

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 561

GRAPHICAL SYMBOLS
FOR COAL PREPARATION PLANT

1st EDITION

March 1967

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BRIEF HISTORY

The ISO Recommendation R 561, *Graphical Symbols for Coal Preparation Plant*, was drawn up by Technical Committee ISO/TC 27, *Solid Mineral Fuels*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question by the Technical Committee began in 1955 and led, in 1960, to the adoption of a Draft ISO Recommendation.

In October 1963, this Draft ISO Recommendation (No. 604) 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:

Argentina	France	Portugal
Australia	Germany	Republic of South Africa
Austria	Greece	Romania
Belgium	India	Spain
Bulgaria	Italy	Switzerland
Canada	Japan	Turkey
Chile	Netherlands	U.A.R.
Czechoslovakia	New Zealand	United Kingdom
Denmark	Poland	U.S.S.R.

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 March 1967, to accept it as an ISO RECOMMENDATION.

GRAPHICAL SYMBOLS FOR COAL PREPARATION PLANT

1. SCOPE

This ISO Recommendation illustrates basic symbols for use in flowsheets (see Note below) and other diagrams relating to coal preparation plant.

It is expected that the general adoption of these standard symbols will greatly simplify the exchange of information between those concerned with the design, construction and operation of coal preparation plant.

2. PRINCIPLE

The symbols included in this ISO Recommendation have been selected in accordance with the following principles:

- (a) The items of plant listed should be widely used for coal preparation purposes, and should be required to be identified on flowsheets.
- (b) The symbols should be easy to draw and readily distinguishable one from another.
- (c) The symbols should preferably give some indication of the *principle* of the operation involved, but should not represent the *appearance* of any particular type of machine.
- (d) Where a single symbol represents a group of items for which separate symbols are standardized nationally, the ISO symbol should be readily distinguishable from any one of the national symbols.

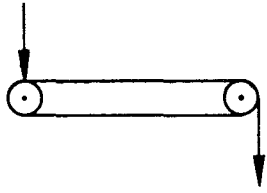
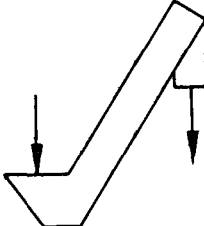
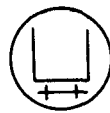
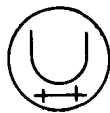
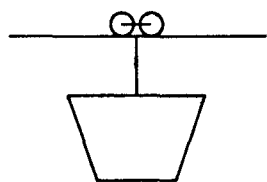
3. CONVENTIONS FOR DRAWING OF SYMBOLS

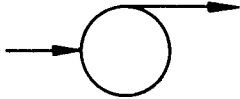
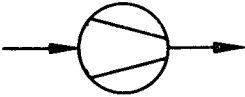
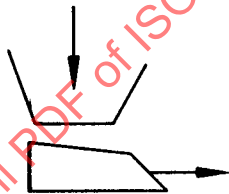
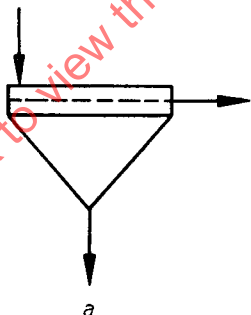
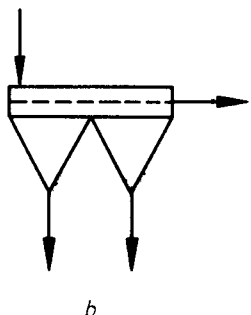
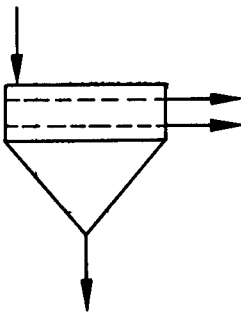
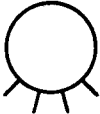
It is recommended that the following conventions should be adopted for drawing the standard symbols:

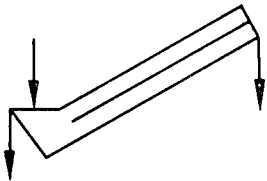
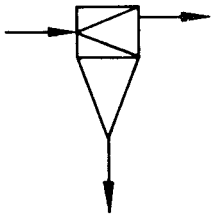
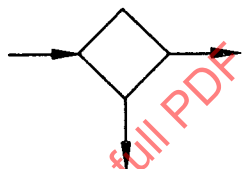
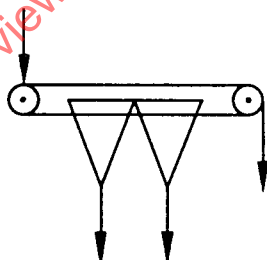
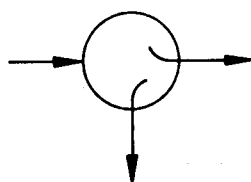
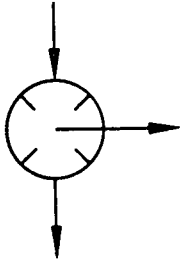
- (a) The plant symbols should be shown by heavy lines and the product flow by light lines.
- (b) In general, the flowlines should enter the symbol from above or from the left and should leave the symbol downwards or to the right.
- (c) Where more than one product may enter or leave an item of plant, the number of entry and exit arrows should be varied accordingly.

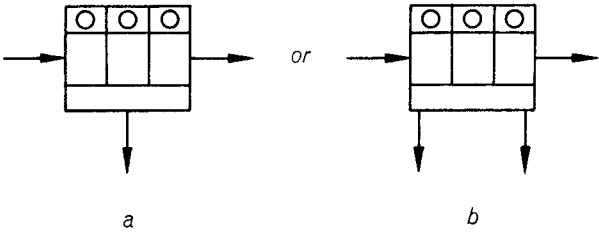
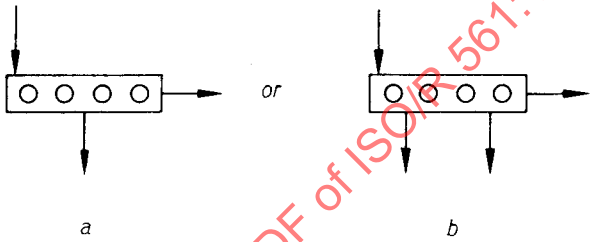
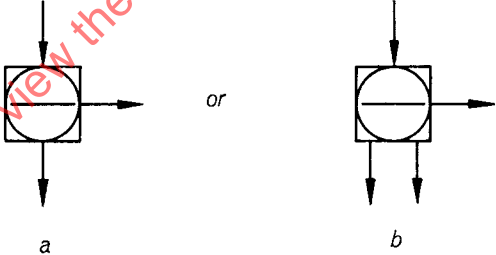
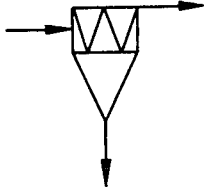
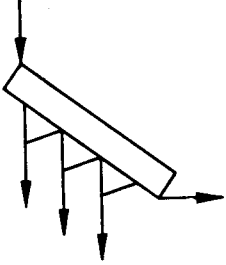
NOTE. — Reference may also be made to ISO Recommendation R . . . , *Principles and Conventions for Flowsheets for Coal Preparation Plant* (at present Draft ISO Recommendation No. 1059).

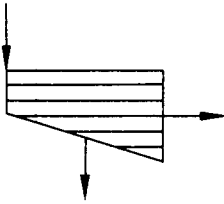
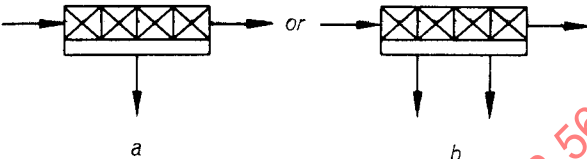
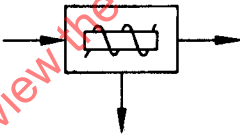
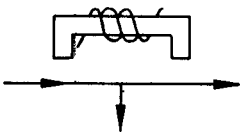
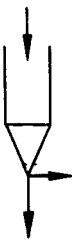
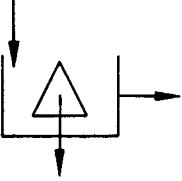
4. SYMBOLS

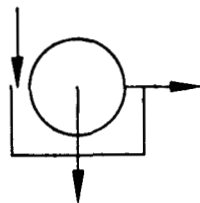
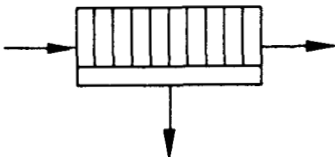
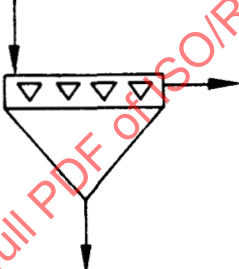
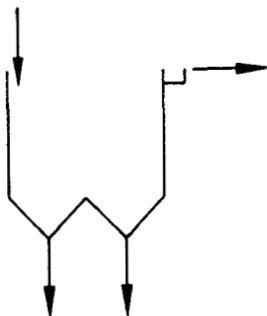
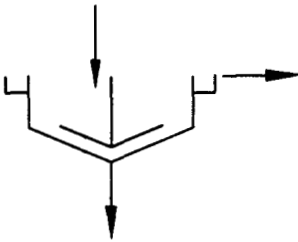
No.	Item	Symbol
1	Conveyor	
2	Elevator	
3	Wagon	
4	Tub	
5	Wagon tippler	
6	Tub tippler	
7	Aerial ropeway	

No.	Item	Symbol
8	Pump	
9	Fan	
10	Compressor	
11	Feeder	
12	Screen	  <i>One under-product</i> <i>Two under-products</i>
13	Screen (double deck)	
14	Water spray	

No.	Item	Symbol
15	Mechanical classifier	
16	Cyclone classifier	
17	Deduster	
18	Picking belt	
19	Picking table (circular)	
20	Bradford breaker	

No.	Item	Symbol
21	Jig washer	
22	Dry cleaner	
23	Dense medium separator	
24	Cyclone separator	
25	Trough washer	

No.	Item	Symbol
26	Concentrating table	
27	Froth flotation cells	
28	Conditioner	
29	Magnetic separator (medium)	
30	Magnetic separator (tramp iron)	
31	Bunker (drainage)	
32	Centrifuge	

No.	Item	Symbol
33	Filter (vacuum)	
34	Filter (pressure)	
35	Dewatering screen	
36	Spitzkasten	
37	Thickener	
38	Conical settling tank	