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

**GB/T 29129-2012**

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**Marine diesel engines for alternating current generating sets**

船舶交流发电机组用柴油发动机

**Issued on: December 31, 2012**

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**Issued by: General Administration of Quality Supervision, Inspection and  
Quarantine;  
Standardization Administration of the PRC**

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### Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard proposed by China State Shipbuilding Corporation. This standard by the National Marine Machinery Standardization Technical Committee (SAC/TC137) centralized. This standard was drafted. China Shipbuilding Technology and Economy Research Institute, Zibo Zi Chai New Energy Co., Ltd., Guangzhou won the bid linking test Certified Technology Development Co., Ltd., Weichai Power Co., Ltd., China Shipbuilding Industry Corporation 711 Research Institute, Zibo Diesel Corporation, Henan Diesel Engine Heavy Industry Co., Ltd. The main drafters of this standard. Sun Meng, Chen Min Zhong Wang Yanrui, Chen Zhizhong, Hu Xinzhong SOCIETY OF Qi Chao, Li Zhiyong, Guo Xinfeng, Guoxin Mao. AC generators ship diesel engines

### 1 Scope

China's national standard for the diesel engines used in marine alternating current generating sets. It specifies the requirements, the test methods, the inspection rules and the marking, packaging, transport and storage of those engines, and it applies to the design, manufacture and acceptance of the diesel engines for a ship's main and emergency generating sets. A ship's electrical supply has no grid behind it. Everything the vessel runs on - the steering gear, the navigation and communications, the cargo pumps, the refrigeration, the lighting and, on a diesel-electric vessel, the propulsion - comes from a handful of generating sets in a machinery space, and when the last of them stops the ship goes dark and stops steering. That is why the requirements on the engine driving one differ from those on an industrial generator engine on land. The load is switched in large steps: a bow thruster or a cargo pump starting represents a substantial fraction of the set's rating applied in a moment, and the engine has to accept it without the frequency dipping beyond what the switchboard and the connected equipment tolerate. Sets run in parallel, so the

engine's speed governing has to share load stably with another engine rather than fighting it. The emergency set has a duty of its own: it must start on its own stored energy, without ship's power, reach speed and accept the emergency switchboard load within a stated time, from cold, in a compartment that may be unheated. And the whole installation is subject to classification society survey. So the standard covers the performance and governing characteristics, the starting, the parallel operation, the environmental conditions of inclination, vibration and ambient temperature, the fuels, and the tests. Issued on 31 December 2012 and in force since 1 July 2013.

This standard specifies the ship alternator set with a diesel engine (hereinafter referred to as Diesel) requirements, test methods, inspection rules and standards Chi, packaging, transport and storage. This standard applies to the ship's main and emergency power diesel alternator group with design, manufacture and acceptance.

## 2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 699-1999 quality carbon structural steel

GB/T 700-2006 carbon structural steel

GB/T 725 product names and model preparation of the internal combustion engine rules

GB/T 1173-1995 cast aluminum

GB/T 1221-2007 Steel Bars

GB/T 1348-2009 ductile iron castings

GB/T 2820.2 reciprocating internal combustion engine driven alternating current generating sets - Part 2. Engines

GB/T 3077-1999 alloy steel

GB/T 3190-2008 Wrought aluminum and aluminum alloy chemical composition

GB/T 3475 marine diesel engine speed control system technical requirements and test methods

GB/T 5741 marine diesel engine exhaust smoke measurement

GB/T 6072.1 reciprocating internal combustion engine performance - Part 1. Power, calibration and test methods of fuel consumption and lubricating oil consumption Additional requirements for engines for general use

GB 8840 marine diesel engine exhaust smoke limit