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JJG

NATIONAL METROLOGY VERIFICATION REGULATION OF THE PEOPLE'S REPUBLIC OF CHINA

JJG 1167-2019

Anemometers Used in Marine Field

海洋测风仪器检定规程

(English Translation)

Implemented on: March 31, 2020

Issued by: State Administration for Market Regulation

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Introduction

This regulation refers to the World Meteorological Organization (WMO) "Guide to Meteorological Instruments and Methods of Observation" (GuidetoMe-teorological Instruments and Methods of Observation (2014 edition) Summing instrument requirements, for GB/T 14914 "Observation Specification for Seashore", GB/T 12763.3-2007 "Ocean Survey" Specification Part 3: Marine Meteorological Observation, technical requirements for the observation of marine winds, combined with marine wind measurement instruments the use and current situation of this formula is formulated.

This regulation is issued for the first time.

Verification regulations for marine wind measuring instruments

1 Scope

This regulation is applicable to the first verification and subsequent verification of marine wind measuring instruments with a wind speed measuring range of (0~75) m/s.

Continue verification and inspection in use.

Wind gauges other than propeller-type anemometers and ultrasonic anemometers can be used for reference.

2 Reference documents this regulation refers to the following documents.

JJG 431-2014 portable three cup wind direction anemometer JJG 518 Pitot tube JJG 875-2005 Digital pressure gauge for dated references, only the dated versions are applicable to this Regulation; for those without dates the latest version (including all amendments) is applicable to this regulation.

3 Terms and units of measurement

3.1 Terminology

3.1.1 Anemometersusedinmarinefield in ocean observation, monitoring, and surveying, instruments used to measure elements of wind direction and speed.

3.1.2 propelleraneometer the method of measuring the wind direction in such a way that the tail wing swings is facing the direction of the airflow, and the direction of the rotation of the propeller (propeller) with the airflow Wind measuring instrument for measuring wind speed.

3.1.3 Ultrasonicanemometer Calculate the wind speed and direction by measuring the difference in time or frequency (Doppler transform) at the receiving end by sending sound pulses Wind measuring instrument.

3.1.4 The effective area of the wind tunnel working section

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serviceareainthetestsectionofwindtunnel an area with a stable and uniform wind flow field.

3.1.5 Starting wind speed starting threshold of wind velocity the propeller-type anemometer consists of a position where the propeller is at a standstill and the acute angle between the tail wing and the airflow direction of the wind tunnel is 10° Release, under the action of the airflow, the tail wing starts to swing and then stops, the propeller becomes a continuous rotation state, and can collect/display the minimum wind speed indicating the wind speed and wind direction.

3.2 Unit of measurement

3.2.1 Wind speed unit. meter per second, symbol. m/s.

3.2.2 Wind direction unit. degree, symbol. °.

4 Overview

Marine wind measuring instruments (hereinafter referred to as "wind gauges") mainly include propeller wind gauges and ultrasonic wind gauges.

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