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IEC 60534-4

Edition 4.0 2021-12  
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# INTERNATIONAL STANDARD

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**Industrial-process control valves –  
Part 4: Inspection and routine testing**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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ICS 23.060

ISBN 978-2-8322-1064-8

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### INDUSTRIAL-PROCESS CONTROL VALVES –

#### Part 4: Inspection and routine testing

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IEC 60534-4 has been prepared by subcommittee 65B: Measurement and control devices, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2006. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) remove details about hydrostatic test but state that to be performed according to valve design code;
- b) include mandatory test for valve packing;
- c) put in evidence limits of reduced differential pressure seat leakage test procedure;
- d) introduce details about low temperature seat leakage test;
- e) extend dimensional range for leakage class VI to less than 25 mm and over 400 mm seat diameter;
- f) include stroking time tests.

The text of this International Standard is based on the following documents:

Draft	Report on voting
65B/1208/FDIS	65B/1211/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

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## INDUSTRIAL-PROCESS CONTROL VALVES –

### Part 4: Inspection and routine testing

#### 1 Scope

This part of IEC 60534 specifies the requirements for the inspection and routine testing of control valves manufactured in conformity with the other parts of IEC 60534.

This document is applicable to valves with pressure ratings not exceeding Class 2500. The requirements for actuators apply only to pneumatic actuators.

This document does not apply to the types of control valves where radioactive service, fire safety testing, or other hazardous service conditions are encountered. If a standard for hazardous service conflicts with the requirements of this document, the standard for hazardous service should take precedence.

NOTE This document can be extended to higher pressure ratings by agreement between the purchaser and the manufacturer.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60534 (all parts), *Industrial-process control valves*

~~IEC 61298 (all parts), *Process measurement and control devices – General methods and procedures for evaluating performance*~~

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Industrial-process control valves –  
Part 4: Inspection and routine testing**

**Vannes de régulation des processus industriels –  
Partie 4: Inspection et essais individuels de série**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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#### Part 4: Inspection and routine testing

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IEC 60534 (all parts), *Industrial-process control valves*

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## COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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#### Partie 4: Inspection et essais individuels de série

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Cette quatrième édition annule et remplace la troisième édition, parue en 2006. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) suppression des précisions concernant l'essai hydrostatique, mais spécification selon laquelle celui-ci doit être réalisé conformément au code de conception de la vanne;
- b) inclusion d'un essai obligatoire relatif à la garniture d'étanchéité des vannes;

- c) mise en évidence des limites de la procédure d'essai de fuite au siège à différentiel de pression réduit;
- d) précisions concernant l'essai de fuite au siège à basse température;
- e) extension de la plage de dimensions pour la classe de fuite VI avec des diamètres du siège inférieurs à 25 m et supérieurs à 400 mm;
- f) inclusion d'essais de temps de manœuvre.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
65B/1208/FDIS	65B/1211/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Le présent document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). Les principaux types de documents développés par l'IEC sont décrits plus en détail sous [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

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- remplacé par une édition révisée, ou
- amendé.



## VANNES DE RÉGULATION DES PROCESSUS INDUSTRIELS –

### Partie 4: Inspection et essais individuels de série

#### 1 Domaine d'application

La présente partie de l'IEC 60534 spécifie les exigences relatives à l'inspection et aux essais individuels de série des vannes de régulation fabriquées conformément aux autres parties de l'IEC 60534.

Le présent document s'applique aux vannes dont les valeurs assignées de pression n'excèdent pas celles de la classe 2500. Les exigences pour les actionneurs ne s'appliquent qu'aux actionneurs pneumatiques.

Le présent document ne s'applique pas aux types de vannes de régulation destinées à fonctionner dans des applications radioactives, des installations de sécurité à l'épreuve du feu ou pour d'autres conditions de fonctionnement dangereuses. Si une norme sur le fonctionnement dangereux est en contradiction avec les exigences du présent document, il convient de faire prévaloir la norme sur le fonctionnement dangereux.

NOTE Le présent document peut être étendu aux valeurs assignées de pression supérieures par accord entre l'acheteur et le fabricant.

#### 2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60534 (toutes les parties), *Vannes de régulation des processus industriels*