

Pipe Identification on Seagoing Ships

1. Regulations and objective

According to the DIN EN ISO 14726-1/2-last edition dated from 01.07.2002, pipes in service rooms must be clearly and durably identified wherever confusion as to their contents, temperature or pressure can lead to danger. As the pipes are uniformly light coloured when the ship is commissioned, any confusion must be forestalled by an additional colour code which at once indicates the media concerned and the direction of flow.

This standard is valid for ships, the keels of which are laid on or after 01.10.2004.

Already available standards from Shipyards or ship companies will be accepted, if the main colours are in line with the requirements of ISO 14726-1/2.

2. Identification colours for the content of piping systems

Depending on the media which they contain, pipes are to be marked in accordance with the appended table.

If the fuel, oil and sludge/waste water category needs to be further differentiated (beyond the main colours), the colour code is to be used.

Colour coding is not used for steam lines.

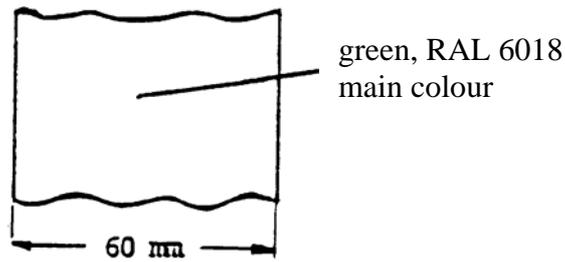
3. Characteristics of adhesive strips

The adhesive strips must:

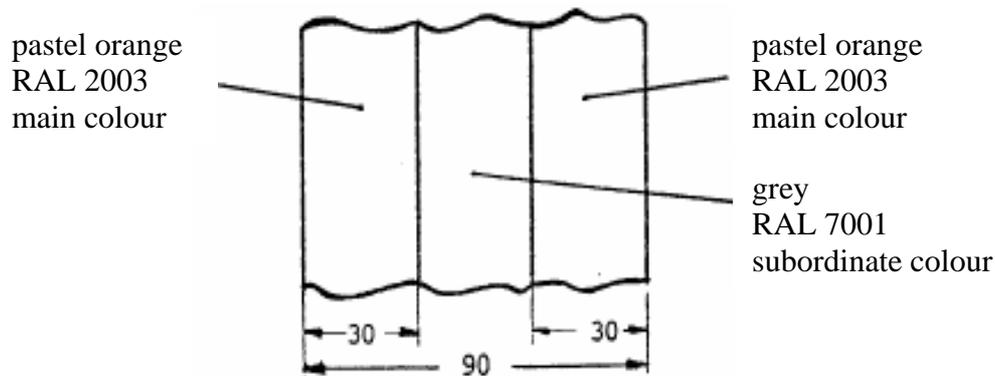
- be made of linear polyester (PETP),
- have a minimum width of 60 mm for the main colour and 90 mm for the main and subordinate colours together,
- be light-fast and resistant to fuel, oils, solvents, seawater, cold cleaning agents and abrasion,
- be made of strip provided with a low-temperature self-adhesive film which can be directly applied down to 0 °C without solvent activation,
- be provided with a protective paper strip covering the adhesive film,
- be heat-resistant up to 95 °C,
- be available in the colours stated in no. 2, and
- be provided with a protective laminate to guard the colours.

Where the coding comprises a main and a subordinate colour, the main colour shall occupy the two outer bands, and the subordinate colour the central band.

Adhesive strips with only the main colour, e.g. for seawater



Adhesive strips with main and subordinate colour, e.g. for hydraulic oil



4. Pipe identification

4.1 General

While the identification of pipes is mandatory only for service rooms and should also be used for pipes in other areas.

Identification may optionally take the form of:

- application of adhesive strips in the colours mentioned in no. 2 or
- painting of the pipes in the colours mentioned in no. 2.

4.2 Application of adhesive strips

Pipes - including those below the floor plates - are to be identified with adhesive strips taking account of the media concerned and the direction of flow.

The spacing of the strips shall not be greater than 5 m. It is especially important that at floor, deck and bulkhead penetrations and at branches not in full view the pipes should be identified at a distance not exceeding 500 mm on both sides of the penetrations or junctions, as the case may be.

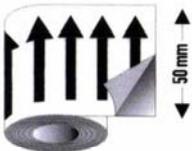
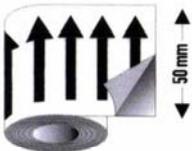
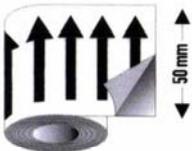
The strips are to be applied so that they overlap and thus form a more durable bond with the pipes.

The surface to which the strips are applied must be smooth (or slightly porous), clean and dry. Prior to application of the strip, the surface must not have been treated with wax, silicone, polish or similar media which impairs adhesion. Thorough cleaning, rinsing and drying is to be carried out wherever necessary. Grease, oil and tightly clinging dirt are to be removed with toluene, xylene, paint thinner, spirits or white spirit - and in the case of painted surfaces white spirit or spirits are to be used exclusively. Painted substrates must also be completely dry (solvent-free) before fixing takes place.

Appendix (page 4)

5. Standard colours and equivalent colours code

colour	Media	RAL	Pantone	Munsell code
Black	Waste media ^a	9 005	Black c	N 1
Blue	Freshwater	5 015	PMS 2925 c	2.5PB 3.5/10
Brown	Fuel	8 001	PMS 154 c	5YR 3.5/4
Green	Sea Water ^b	6 018	PMS 362 c	10GY 4/10
Grey	Non flammable gases	7 001	PMS 430 c	N5
Maroon	Masses (dry and wet) ^c	8015	PMS 490 c	2.5RP 4/12
Orange	Oils other than fuels	2 003	PMS 158 c	2.5YR 6/14
Silver	Steam	9 006	PMS 877 c	--
Red	Fire Fighting/Fire Protection	3 000	PMS 1797 c	7.5R 4/14
Violett	Acids, alkalis	4 001	OMS 2633 c	2.5O 4/11
White	Air in ventilation systems	9 010	White	N9.5
Yellow-ochre	Flammable gases	1 021	PMS 116 c	2.5Y 8/14
^a blackwater, greywater, waste oil, exhaust gas ^b for ships with different trades ^c for powder and foam only (firefighting)				

 ISO 14726		<h1 style="text-align: center;">Color marking of pipes</h1> <h2 style="text-align: center;">ISO 14726</h2>												Longlife Pipeline Identification Self adhesive tapes Standard length: 50m																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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