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

GB/T 22193-2008

**Electrical installations in ships -- Equipment -- Semiconductor
convertors**

船舶电气设备 设备 半导体变流器

(English Translation)

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Foreword

This standard is identical with IEC 60092-304:1995 "Electrical installations in ships - Part 304. Equipment - Semiconductor convertors" (in English).

This standard is equivalent translation IEC 60092-304:1995.

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

--- "This International Standard" be replaced by "this standard";

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

--- Delete international standards preface, introduction;

--- Of expression in accordance with the provisions of GB/T 1.1-2000 made changes.

The standard proposed by China State Shipbuilding Corporation.

This standard by the National Standardization Technical Committee boat ocean.

This standard was drafted. Technical and Economic Research Institute of China Shipbuilding Industry.

1 Scope

This standard applies to the use of such diodes, and reverse blocking three-terminal thyristor semiconductor rectifier element marine static converter. Converter can So the AC to DC and DC-AC, DC-DC and AC-AC.

2 General requirements

Semiconductor convertors shall comply with the relevant provisions of the following publications, and should be in accordance with this standard and IEC 60092 Parts of other additional Provisions.

IEC 60146 Semiconductor converters (attached 1st Amendment) Semiconductor convertors IEC 60146A 1st Addition. Chapter 7. converter equipment and components mark Semiconductor convertors IEC 60146-2 Part 2. Semiconductor self-commutated converter Semiconductor convertors IEC 60146-3 Part 3. Semiconductor direct DC converter (chopper direct converter) IEC 60119 polycrystalline semiconductor rectifier stack and rectifier equipment Recommendations

3 Cooling arrangement

3.1

Semiconductor convertors is preferably a dry air-cooled.

3.2

immersion semiconductor converters should be sealed. If ventilation measures, it should be equipped with appropriate desiccant.

3.3

pairs immersion semiconductor converters should consider configuring a liquid over-temperature alarm and pneumatic protection device.

NOTE: Installation Notes See IEC 60092-401 "Installation and test of completed" in Chapter 16.

4 Selenium rectifying elements

Even small amounts of mercury can damage the anti-fogging agent type selenium rectifying elements, and therefore does not allow the use of mercury selenium rectifying element type anti-fogging agent.

5 Accessibility

Semiconductor convertors group or member should enable mounting a semiconductor device is removed without having to break up the entire converter.

6 Conditions

6.1

Semiconductor convertors conditions of use shall apply IEC 60092-101 "Definitions and general requirements" provisions (such as ambient temperature).

6.2

If the converter equipment needs to be dried to facilitate maintenance and inspection, then heating should be particularly careful to prevent it from exceeding the maximum allowable temperature Temperature rise limit.

7.1 Forced cooling

Such as the use of forced cooling circuits should be designed to maintain effective only when cooled, variable flow reactor to power up or remain charged.

7.2 Interaction with the power supply or the load system

7.2.1

Precautions should be taken to prevent over-current or load due to a power system disturbance caused by or overvoltage (if the load operation can be regenerated, further it should include regenerative power) harmful effects on the converter equipment.

GB/T 22193-2008/IEC 60092-304:1995