Dark violet | — |
| Chlorine | Canary yellow | Dark violet | Light orange |
| Hydrocyanic acid | Canary yellow | Dark violet | Post office red |
| Phenole | Canary yellow | Dark violet | Smoke grey |
| Sulphur dioxide | Canary yellow | Dark violet | Golden brown |
| Acetylene | Canary yellow | Service brown | — |
| Flare gases | Canary yellow | — | — |
| Hydrogen sulphide | Canary yellow | Gulf red | — |
| Argon | Canary yellow | French blue | — |
| Benzole | Canary yellow | Dark violet | French blue |
| Blast furnace gas | Canary yellow | Signal red | Light grey |
| Butane | Canary yellow | Signal red | — |
| Coal gas | Canary yellow | Signal red | Brilliant green |
| Carbon dioxide (temperate) | Canary yellow | Light grey | — |
| Carbon monoxide | Canary yellow | Signal red | White |
| Coke oven gas | Canary yellow | Signal red | Dark violet |
| Ethylchloride (inflammable) | Canary yellow | Light grey | Signal red |
| Ethylchloride (non-inflammable) | Canary yellow | Light grey | White |
| Ethylene | Canary yellow | Dark violet | Signal red |
| Ethylene oxide | Canary yellow | Dark violet | Brilliant green |
| Freon (chlorofluoro derivative of methane and ethane) | Canary yellow | Light grey | Dark violet |
| Helium | Canary yellow | Light brown | — |
| Hydrogen | Canary yellow | Signal red | French blue |
| Methane | Canary yellow | Signal red | Light brown |
| Methylbromide | Canary yellow | French blue | Black |
| Methylchloride (inflammable) | Canary yellow | Brilliant green | Signal red |
| Methylchloride (non-inflammable) | Canary yellow | Brilliant green | French blue |
| Neon | Canary yellow | Light brown | Black |
| Nitrogen | Canary yellow | Black | — |
| Oxygen | Canary yellow | White | — |
| Propane | Canary yellow | Signal red | Black |
| Phosgene | Canary yellow | Black | White |

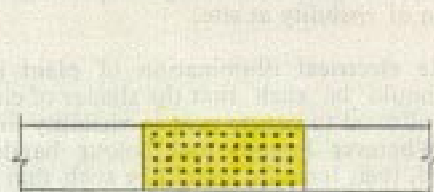
Table 4 Colour Code for Hydrocarbons and Naptha
(*Clauses 7.5 and 9.1*)

| Contents | Ground Colour | First Colour Band | Second Colour Band |
|---------------------------------------|---------------------|-------------------|--------------------|
| Propylene F.P. (Liquid) | Dark Admiralty grey | Brilliant green | — |
| Propylene (C.G.) (Liquid) | Dark Admiralty grey | Brilliant green | Smoke grey |
| Ethylene glycol | Dark Admiralty grey | Brilliant green | Gulf red |
| Ethylene Di-chloride | Dark Admiralty grey | Gulf red | — |
| Benzene | Dark Admiralty grey | Canary yellow | — |
| Butadine | Dark Admiralty grey | Black | — |
| Acetone | Dark Admiralty grey | Black | Canary yellow |
| Methanol | Dark Admiralty grey | Deep buff | — |
| Naptha | Dark Admiralty grey | Light brown | Black |
| ACIDS | | | |
| Phosphoric acid | Dark violet | Silver grey | — |
| Hydrofluoric acid | Dark violet | Signal red | French blue |
| Sulphuric acid | Dark violet | Brilliant green | Light orange |
| Nitric acid | Dark violet | French blue | Light orange |
| Hydrochloric acid | Dark violet | Signal red | Light orange |
| Acetic acid | Dark violet | Silver grey | — |
| CHEMICAL & ALLIED PRODUCTS | | | |
| Brine | Black | White | — |
| Caustic solution | Smoke grey | Light orange | — |
| Classified | Black | Canary yellow | — |
| Spinbath concentrative sulphuric acid | Dark violet | Brilliant green | Canary yellow |
| Dissolving | — | Light orange | White |
| Causted | Dark violet | Light orange | — |
| Evaporated spinbath | Black | Canary yellow | Brilliant green |
| Floculent solution | Black | Brilliant green | — |
| Lime | Smoke grey | White | Canary yellow |
| Mercury | Black | White | Brilliant green |
| Rum-off caustic | Smoke grey | White | — |
| Recovered caustic | Smoke grey | Signal red | White |
| Carbon disulphide | Black | Light orange | — |
| Strong caustic | Smoke grey | French blue | White |
| Steeping caustic | Smoke grey | Golden yellow | — |
| Sodium sulfide | Black | Brilliant green | Canary yellow |
| Soap solution | Black | Light orange | White |
| Spinbath supply | Black | White | Canary yellow |
| Spinbath return | Black | Golden yellow | — |
| Sodium carbonate solution | Dark violet | Jasmine yellow | — |
| Waste caustic | Dark violet | White | Canary yellow |
| Waste spinbath | Black | Jasmine yellow | — |
| Viscose | Black | Golden yellow | Brilliant green |

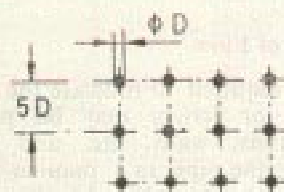
Table 5 Colour Code for Medical Gases

(Clauses 7.5 and 9.1)

| Gas | Ground Colour Band | First Colour Band | Second Colour Band |
|-----------------------------------|--------------------|-------------------|--------------------|
| Air | Sky blue | White | Black |
| Cyclopropane | Canary yellow | Light orange | — |
| Carbon dioxide | Canary yellow | Light grey | — |
| Ethylene | Canary yellow | Dark yellow | Signal red |
| Helium | Canary yellow | Light brown | — |
| Oxygen | Canary yellow | White | — |
| Oxygen and carbon dioxide mixture | Canary yellow | White | Light grey |
| Oxygen and helium mixture | Canary yellow | White | Light brown |
| Nitrous oxide | Canary yellow | French blue | Signal red |
| Nitrogen | Canary yellow | Black | — |
| Vacuum | Sky blue | Black | — |



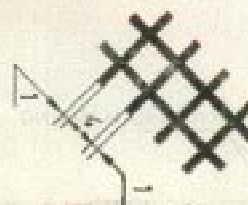
BACKGROUND OF NO. 397 JASMINE YELLOW WITH BLACK DOTS



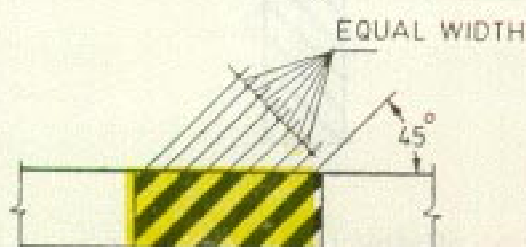
POSITIONING OF DOTS

4A Hazard Marking for Slightly Radioactive Fluids

BACKGROUND OF NO. 557 LIGHT ORANGE WITH BLACK CROSS STRIPES



PROPORTIONAL WIDTH 4:1 BLACK CROSS STRIPES

4B Hazard Marking for Highly Radioactive Fluids

STRIPES OF BLACK AND NO. 356 GOLDEN YELLOW

4C Hazard Marking for Other Kind of Hazards**FIG. 4 DETAILS OF HAZARD MARKING**

9 ADDITIONAL IDENTIFICATION

When further identification is required to supplement the colour code, this may be done by the particular industry for its own use.

9.1 Lettering

Lettering is recommended for Chemical Industry (see Fig. 3 and 5), for the products not covered in Tables 2 to 5. For steam, temperature and pressure shall be indicated after colour indication, by lettering. The recommended size of lettering for pipes of different diameters is given below:

| Outside Diameter of Pipe or Covering mm | Size of Legend mm |
|---|----------------------|
| 20 to 30 | 10 |
| Above 30 „ 50 | 20 |
| „ 50 „ 80 | 30 |
| „ 80 „ 150 | 40 |
| „ 150 „ 250 | 90 |
| Over 250 | |

9.2 Direction of Flow

Where it is required to indicate the direction of flow, arrows or letters may be painted near valves, junctions, walls, etc, and at suitable intervals along the pipe, in a manner best suited to local conditions (see Fig. 3). These shall be black or white in colour and in contrast to the colour on which they are superimposed. If a label or badge with a codified indication is

attached to the pipe, the direction of flow may be indicated by the pointed end of the label or badge.

Sizes of arrow shall be as given in Fig. 6.

9.2.1 For central heating systems or other closed circuits where it is necessary to indicate separately, the flow and return pipes, this shall be done by the use of the word 'FLOW' or the letter 'F' on the one pipe and the word 'RETURN' or the letter 'R' on the other.

10 VISIBILITY OF MARKINGS

10.1 Attention shall be given to the visibility of colour marking and the letterings. Where the pipelines are located above the normal line of vision of the operator, the lettering shall be placed below the horizontal line of the pipes, as shown in Fig. 7.

10.2 Preferably colouring shall be all around the pipe wherever possible, if not, the extent of colouring along the circumference is to be decided by purchase Engineer in charge depending upon direction of visibility at site.

10.3 The electrical illumination of plant in the night should be such that the shades of colours are not affected to ensure proper visibility in the night. Wherever legends and colour bands are indicated, their location should be such that they are easily visible from floor/ground level during day time and extra illumination should be provided over them for night time or wherever visibility is poor.

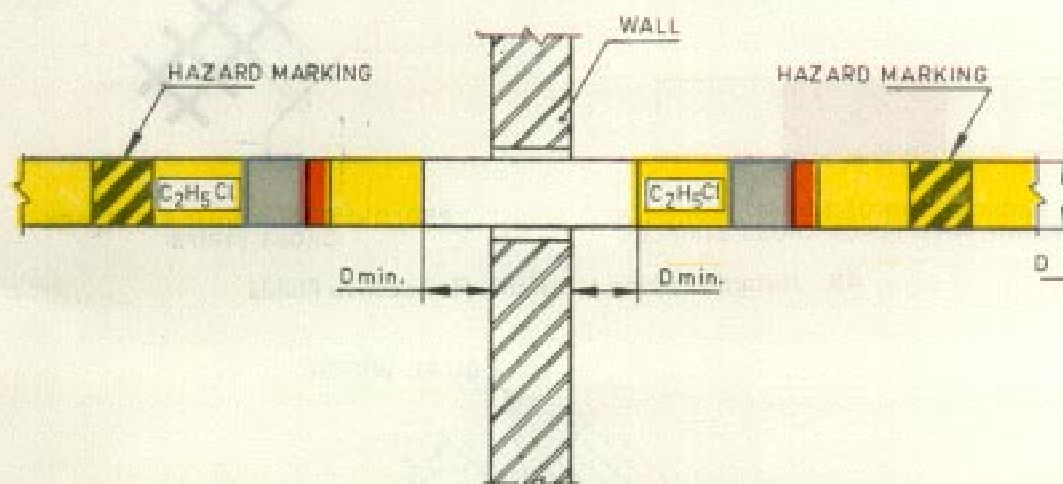
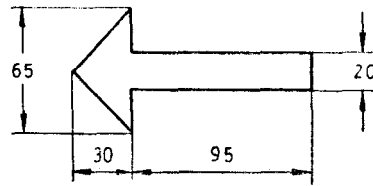
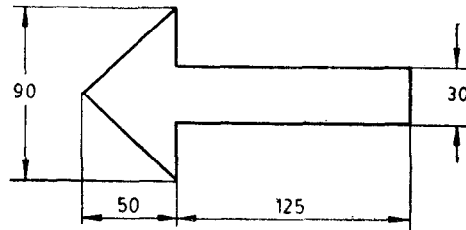


FIG. 5 HAZARD MARKING (FLUID CARRIED, ETHYL CHLORIDE)



6A For Pipes DN 200 and Below



6B For Pipes Above DN 200

FIG. 6 SIZE OF ARROWS

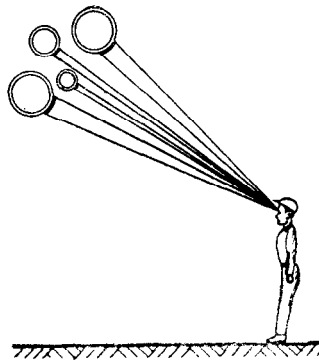


FIG. 7 POSITIONING OF MARKINGS FOR VISIBILITY

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Revision of Indian Standards

Indian Standards are reviewed periodically and revised, when necessary and amendments, if any, are issued from time to time. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition. Comments on this Indian Standard may be sent to BIS giving the following reference :

Doc : No. HMD 17 (5222)

Amendments Issued Since Publication

| Amend No. | Date of Issue | Text Affected |
|-----------|---------------|---------------|
| | | |
| | | |
| | | |

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksanstha
(Common to all Offices)

Regional Offices:

Telephone

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg
NEW DELHI 110002

{ 331 01 31
{ 331 13 75

Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola
CALCUTTA 700054

{ 37 84 99, 37 85 61,
{ 37 86 26, 37 86 62

Northern : SCO 445-446, Sector 35-C, CHANDIGARH 160036

{ 53 38 43, 53 16 40,
{ 53 23 84

Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113

{ 235 02 16, 235 04 42,
{ 235 15 19, 235 23 15

Western : Manakalaya, E9 MIDC, Marol, Andheri (East)
BOMBAY 400093

{ 632 92 95, 632 78 58,
{ 632 78 91, 632 78 92

Branches : AHMADABAD, BANGALORE, BHOPAL, BHUBANESHWAR, COIMBATORE,
FARIDABAD, GHAZIABAD, GUWAHATI, HYDERABAD, JAIPUR, KANPUR,
LUCKNOW, PATNA, THIRUVANANTHAPURAM.

AMENDMENT NO. 1 MAY 2007
TO
IS 2379 : 1990 PIPELINES — IDENTIFICATION — COLOUR CODE

(First Revision)

(Page 4, Table 2) — Add the following after the last entry 'Waste water' under subheading 'Water':

| Contents | Ground Colour | First Colour Band | Second Colour Band |
|---------------------|---------------|-------------------|--------------------|
| Demineralized water | Sea green | Gulf red | - |
| Process water | Sea green | Oxide red | - |
| Wash water | Sea green | Canary yellow | - |
| Quench water | Sea green | Dark grey | - |

(Page 5, Table 3) — Add the following after the last entry 'Phosgene':

| Contents | Ground Colour | First Colour Band | Second Colour Band |
|-----------------------|---------------------|-------------------|--------------------|
| Fuel gas and sour gas | Canary yellow | Grey | Dark violet |
| Sweet gas | Canary yellow | Grey | - |
| Residue gas, LPG | Canary yellow | Oxide red | White |
| Charge gas | Canary yellow | Signal red | French blue |
| Aromatic gasoline | Dark Admiralty grey | Brilliant green | Canary yellow |
| Pyrolysis gasoline | Dark Admiralty grey | Brilliant green | Black |

(Page 6, Table 4) — Add the following after 'Naptha':

| Contents | Ground Colour | First Colour Band | Second Colour Band |
|--------------------|---------------------|-------------------|--------------------|
| Ethane (Liquid) | Dark Admiralty grey | Light grey | French blue |
| Propylene (Liquid) | Dark Admiralty grey | Signal red | Black |
| Kerosene | Light brown | Brilliant green | Dark violet |
| LPG (Liquid) | Dark Admiralty grey | Brilliant green | Dark violet |