INTERNATIONAL STANDARD 5170

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Machine tools — Lubrication systems

Machines-outils — Installations de lubrification

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5170 was developed by Technical Committee ISO/TC 39, *Machine tools*, and was circulated to the member bodies in January 1976.

It has been approved by the member bodies of the following countries :

Australia	Italy	Spain
Belgium	Japan	Switzerland
Bulgaria	Korea, Dem. P. Rep. of	Turkey
Czechoslovakia	Mexico	U.S.A.
France	Netherlands	U.S.S.R.
Germany	Poland	Yugoslavia
Hungary	Romania	
India	South Africa, Rep. of	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Sweden
United Kingdom

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Machine tools — Lubrication systems

1 SCOPE AND FIELD OF APPLICATION

This International Standard establishes

- a classification of the various lubrication systems for machine tools;
- specifications regarding the components;
- control and monitoring methods;
- system lay-out practice;
- system maintenance.

It is intended to give guidance to manufacturers and users of machine tools, with a view to rationalizing the method of lubrication.

This International Standard may be applied to other general types of machinery.

2 REFERENCES

ISO 1219, *Fluid power systems and components — Graphic symbols.*

ISO 3498, *Lubricants for machine tools.*[1)]

ISO 5169, *Machine tools — Presentation of lubrication instructions.*[2)]

3 DEFINITIONS

For the purposes of this International Standard, the following definitions apply.

3.1 lubrication point : The point where lubricant is fed in order to lubricate a bearing surface.

3.2 action point : Any point in a lubrication system where, in general, an external action should be carried out to ensure the correct operation of the system. For example, filling with lubricant (nipples or reservoirs, etc.), actuation of a lever, etc.

4 METHODS OF LUBRICATION (See the annexes)

4.1 Total loss system

The lubricant is supplied to the lubrication point and after use it goes to waste.

4.2 Circulating system

The lubricant is fed to the lubrication points and is then returned to the reservoir for further use.

4.3 Hydrostatic system

Fluid lubrication in which surfaces, moving or stationary, are separated by a fluid introduced between them by an external pressure.

5 TYPES OF SYSTEM (See the annexes)

5.1 Individual point lubrication

Individual point lubrication is that type of lubrication carried out by manual portable equipment.

Individual point lubrication may be used on simple machines or where there are only about 10 points requiring lubrication at intervals of approximately 50 h.

5.2 Centralized system

A centralized system is one in which two or more lubrication points on a machine are served with the same lubricant from a common source. Centralized systems are particularly applicable if the machine is intended for mass production or if the machine is complex or expensive.

Centralized systems may be

a) manually operated;

b) semi-automatic in operation, pumps being manually actuated;

c) fully automatic in operation.

1) At present at the stage of draft. (Revision of ISO/TR 3498-1974.)

2) At present at the stage of draft.