Pipelines – Identification – Colour code

By Converge Design

Why invest in Colour coding of pipelines?

1. Lack of colour coding can lead to destruction of property and injury to personel particularly when outside agencies like firefighting squads are called in.

2. Uniformity of colour marking promotes greater safety, lessens the chance of error and reduces hazards involved in handling of material inside the pipelines

3. In case of any accident the industry is seen to have fulfilled it's safety obligations as per law thus mitigating legal liability.

The process

1. Pipe quantities and details given by client. 1day

2. Rough estimate and BOQ is calculated as submitted by client. 5 days

3. Installation type, method of installation and quantities of different installation types to be formatted on paper. 7 days

4. Purchase order and advance issued by client.

5. Design submission for approval. 10days

6.The designs are finalised at site in consultation with the operational head. 3days

7. Manufacture the signs and labels. 30 days

8. Installation to be done. 30 days

9. Installation to be checked. 6 days

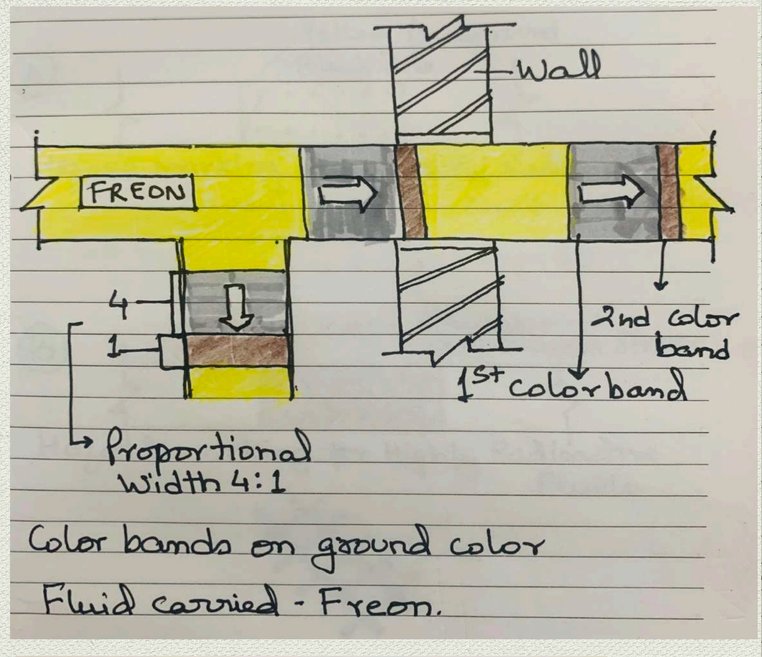
Colour coding of pipelines?

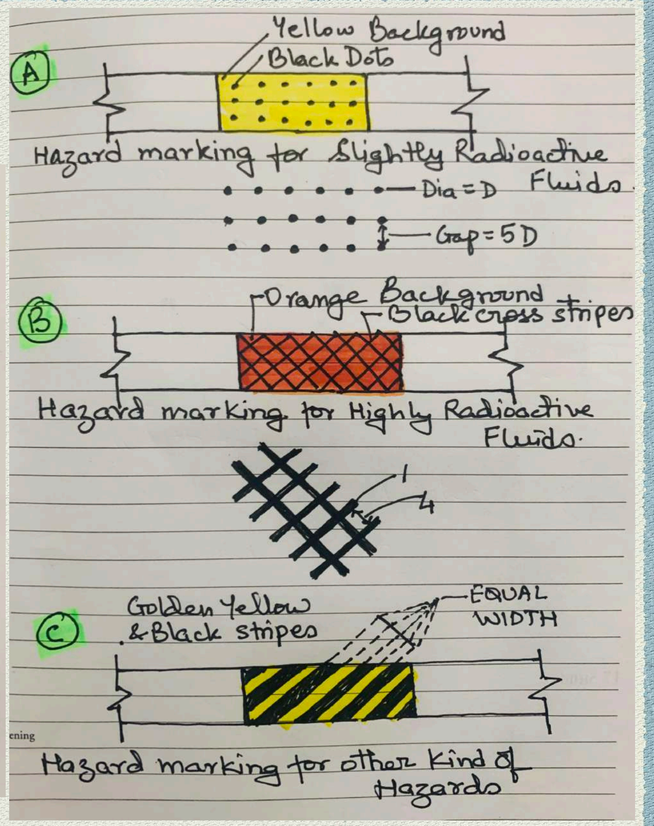
Identification of contents of pipelines is achieved by imposing suitable colour bands on the ground colour in addition to use of lettering and arrows.
Use of lettering reduces the possibility of mistakes in anticipation

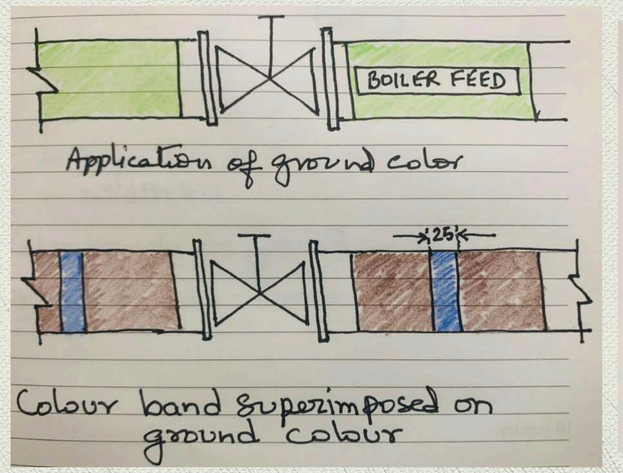
The scope

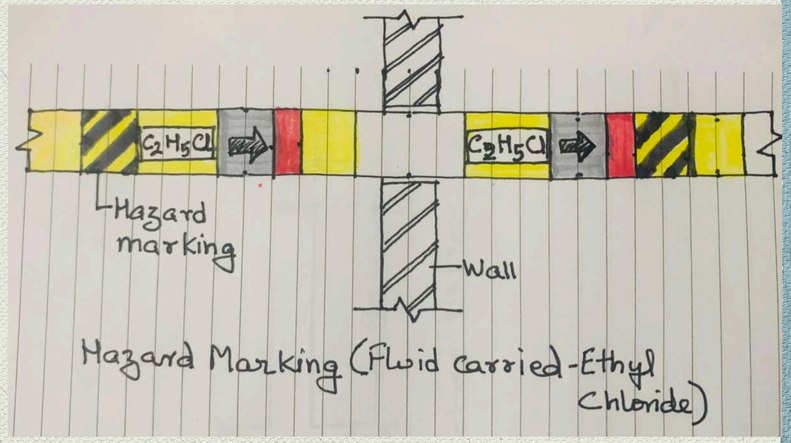
This includes pipes of any kind in addition to fittings, walls and pipe coverings. Brackets or other accessories are specifically excluded.

Underground pipelines and those use for electrical services are excluded from this colour coding









Colour codes

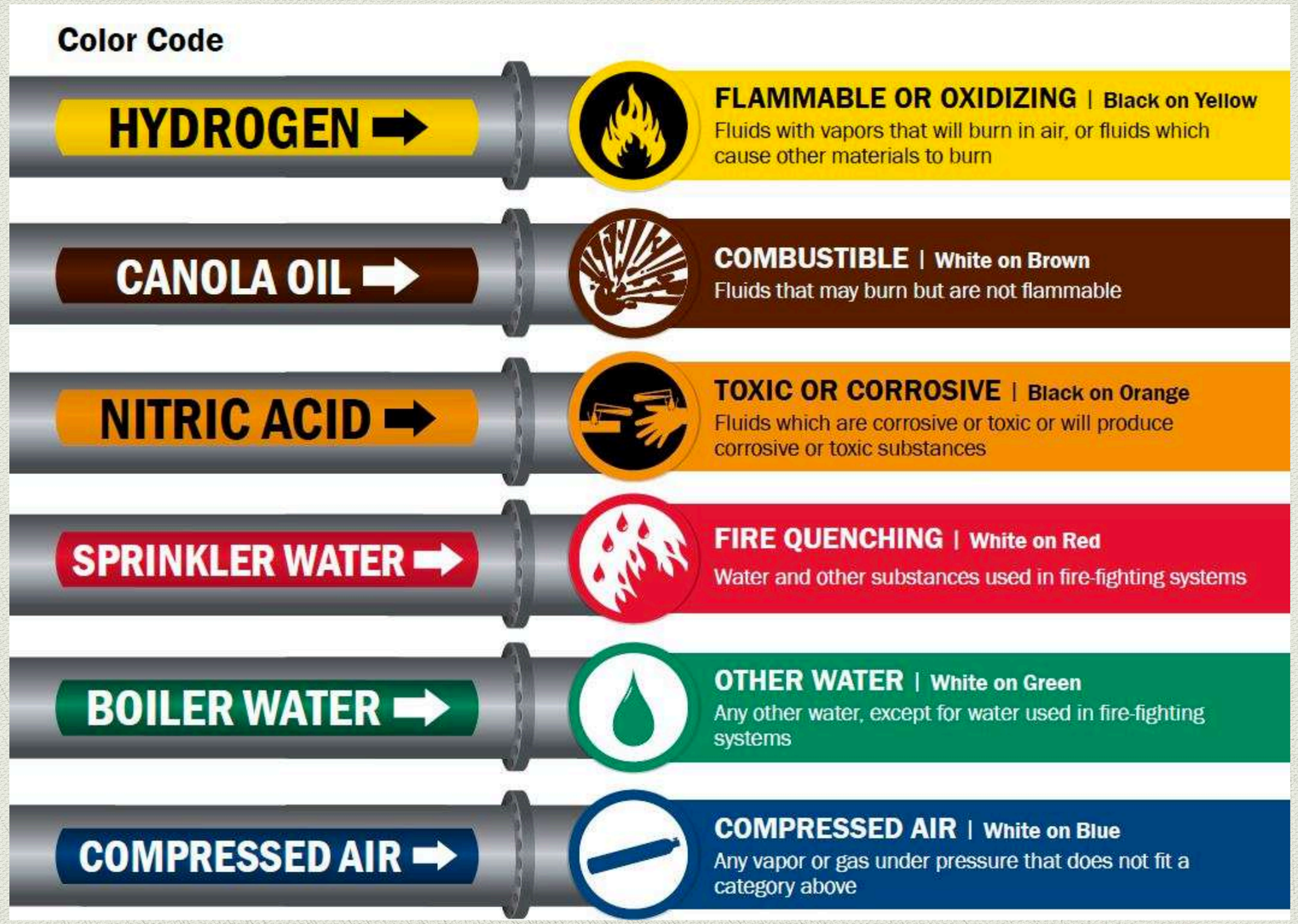
Colour shades to be used as per IS 2379

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

2. The base colour is the basic nature of the fluid carried , it distinguishes one fluid from another

3. The colour band superimposed on the ground colour distinguishes condition of the fluid and kind of the fluid

4. Base colour band is minimum 300 MM in width



Ground Colors

Substance	***Colour***
Water	Sea green
Steam	Aluminium to IS 2339
Minerals,Vegetables 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

Some Color Codes

Contents	***Ground colour***	***First colour band***	***Second colour band***
Demineralised water	Sea green	Gulf red	-
Process water	Sea green	Oxide red	-
Wash water	Sea green	Canary yellow	-
Quench water	Sea green	Dark grey	-
Contents ground	***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
Contents ground	***Ground colour***	***First colour band***	***Second colour band***
ethan(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

Pipe Marker Placement

These are superimposed on the ground colour at the following locations

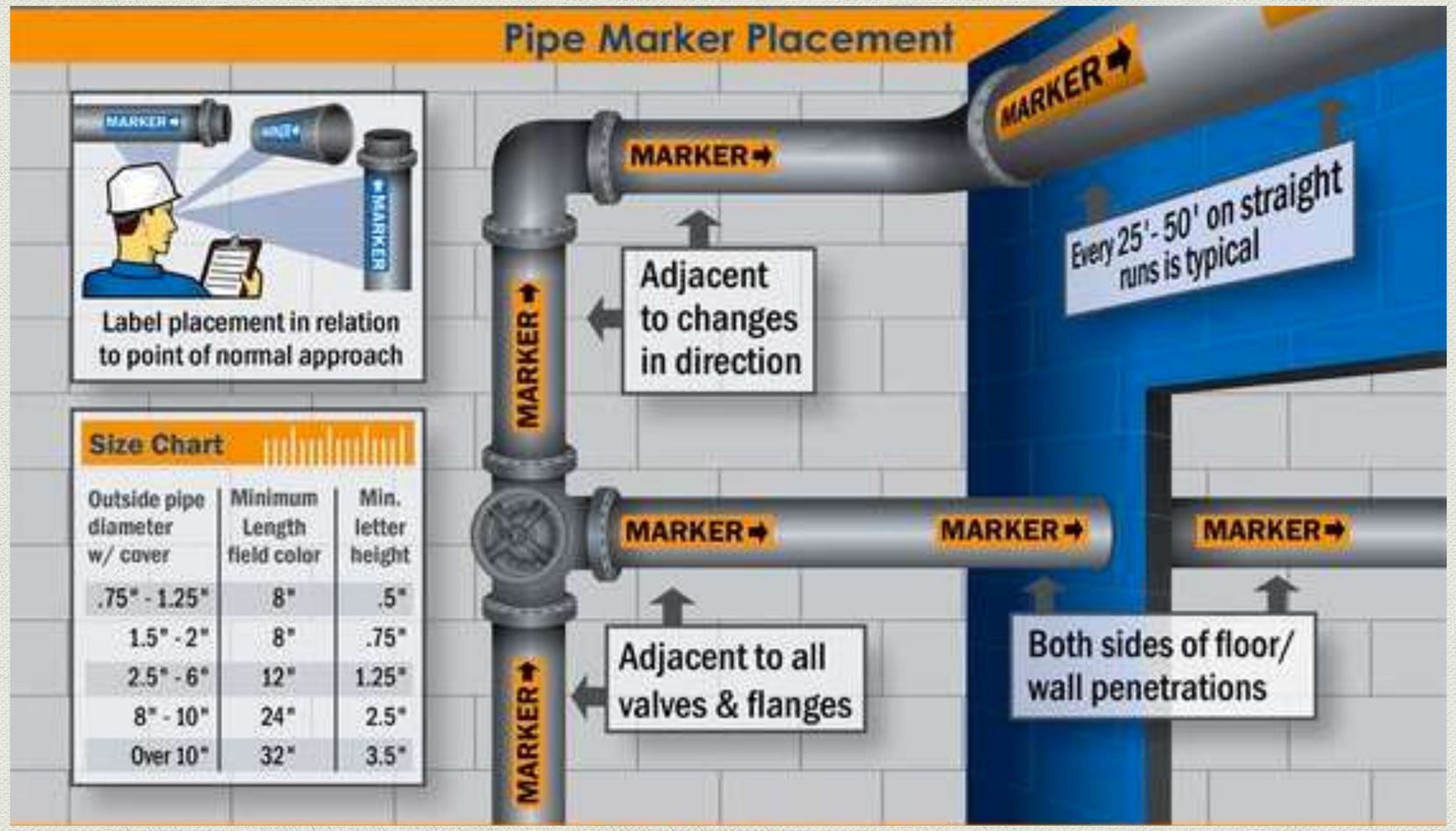
1. At battery limit points

2. At intersection points and change of direction points in piping ways

3. Other points such as midway of each piping way, near walls, Junction joints of service appliances, walls, on either side of pipe culverts

4. For long stretch yard piping at 50 m intervals

5. At start and terminating points



Additional Identification

1. Lettering is used to make identification clear and more specific

2. Arrows these are used to show the flow of direction of the material carried within the pipes

Visibility

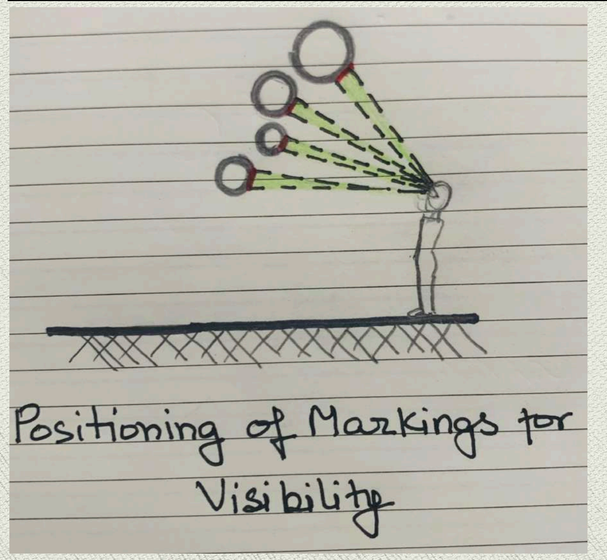
Visibility of marking it is important to ensure this

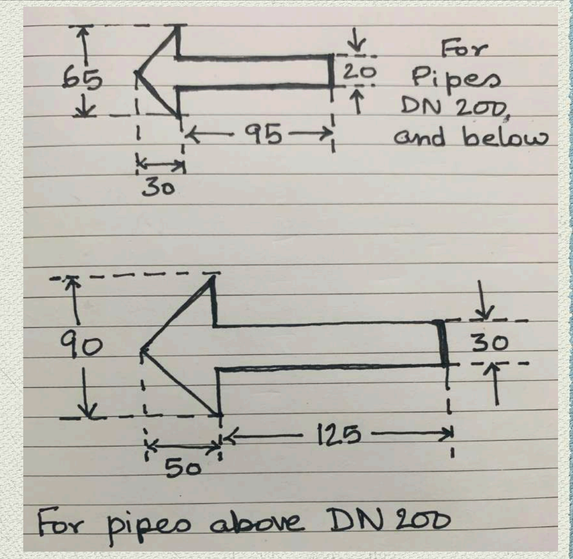
1. The markings and colour has to be in line with vision of the person standing below

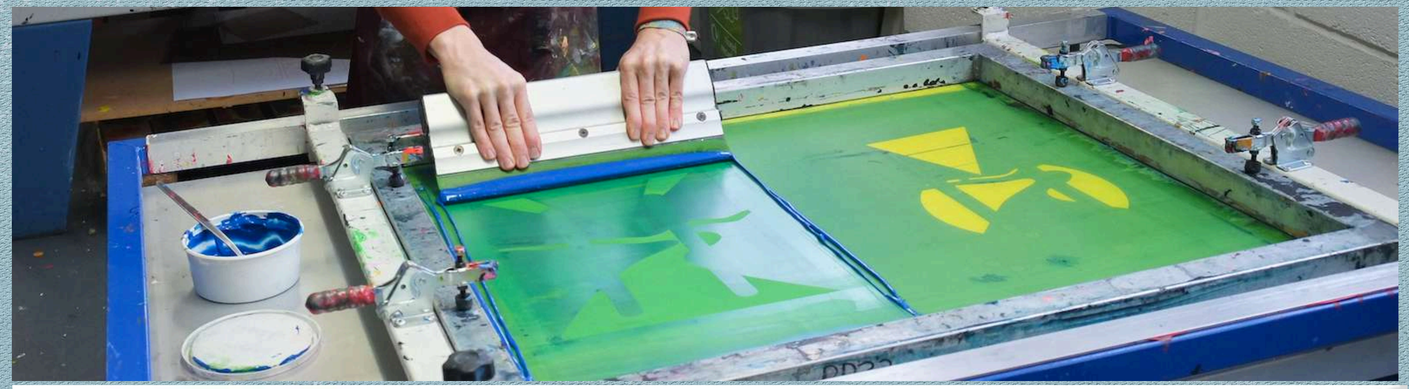
2. Colour and text should be all around the pipe

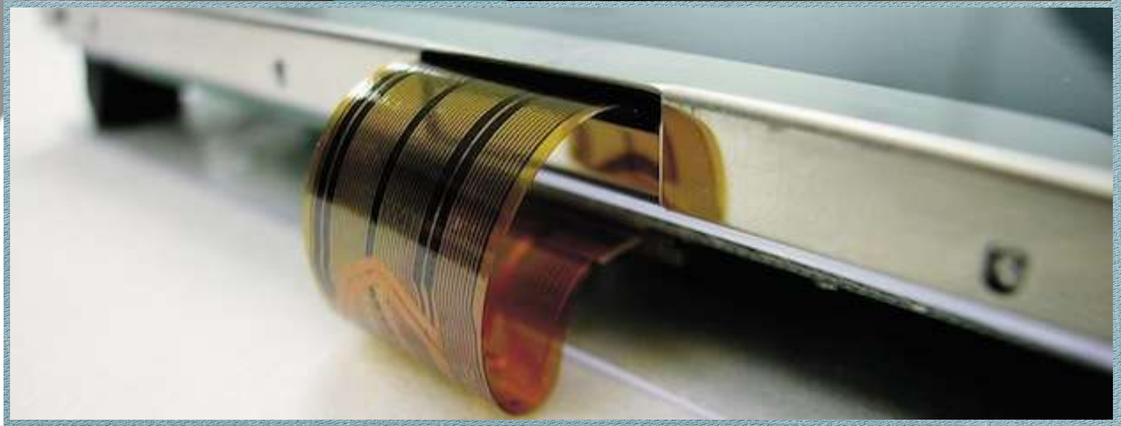
3. Electrical illumination Should be such so as to make the colour bands and agents visible in the dark

Outside diameter of pipe or covering(mm)		***Size of legend(mm)***
	20 to 30	10
Above	30 to 50	20
Above	50 to 80	30
Above	80 to 150	40
Above	150 to 250	90
Over 250		









Technical specifications of marking labels

Cast Vinay stickers for pipe surface having temperature upto 60°C with UV print

Polycarbonate stickers with silk screen printing for marking on floor with 40°C temperature limit

This presentation is an introduction to

colour coding of pipelines.

To further develop upon this actual working will be required which is

related to specific requirements of the project work and can be done once

contract is given for Design & Build.

Thanking you
Team Converge