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GB 31221-2014

Specifications for observing environs protection of surface meteorological station

气象探测环境保护规范 地面气象观测站

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Foreword

This standard 3.1.1.2.2,

3.3 are recommended, the rest are mandatory. This standard was drafted in accordance with rules GB/T 1.1-2009 given. The standard proposed by the China Meteorological Administration. This standard by the national meteorological Standardization Technical Committee (SAC/TC507) instruments and methods of observation. Drafted by: China Meteorological Administration meteorological center, Henan Meteorological Bureau, Yunnan Provincial Meteorological Bureau, Zhejiang Meteorological Bureau. The main drafters. Guo Jianxia, Chen Ting, Zhang Jianlei, Cao Tie, Li Li, Chen Xuefeng, Sangrui stars, painted red, late literature.

Meteorological observation station is the main place to obtain a variety of ground meteorological observations, it is to carry out the weather early warning and forecasting, climate predictions forecast, An important foundation for meteorological services and research. Meteorological environment representative of meteorological observation, accuracy and comparability has a more Big impact. To protect the ground meteorological station has been built to detect the environment, and living with limited damage to Zhou Bian environs for meteorological observation may occur Move, formulated standards. Meteorological environmental protection norms Meteorological observation stations

1 Scope

GB 31221-2014 is the Chinese national standard on specifications for observing environs protection of surface meteorological station, in the field of natural and applied sciences. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 30 September 2014 by the General Administration of Quality

Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 January 2015. Classification: ICS 07.060, CCS A47. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies requirements for ground meteorological station detection of environmental protection. This standard is suitable for detecting environmental protection meteorological stations.

2 Terms and Definitions

The following terms and definitions apply to this document.

2.1 Meteorological observation stations surfacemeteorologicalstation To carry out long-term continuous meteorological observations by the competent meteorological department under the State Council, local authorities at all levels of the State Department and other meteorological there Relevant departments and provinces, autonomous regions, municipalities directly under the other surface weather observing sites set up by the relevant departments.

2.2 Detecting environmental environsformeteorologicalobservation In order to avoid all kinds of interference and ensure accurate meteorological facilities access to environmental space minimum distance necessary meteorological information constituted.

2.3 National reference climatological stations nationalreferenceclimatologicalstation According to the requirements of national climate division, and Global Climate Observing System, in order to obtain long-term, continuous information and set up a fully representative Opposed meteorological observation station.

2.4 National basic weather station nationalbasicsynopticstation According to the National Climate Analysis of weather forecasting and the need to surface weather stations are set.

2.5 National general weather nationalmeteorologicalobservingstation Meteorological observation stations by province (autonomous regions and municipalities) set of administrative divisions.

2.6 Regional weather station regionalmeteorologicalobservingstation According to small-scale severe weather warnings, cities, weather forecast service needs special areas and exclusive economic zone, as well as local Economic and social development needs, complement the construction of meteorological observation stations on the basis of national meteorological observation station on the layout.

Note. The national meteorological observation stations, including national reference climatological stations, base stations in the country, the national general weather station.

2.7 Meteorological observation field surfacemeteorologicalobservationsite Field observations For the placement of meteorological observation instruments and facilities dedicated site meteorological observations.

2.8 Obstacle obstacle Higher than the observation field of the observation field plane 1m above the buildings, structures, trees, crops and other objects.

2.9 Height distance than ratioofheighttodistance Obstacles higher than the observation field of the planar portion of the height of the height of the point of the projection plane to the point of observation site fence recently observed field Than the distance between the points.

2.10 Blocking elevation blockelevationangle To the highest point of the obstacle visible when viewed from ground-based observations field fence from the nearest point of the obstacle, the line of sight and line of sight in the observation field location The angle formed by the projection plane.

2.11 Sunrise direction azimuthrangeofsunrise Sunrise and azimuth angle region formed between the winter solstice sunrise azimuth location of summer solstice.

2.12 Sunset direction azimuthrangeofsunset Japanese seat summer solstice and the winter solstice position did not date the angle formed between the orientation of the region.

3.1.1 General requirements

3.1.1.1 duration of protection 3.1.1.1.1 national reference climatological station site should be at least 50 years of stable. 3.1.1.1.2 national basic weather stations and national general weather station site should be kept for at least 30 years of stable.

3.1.1.2 surroundings 3.1.1.2.1 observation site four weeks should open flat, smooth airflow and maintaining natural daylight. 5000m, wind up the other direction in the observation field range of 90 ° 3.1.1.2.2 upwind 2000m, shown in Figure 1, in this range should not be regulated Zoned industrial and mining areas, the construction should not be easy to produce smoke and other air pollution facilities; the wind direction in the observation field national reference climatological stations in the 5000m range Also not planning a total population of more than 5,000 neighborhood. 3.1.1.2.3 embodiment should not be blasting, drilling, quarrying digging of sand, earth and the like in the observation field range of 1000m compromise safety ground observation field of meteorological activity. Description.

--- R & lt most upwind wind field observation range 90 ° edge of the outer fan radius;

--- R & lt remaining outer edges of the fan radius direction of the observation field.

Note. The schematic westerly example, limit the scope of the actual local wind up prevail.

1 a schematic view of Zhou Bian field of meteorological observation restricted planning zone

3.1.2 Restrictions on obstacles

3.1.2.1 obstacle-controlled areas demarcated In the field of meteorological observation obstacle four weeks should be designated control area, the control area should range in accordance with Table 1. Table 1 meteorological observation field four weeks obstacle to the control area in meters From outside the National Collections meteorological observation stations outfield fence outwardly extending around National reference climatological stations 2000 National basic weather station 1000 National general weather station 800

3.1.2.2 restricting national reference climatological stations and the national basic weather station controlled area obstacle requirements 3.1.2.2.1 height distance to the obstacle at any point in the control area is less than 1/10. Obstacles and observation field fence 3.1.2.2.2 controlled areas closest distance of not less than 50m. National restrictions

3.1.2.3 General requirements obstacle weather station controlled area 3.1.2.3.1 height from the obstacle at any point in the control area is less than 1/8. 3.1.2.3.2 controlled area and observation field fence nearest obstacle distance not less than 30m. There are additional restrictions

3.1.2.4 sunlight or solar radiation observed meteorological stations surrounding obstacles requires 3.1.2.4.1 national reference climatological stations and national weather substantially in the directions of sunrise and sunset direction (this range is not limiting control area), the barrier Blocking the shutter is not greater than the elevation angle 5 °. 3.1.2.4.2 weather countries generally in the directions of sunrise and sunset direction (this range is not limiting control area), the elevation angle is not blocked by obstacles At 7 °.

3.1.3 restrictions on sources of influence The minimum distance between the source and observation affect the outfield fence shall meet the requirements in Table 2. The minimum distance between the unit and Table

2 Effects of source of meteorological observation outfield fence m Impact source category national reference climatological stations the state's basic national weather stations in general Railway embankment > 200 > 200 > 100 Roadbed > 50 > 50 >

30 Artificial construction Water > 100 > 100 >

50 Garbage dumps, sewage outfall and other sources influence > 500 > 500 > 200

3.2 regional weather station

3.2.1 general requirements

3.2.1.1 observing Zhou Bian environment to maintain an open field, to ensure that the sensing surface ventilation equipment and non-shade. 10m range within Zhou Bian

3.2.1.2 observed field should not be an obstacle.