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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION
R 538

CONVENTIONAL SIGNS TO BE USED IN SCHEMES FOR THE INSTALLATIONS OF PIPELINE SYSTEMS IN SHIPS

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BRIEF HISTORY

The ISO Recommendation R 538, *Conventional Signs to be Used in Schemes for the Installations of Pipeline Systems in Ships*, was drawn up by Technical Committee ISO/TC 8, *Shipbuilding Details*, the Secretariat of which is held by the Nederlands Normalisatie-instituut (NNI).

Work on this question by the Technical Committee began in 1956 and led, in 1962, to the adoption of a Draft ISO Recommendation.

In March 1963, this Draft ISO Recommendation (No. 562) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Australia	Greece	Spain
Austria	Israel	Sweden
Belgium	Italy	Switzerland
Chile	Japan	United Kingdom
Czechoslovakia	Netherlands	U.S.S.R.
Finland	Norway	Yugoslavia
France	Poland	
Germany	Romania	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in January 1967, to accept it as an ISO RECOMMENDATION.

ISO Recommendation R 538 January 1967

CONVENTIONAL SIGNS TO BE USED IN SCHEMES FOR THE INSTALLATIONS OF PIPELINE SYSTEMS IN SHIPS

INTRODUCTION

This ISO Recommendation covers conventional signs to be used in schemes for installations for ship pipelines.*

The symbols given in the Tables have been classified in the following manner:

1. General conventional signs
2. Pipes and pipe joints
3. Valves, gate valves, cocks and flaps
4. Control and regulation parts
5. Appliances
6. Fittings
7. Indicating and measuring instruments

The *general conventional signs* concern symbols representing principal parts and appliances.

The *other signs* are all derived from the general basic signs.

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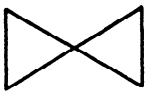
* Other ISO Recommendations for conventional signs to be used in ships:

ISO/R ..., *Conventional Signs to be used in Schemes for the Installations of Ventilation Systems in Ships*, at present Draft ISO Recommendation No. 856.

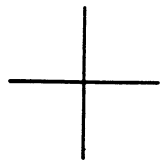
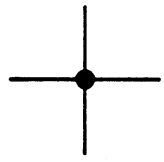
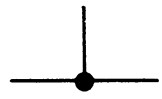
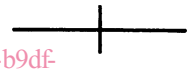
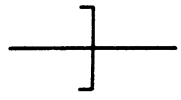
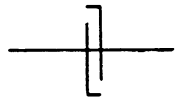
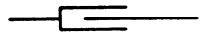
ISO/R ..., *Conventional Signs to be used in Schemes for the Installations of Sanitary Systems in Ships*, at present Draft ISO Recommendation No. 941.

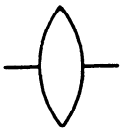
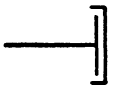
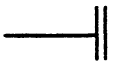
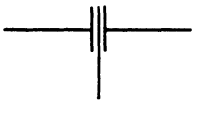
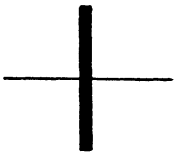
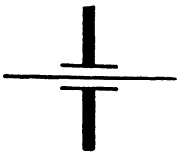
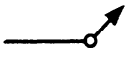
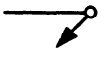
1. GENERAL CONVENTIONAL SIGNS

1.1	Pipe	
1.1.1	Pipe with indication of direction of flow	
1.2	Valves, gate valves, cocks and flaps	
1.3	Appliances	
1.4	Indicating and measuring instruments	

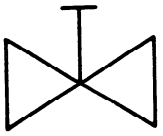
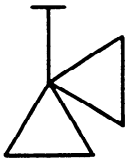
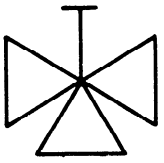
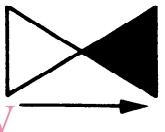
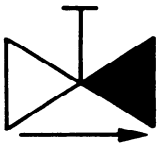
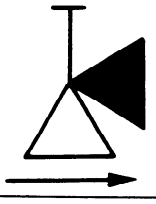
NOTE. — Conventional signs, not mentioned in this ISO Recommendation, can be derived from the general conventional signs mentioned in Table 1, by adding an elucidation to the legend of the drawing.

2. PIPES AND PIPE JOINTS

2.1	Crossing pipes, not connected	
2.2	Crossing pipes, connected	
2.3	Tee pipe	
2.4	Flexible pipe	
2.5	Joint, flanged	
2.6	Joint, sleeve	
2.7	Joint, screwed	
2.8	Joint, quick-releasing	
2.9	Expansion joint with gland	

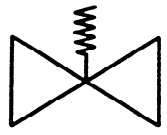
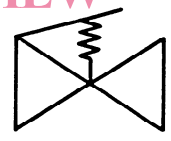
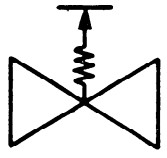
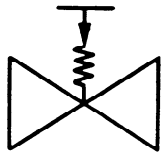
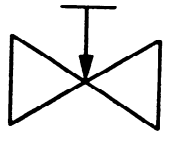
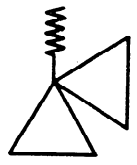
2.10	Expansion pipe	
2.11	Expansion pipe (corrugated), general	
2.12	Cap nut	
2.13	Blank flange	
2.14	Spectacle flange	
2.15	Bulkhead crossing, watertight	
2.16	Bulkhead crossing, non-watertight	
2.17	Pipe going upwards	
2.18	Pipe going downwards	

3. VALVES, GATE VALVES, COCKS AND FLAPS

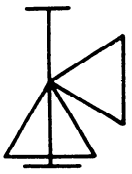
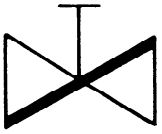
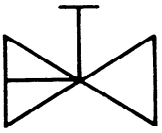
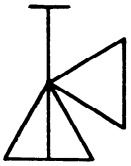
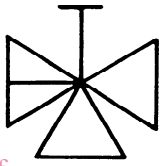
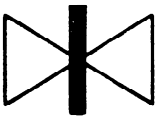
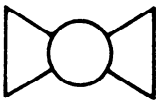
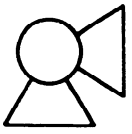
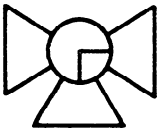
3.1	Globe valve, straight through		**
3.2	Globe valve, angle		**
3.3	Globe valve, three-way		**
3.4	Non-return valve (flap), straight		*
3.5	Non-return valve (flap), angle		*
3.6	Non-return valve (flap), straight, screw down		* **
3.7	Non-return valve (flap), angle, screw down		* **
3.8	Flap, straight through		*

* The arrow gives the direction of flow, but need not be drawn near the valve (flap) in drawings and/or schemes.

** For other types of commands see Table 4.

3.9	Flap, angle	 *
3.10.1	Pressure reducing valve, straight Small triangle — high pressure	
3.10.2	Pressure reducing valve, angle Small triangle — high pressure	
3.11	Safety valve	 **
3.12	Self-closing valve	
3.13	Quick-opening valve	 **
3.14	Quick-closing valve	 **
3.15	Regulating valve	 **
3.16	Angle safety valve	 **

* The arrow gives the direction of flow, but need not be drawn near the valve (flap) in drawings and/or schemes.
** For other types of commands see Table 4.

3.17	Kingston valve	 *
3.18	Butterfly valve	 *
3.19	Double-seated changeover valve, straight	 *
3.20	Double-seated changeover valve, angle	 *
3.21	Double-seated changeover valve, three-way	 *
3.22	Gate valve	
3.23	Cock, straight through	
3.24	Cock, angle	
3.25	Cock, three-way, L-port in plug	

* For other types of commands see Table 4.