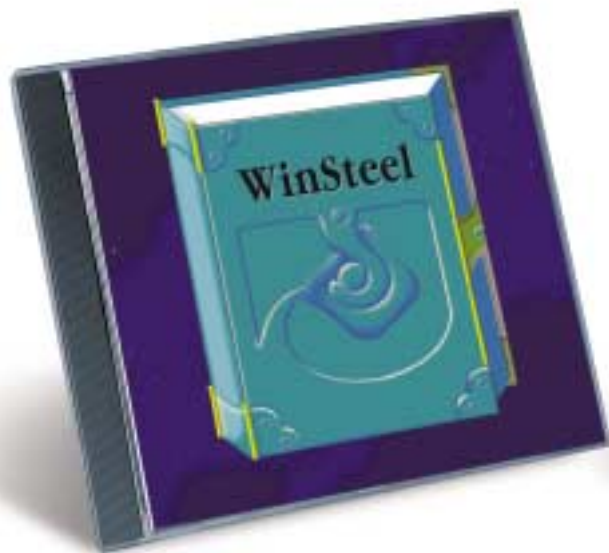


How to translate DIN to GOST, EN to ASTM, JIS to BS?

to buy standards?..

to ask a colleague?..

to delve in guide-books?..



But maybe just to switch on your PC?

International Steel and Non-Ferrous Translators

WinSteel Database atabase contains data on more than 75,000 steel grades of 25 countries: Germany, France, Italy, CIS, USA, UK, Japan, China, Korea and others as well as grades included in European (EN) and two international (ISO and UIC) standards.

WinAlloy Database includes information on more than 37,000 non-ferrous metals and alloys of 30 countries: Germany, France, CIS countries, USA, UK, Japan, Italy, Canada and others as well as grades included in European (EN), International (ISO) and Pan American (COPANT) standards.

Quantor-Soft Metal

Mail address: P.O. Box 39, 119049 Moscow, Russia
Phone: +7 495 234 4905

E-mail: inform@metaldata.info
Fax: +7 495 232 3996
Web: www.metaldata.info

Features:

- Ability to find foreign equivalents for steel or alloy specified in any national standard;
- Two levels of the equivalence search: the easiest way to use Fast Search and the Advanced Search for specialists;
- Ability to find steel or alloy if you know only its chemical composition;
- Search for a grade in the database by Mask (used if you don't know correct grade designation).

Benefits:

- Fast searching of the data on compositions and equivalents within seconds;
- Ensure that you have the most complete and up-to-date information on steels and metals worldwide;
- Printing and saving in HTML files data on grades and equivalents;
- Context Help and comprehensive User's Guides with illustrations of operation with the software;
- Possibility to operate with all major network hardware and software.

With your purchase you receive:

- Unlimited license to use the software;
- Our technical Support Service;
- Software updates every quarter without additional payments during the warranty period of 12 months;
- Free access to the Online software versions during the warranty period;
- Ability to subscribe to our Annual Support Service on completion of the warranty period;
- Hot information on new software versions with ability to buy upgrades.

Order Form

| Software | For single PC | Multi - User | | Amount |
|----------------------------|---------------|--------------|--------------|--------|
| | | 2-5 Users | 6-10 Users | |
| WinSteel | €350 - ____ | €525 - ____ | €700 - ____ | € ____ |
| WinAlloy | €350 - ____ | €525 - ____ | €700 - ____ | € ____ |
| WinSteel + WinAlloy | €630 - ____ | €925 - ____ | €1260 - ____ | € ____ |
| Delivery by courier | | | | €50 |
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International Translator of Steel Grades WinSteel

Why is WinSteel Software Better than Reference Handbooks on Steel Grades?

- WinSteel database contains information on steels equivalents selected by our experts from a number of different reference books, standards and brochures of steel companies of the whole world.
- Using WinSteel you will find even those equivalents, which you cannot find directly in any sources used by us.
- WinSteel software allows to find not only exact but similar equivalents by comparison of chemical compositions of a sample steel grade and its presumed equivalents.
- WinSteel software allows to find a steel grade in the database and its equivalents if you know only its composition.

What does WinSteel Differ from the Similar Software by?

- We offer you not only complete database containing information on more than 78,000 steel grades but also a software providing simple and efficient operation with the database involved.
- WinSteel software allows to find equivalents in two modes: by known steel grade and by known chemical composition.
- Using WinSteel you can find a designation of a steel grade and its equivalents even in that case when only its chemical composition is known.
- WinSteel provides to save information on found equivalents in the Notepad so that their repeated search could take much less time.
- If you don't know exact name of a steel grade you have an opportunity to find it in the database using Search by Mask.
- WinSteel database is constantly updated. We issue new software releases every three months.
- Besides offline software version on CD-ROM we'll give you access to WinSteel Online. It allows you to get required information when you are out of your office also.
- WinSteel possesses friendly interface provided with the comprehensive User's Guide with illustrations of operating with the software and Help.

International Translator of Steel Grades

WinSteel

General Information

WinSteel is original user-friendly software that helps you to find the correspondence between steel grades used in your country and steel grades of other industrial countries. WinSteel, ver. 5.0 database contains data on more than **78,000 steel grades** of **27 countries**: Russia, Ukraine and other CIS countries, USA, Germany, UK, China, Japan, France, Italy, Canada, Finland, Norway, Sweden, Austria, Switzerland, Spain, Belgium, Australia, Brazil, Korea, Turkey, Poland, Hungary, Czech and Slovak Republics, Bulgaria, Romania, former Yugoslavia, as well as grades included in European (*EN*) and two International (*ISO* and *UIC*) standards.

WinSteel allows you:

- to get information *on chemical composition* of steel grade of your interest in any country;
- *to find equivalents of the grade* in another country (countries);
- to learn *the designation of steel* (and find its equivalents) if you know only its chemical composition.

Database

The database contains the following information on steels:

- designation of a steel grade;
- chemical composition;
- standard or list of standards that contain information on the steel;
- additional information (remark);
- information on other designations of the steel;
- field of application;
- generalised list of steel equivalents in other countries.

Chemical composition of steels contains information on the percentage of the following elements: carbon (**C**), silicon (**Si**), manganese (**Mn**), phosphorus (**P**), sulphur (**S**), chrome (**Cr**), molybdenum (**Mo**), nickel (**Ni**), vanadium (**V**), niobium (**Nb**), titanium (**Ti**), aluminium (**Al**), copper (**Cu**), nitrogen (**N**), tungsten (**W**), lead (**Pb**), cobalt (**Co**), cerium (**Ce**), zirconium (**Zr**), arsenic (**As**) and boron (**B**). In some countries, the chemical composition of steels also includes carbon factors **CM** and **CE**.

Search for Equivalents

WinSteel software provides two types of the search for equivalents:

- **by steel grade:** you know a steel grade in one country and you want to find its equivalents in another country (other countries);
- **by chemical composition:** you know chemical composition of a steel and you wish to find out its designation and/or to find its equivalent, in other country (countries).

Search by Steel Grade

The Search by Steel Grade may be conducted in one of two modes: *Fast Search* or *Search by Comparison of Chemical Compositions* of a steel and its assumed equivalents.

Fast Search

The *Fast Search* consists in establishing direct correspondence between the selected steel and its equivalent(s) in another country. This correspondence is established by comparing data taken by our experts on the basis of the analysis of different sources: standards, reference books and brochures provided to us by steel companies of the whole world.

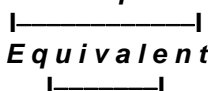
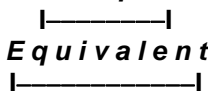
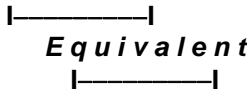
Apart from the standard mode, the Fast Search may be carried out in “*extended*” mode. The extended search mode is based on a special algorithm developed by the authors. In a number of cases, this algorithm makes it possible to find quite acceptable equivalents, which you could not find directly in any of sources used by us.

International Translator of Steel Grades WinSteel

Search by Comparison of Chemical Compositions

If the *Fast Search* does not produce positive results, you have an opportunity to find equivalents *by comparison of chemical compositions* of the sample steel grade and steels included in the software database. The search by the comparison of chemical compositions is performed only by elements indicated by a User (the contents of other elements are disregarded). To establish the correspondence between the indicated chemical elements in the sample steel grade and in its potential equivalent(s), you can use one of the three search modes (see the *Table*).

Modes of Search for Equivalents by Comparison of Chemical Compositions

| Search Mode | Content | Illustration |
|---------------------------------|---|--|
| Getting within the range | The content of a chemical element in the equivalent fits into the range of this element in the sample grade | Sample  |
| Covering range | The content of a chemical element in the sample grade fits into the range of this element in the equivalent | Sample  |
| Overlapping rangers | The ranges of a chemical element in the sample grade and in the equivalent are overlapping | Sample  |

At a User's wish, he can select the *common search mode* for all indicated chemical elements, or *a separate mode for each indicated element*. Before starting the search, a User can correct chemical composition of the sample steel grade, in order to ensure the required flexibility of the search and to fulfil the terms of the chosen search mode.

On searching for equivalents by comparison of chemical compositions a User can use some *additional opportunities*:

1. To mark a chemical element as a base of steel or alloy. This option is useful when it is necessary to find the correspondence between heat-resistant steels and Ni- or Co-based alloys. To process the content of such elements in the search, we use the algorithm that consists in the following:
 - to determine the correspondence of the content of the above elements in the sample grade and in its presumed equivalents, the *Overlapping ranges* search mode is used irrespective of the chosen general search mode;
 - *the maximum* value of the content of the base element is calculated as difference between 100% and minimum values of the contents of *all other elements* constituting the steel (alloy);
 - *the minimum* value of the content of the said element is assumed as a half of the maximum value.

2. To mark that in the search for equivalents, an element should be treated as *admixture*. During the search, the elements so marked are processed in a different way from the other elements included in the search. This special treatment consists in the following:
 - for elements marked as admixtures, the search mode chosen for other elements is disregarded;
 - the correspondence between the contents of such elements is considered to be established, if the said element is absent in the sample grade or in an equivalent, or its content fits into the range **0 - x%** where **x** is a ratio that can be established by a User.

International Translator of Steel Grades

WinSteel

3. Depending on the selected search mode to enter *values of minimum coincidence* and *maximum discrepancy of the ranges* of content an element in the sample steel grade and an equivalent. It is necessary to narrow the circle of equivalents considered, excluding the steels whose chemical compositions, though meet the conditions of the chosen search mode, but their content ranges of some elements do not coincide with the ranges of the same elements in the sample grade.

Search by Chemical Composition

In many respects, *the search for a steel grade by known chemical composition* is similar to the search by steel grade by comparison of chemical compositions.

The search is conducted only by the marked chemical elements in one of the modes described above (see the *Table*). Here again you can use its additional possibilities, namely, *mark selected elements as a steel (alloy) base or as admixtures, enter the values of minimum coincidence and maximum discrepancy of the ranges, and correct the parameters of additional set-up. The main difference is that you should enter the chemical composition of the sample steel grade manually from the keyboard.*

Search Results

The found equivalents of a steel grade you need are placed in the list-box. Using this list-box you are allowed:

1. *To compare* chemical composition of the chosen steel with the chemical composition of each equivalent from the list-box. Such a comparison is made either in a table form or in a graphic form by means of comparative histograms.
2. *To delete* an unnecessary equivalent (equivalents) from the list.
3. To store information on found equivalents in *the Notepad*.
4. To *print out* information on equivalents.
5. To save information on found equivalents in *HTML file* to use it in other Windows applications.

Notepad

The Notepad is intended for storing information on steels selected by you in the course of operation with the software. The information entered by you is stored on the hard disk of your PC and you can use it in your future sessions of operation with the software.

The Notepad consists of two sections:

1. *The first section* is called *General Notepad*, and you can store in it information on *any steel grade* found by you in the software database.
2. *The second section* – *Notepad of Equivalents* is intended for storing information only on equivalents of different steels.

Search for Steel Grade in the Database by Mask

In case you do not know exact designation of a steel grade for which you are going to look for an equivalent, you have an opportunity to find the steel in the database of the software by using the mode of *Search by Mask*.

Mask is a designation of a steel grade where some unknown characters (or groups of characters) are replaced with signs * or ?. The sign ? is used to replace only one unknown character and the sign * is used to replace a group of characters (a group may include any number of characters, also one character, or no character). The difference between upper- and lower-case letters in the Mask field is disregarded.

On the Search by Mask a User also can use the mode *Search by "short name"* in which the search will consider only the alphanumeric characters that he entered in the Mask field. The other characters, namely: full stops, commas, dashes, blanks, slashes, etc. will be disregarded in the search, even if he enters them in the Mask field.

International Translator of Steel Grades WinSteel

Supply and Installation

Standard delivery package includes:

- software on CD-ROM;
- comprehensive User's Guide containing detailed information on the software with a lot of samples;
- USB security device (HASP) for illegal copy protection.

The software can be delivered in two optional configurations, i.e. for use on **single PC** in a time or for **network (multi-user) use**.

Requirements for Hardware and Operating System

- Windows 95 / 98 / NT 4.0 / 2000 / ME / XP / Vista;
- 65 MB of free hard disc storage;
- Pentium / Pentium II / Celeron / Pentium III / Pentium IV;
- 16 MB RAM or more;
- CD-ROM read driver.

Installation

To install the software it is necessary to have not less than 65 Mb of free space on the hard disk of your PC. The installation is carried out automatically by means of the installation program.

Support

The warranty period for WinSteel software is **12 months** since the date of receiving a copy of the software by a User. During this period our Users:

- receive new software releases (versions) every three months without any additional payment;
- have free access to the **WinSteel Online** on our web-site **www.metaldatoonline.com**;
- are guaranteed with replacement of the defective CD-ROMs and the security device providing the revealed faults resulted not in violation of the rules of installation and use the software, contained in the User's Guide;
- are provided with possibility to use consultations of our Support Service Group.

During the whole period of the operation with the software authorised Users are provided with the following:

- subscription to our Annual Support Service with receiving new releases of the software every quarter on completion of the warranty period;
- rights to purchase new versions of the software on upgrade terms;
- discounts when buying other software of Quantor-Soft Metal.

You can contact Quantor-Soft Metal on all questions:

-  (+ 7 495) 234 4905
- Fax** (+ 7 495) 232 3996
-  P.O. Box 39, 119049 Moscow, Russia
- E-mail** winsteel@metaldato.info
- Web-site** <http://www.metaldato.info>

Results of Analogue Search

Steel Grade: 321 AISI (USA)

Chemical Composition:

| | | | | | |
|-----------|--------------|-----------|-------------|-----------|-------------|
| C | ≤ 0.08 | Si | ≤ 1.0 | Mn | ≤ 2.0 |
| P | ≤ 0.045 | S | ≤ 0.03 | Cr | 17.0 - 19.0 |
| Mo | - | Ni | 9.0 - 12.0 | V | - |
| Ti | - | Cu | - | W | - |
| Fe | Rest | | | | |

Analogues:

Steel Grade: 08Ch18N10T Included to 12 standards (CIS Countries)

Chemical Composition:

| | | | | | |
|-----------|--------------|-----------|------------|-----------|-------------|
| C | ≤ 0.08 | Si | ≤ 0.8 | Mn | ≤ 2.0 |
| P | ≤ 0.035 | S | ≤ 0.2 | Cr | 17.0 - 19.0 |
| Mo | ≤ 0.3 | Ni | 9.0 - 11.0 | V | ≤ 0.2 |
| Ti | ≤ 0.7 | Cu | ≤ 0.4 | W | ≤ 0.2 |
| Fe | Rest | | | | |

Steel Grade: X 6 CrNiTi 18-10 Included to 14 standards (Germany)

Chemical Composition:

| | | | | | |
|-----------|--------------|-----------|-------------|-----------|-------------|
| C | ≤ 0.08 | Si | ≤ 1.0 | Mn | ≤ 2.0 |
| P | ≤ 0.045 | S | ≤ 0.03 | Cr | 17.0 - 19.0 |
| Mo | - | Ni | 9.0 - 12.0 | V | - |
| Ti | ≤ 0.7 | Cu | - | W | - |
| Fe | Rest | | | | |

Steel Grade: Z 6 CNT 18-10 AFNOR NF A 35-559 (France)

Chemical Composition:

| | | | | | |
|-----------|-------------|-----------|-------------|-----------|-------------|
| C | ≤ 0.08 | Si | ≤ 1.0 | Mn | ≤ 2.0 |
| P | ≤ 0.04 | S | ≤ 0.03 | Cr | 17.0 - 19.0 |
| Mo | - | Ni | 9.0 - 11.0 | V | - |
| Ti | ≤ 0.6 | Cu | - | W | - |
| Fe | Rest | | | | |

Steel Grade: 07Ch16N6 Included to 5 standards (CIS Countries)**Chemical Composition:**

| | | | | | |
|-----------|--------------------|-----------|--------------------|-----------|------------------|
| Fe | Rest | Cr | 15.5 - 17.5 | Ni | 5.0 - 8.0 |
| C | 0.05 - 0.09 | Si | ≤ 0.8 | Mn | ≤ 0.8 |
| Cu | ≤ 0.3 | Mo | ≤ 0.3 | Ti | ≤ 0.2 |
| W | ≤ 0.2 | V | ≤ 0.2 | P | ≤ 0.035 |
| S | ≤ 0.02 | | | | |

Included in Standards:

| | |
|---------------|---|
| GOST 25054-81 | Forgings of corrosion-resistant steels and alloys. General specifications. |
| GOST 5582-75 | Stainless and Heat-Resisting Sheet. Specifications. |
| GOST 5632-72 | High-alloy steels and corrosion-proof, heat-resisting and heat treated alloys. Grades. |
| GOST 5949-75 | Sorted and gauged corrosion-resistant, heat-resistant and high-temperature steel. Specifications. |
| GOST 7350-77 | Steel thick sheet, corrosion-resistant, heat-resistant Technical conditions. |

Other Designations:

| | |
|--------|--------------|
| Ch16N6 | GOST 5632-72 |
| EP288 | GOST 5632-72 |

Additional Information:

Ti < 0.05% - by agreement

Results of Analogue Search

Steel Grade: 20 Included to 18 standards (CIS Countries)

Chemical Composition:

| | | | | | |
|-----------|--------------------|-----------|--------------------|-----------|--------------------|
| C | 0.17 - 0.24 | Si | 0.17 - 0.37 | Mn | 0.35 - 0.65 |
| P | ≤ 0.035 | S | ≤ 0.04 | Cr | ≤ 0.25 |
| Mo | - | Ni | ≤ 0.3 | Cu | ≤ 0.3 |
| N | ≤ 0.008 | As | ≤ 0.08 | Fe | Rest |

Analogues:

Steel Grade: C 22 Included to 3 standards (Germany)

Chemical Composition:

| | | | | | |
|-----------|--------------------|-----------|----------------|-----------|------------------|
| C | 0.17 - 0.24 | Si | ≤ 0.4 | Mn | 0.4 - 0.7 |
| P | ≤ 0.045 | S | ≤ 0.045 | Cr | ≤ 0.4 |
| Mo | ≤ 0.1 | Ni | ≤ 0.4 | Cu | - |
| N | - | As | - | Fe | Rest |

Steel Grade: C 22 E Included to 6 standards (Germany)

Chemical Composition:

| | | | | | |
|-----------|--------------------|-----------|----------------|-----------|------------------|
| C | 0.17 - 0.24 | Si | ≤ 0.4 | Mn | 0.4 - 0.7 |
| P | ≤ 0.035 | S | ≤ 0.035 | Cr | ≤ 0.4 |
| Mo | ≤ 0.1 | Ni | ≤ 0.4 | Cu | - |
| N | - | As | - | Fe | Rest |

Steel Grade: C 22 k (Germany)

Chemical Composition:

| | | | | | |
|-----------|--------------------|-----------|----------------|-----------|------------------|
| C | 0.17 - 0.24 | Si | ≤ 0.4 | Mn | 0.4 - 0.7 |
| P | ≤ 0.045 | S | ≤ 0.045 | Cr | ≤ 0.4 |
| Mo | ≤ 0.1 | Ni | ≤ 0.4 | Cu | - |
| N | - | As | - | Fe | Rest |

Steel Grade: 1045 AISI (USA)

Chemical Composition:

| | | | | | |
|-----------|---------------|-----------|------------------|----------|--------------------|
| Fe | Rest | Mn | 0.6 - 0.9 | C | 0.43 - 0.50 |
| S | ≤ 0.04 | P | ≤ 0.04 | | |

Included in Standards:

AISI

Other Designations:

| | |
|------------------|-----------|
| A 183 (2-Nuts) | ASTM A183 |
| A 236 (1045) | ASTM A236 |
| A 266 (1045) | ASTM A266 |
| A 29 (1045) | ASTM A29 |
| A 510 (1045) | ASTM A510 |
| A 519 (1045) | ASTM A519 |
| A 576 (1045) | ASTM A576 |
| A 682 (1045) | ASTM A682 |
| A 827 (1045) | ASTM A827 |
| A 830 (1045) | ASTM A830 |
| G 10450 | UNS |
| J1397 (1045) | SAE J1397 |
| J403 (1045) | SAE J403 |
| J412 (1045) | SAE J412 |
| QQ-S-700 (C1045) | FED |

Additional Information:

Si : By agreement

When boron treatment for killed steels is specified, the steels can be expected to contain 0.0005 - 0.003% B.
If the usual titanium additive is not permitted, the steels can be expected to contain B ≥ 0.005.