

ICS 47.020.01

CCS U 07



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 22217-2008

**Shipbuilding -- Numerical control of machines -- ESSI format
(English Translation)**

Issued on: August 4, 2008

Implemented on: February 1, 2009

Issued by: Standardization Administration of China

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Foreword

This standard is identical with ISO 6582. 1983 "Shipbuilding ESSI format digital control machine" (in English).

This standard is equivalent translation ISO 6582. 1983.

For ease of use, this standard made the following editorial changes.

--- The "international standard" be replaced by "this standard";

"," --- With a decimal point instead of a comma as the decimal point, "";

--- Delete international standards foreword.

This standard Annex A, Annex B normative appendix.

The standard proposed by China State Shipbuilding Corporation.

This standard by the National Standardization Technical Committee boat marine vessels based at the Technical Committee.

This standard was drafted. Changjiang Ship Design Institute.

Introduction

"ESSI format" was first proposed by the Industrial Research Center in Oslo, Norway, it is widely used in CNC flame cutting machine and plotter, as well as it was produced using a plotter, flame cutting machines and other equipment manufacturers controllers.

Technological advances CNC equipment greatly expanded machine Processing function. However, due to the different incompatible "ESSI format", the lack of interoperability between different equipment manufacturers. This kind Fragmented nature of the development strategy has led to difficulties in the exchange of data between different users

and communications.

To avoid errors in the data exchange, commonly used method is CNC plotter and CNC manufacturing machines both use the same physical Control band (tape, tape, etc.), and this should include the control zone can apply to both types of machine code, so pay special attention to ensure that it will not be ignored for a particular type of code or processing function in which the controller off. Such problems do not use "ESSI format" control system EC also exists therefore not specified in this standard.

Communication and data exchange in the future will become increasingly important shipbuilding industry, this standard will be adopted "ESSI format" create CNC machine tools Build a unified platform.

This standard will be able to guarantee compatibility of different sources and control procedures, so that hardware manufacturers, programmers and CNC machine tools between users Better communication.

"ESSI format" can be used based on punch cards, punched tape, magnetic tape and other media code data exchange standards recommended data symbols.

If you need technical progress or future standard conflict with this standard, this standard will be introduced revisions.

Appendix A and Appendix B is a complete part of the present standards.

GB/T 22217-2008/ISO 6582. 1983 Shipbuilding digital control machine ESSI format

1 Scope

This standard describes in detail the ESSI format as a coordinated system design guidance standard, its commitment to reduce the required program type, Improve uniformity programming technology, promoting the program among the shipbuilding industry plotters and CNC flame cutting machine interchangeability.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 8129 Industrial automation systems - Numerical control of machines vocabulary (GB/T 8129-1997, idt ISO 2806:1994) GB/T 19660 Industrial automation systems and integration - Numerical control of machines and motion coordinate system named (GB/T 19660-2005, ISO 841:2001, IDT)

3 Words

Length 3.1 Classification of various types of word format no special provisions.

3.2

Only in three-axis machine, the address of the word character should be placed on top.

3.3

size of the word should be used in incremental coordinates (although the function 81 and 82 may be absolute coordinates), and should contain the following Digital.

- a) shall contain all the incremental linear algebraic sign numerals to indicate the direction;
- b) addition of zero for each axis in the direction of digital simply insert the algebraic symbol, all blocks should have represented each increment digital.

3.4

non-dimension word should contain. Machine functions (auxiliary functions) of up to three unsigned composition (see Appendix B).

4 Blocks

4.1

blocks in each instruction maximum number of characters should be consistent with the provisions of Appendix A.

4.2

Each block shall be the end of one of the following characters.

- a) LF (line feed);
- b) CR (carriage return);
- c) LF and CR.

When the control zone to use both characters (LF and CR), the controller if only one of the characters will be ignored by the other. another in addition, it should be the first program block (s) character begins.

4.3

If the initialization block, for example, require automatic rewind or automatic code detection, the module should be a special character guide (in ISO is%, the EIA punctured code is EOR).

5 Address

5.1

blocks in different formats, no axis address by the number of symbols (see Appendix B).

GB/T 22217-2008/ISO 6582. 1983