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

**GB 142-2013**

Replacing GB 142-1995

**Logs for pit-props**

坑木

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Quarantine;  
Standardization Administration of the PRC**

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### Foreword

3.3 of this standard are mandatory, the rest are recommended. This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard replaces GB 142-1995 "direct use of wood prop", compared with the GB 142-1995 main changes are as follows:

- "Direct use of wood prop" name to "prop";
- Used as a prop for the species is not allowed to make a note;
- Increased requirements for longitudinal crack defects;
- Increasing the 13cm diameter class material, and the provisions of the diameter class volume is calculated;
- Increase the "pit volume tables" (see Appendix A);
- Increased sampling of the product. Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents. This standard by the National Standardization Technical Committee timber (SAC/TC41) and focal points. This standard was drafted. Heilongjiang Provincial Academy of Forestry, China Coal Energy Datun Coal and Electricity Company, Heilongjiang Provincial Institute of Wood Science. The main drafters of this standard. Songrun Hui, Gong Renmei, put off, Li River, Wang Wei Qi, Xu Bin, plum gold, Tie force, Zhang Dongmei, Zhangshan Jun, Liu Decheng. This standard replaces the standards previously issued as follows:
  - GB 142-1958, GB 142-1984, GB 142-1995. Pit prop

### 1 Scope

China's mandatory standard for pit props - the round timber that holds up the roof of a coal

mine roadway, and that is expected to give warning by creaking and splitting before it fails rather than to break without notice. It specifies the technical requirements, the test methods and the measurement of volume for pit props, and it applies to the round timber used in coal mines as props, as supports and for other purposes. Clause 3 is mandatory and the remainder is recommended. The requirements set which species may not be used, the diameter classes and lengths and their permitted deviations, and the limits on the defects the piece may carry - the knots, the slope of grain, the longitudinal cracks, the taper, the decay and the insect damage - with the timber inspected in accordance with GB/T 144, the volume of a log taken from the log volume tables of GB/T 4814, and the batches sampled and judged in accordance with GB/T 17659.1. Compared with the 1995 edition it replaces, the name of the standard is shortened, the note on species that may not be used as props is removed, requirements on longitudinal crack defects are added, the 13 cm diameter class is introduced together with the way the volume of a diameter class is calculated, a normative annex of pit prop volume tables is added, and provisions on the sampling of the product are introduced. Issued on 12 November 2013 and in force since 11 September 2014, it replaces GB 142-1995 and is held by SAC/TC 41.

This standard specifies the technical requirements of the pit prop, test methods and measurement volume. This standard applies to coal mine for wood pillars, brackets and other purposes.

## 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 144 timber inspection

GB/T 4814 original timber volume table

GB/T 17659.1 sawn timber batch inspection Sampling and judging methods - Part 1. Wood batch inspection Sampling and judging methods

## 3 Technical requirements

3.1 Species Sonko hard species and broadleaf species. The following species can not be used as a prop. (. Paulowniaspp) fir and pine fir (A.holophylla), Paulownia, to be alder (Alniphyllum fortunei), sweetgum (L.Formosana), alder (Alnus spp.), A. davidii (A.davidii), lacquered (Toxicodendronspp.), Rhus (Rhusspp.).

### 3.2 Dimensions and tolerances

3.2.1 gauging length. 2.2m ~ 4.0m, 0.2m press upgrade, 5.0m, 6.0m.

3.2.2 seized foot diameter. 12cm ~ 24cm, less than 14cm by 1cm upgrade, enhance foot 0.5cm, 0.5cm insufficient rounding; 14cm Press 2cm above upgrade, enhance foot 1cm, 1cm less rounding.

3.2.3 Gauging length deviation. 6-2cm.

3.3 defects allowable limit Defects shall comply with the allowable limit specified in Table 1. Table 1 deficiency allowable limit Name defect allowable limit Must not have internal leakage section full range of timber length Not allowed to have a full timber within the sapwood decay long range Must not have heartwood decay within the full range of timber length Poles have not allowed within the scope of the subject-foot Table 1 (continued) Name defect allowable limit bending The maximum camber height and length in the song level ratio. Gauging length 4.0m below  $\leq 3\%$ ; gauging length 4.0m, 5.0m, 6.0m of  $\leq 5\%$  Trauma, Pianku radial depth with the gauge diameter ratio  $\leq 10\%$  Burst, not allowed to have the wind in the wood off the subject-foot range Longitudinal crack length with the gauge length ratio of  $\leq 30\%$

## 4 Test methods and volume measurement

4.1 Sampling According to GB/T 17659.1 regulations.

4.2 size calibration Performed in GB/T 144 requirements.

4.3 Evaluation Material Performed in GB/T 144 requirements.

4.4 Volume measurement Performed in GB/T 4814 regulations. SIZE 12cm, 13cm of the original volume by the small-diameter timber volume calculation formula, the diameter level 14cm ~ 24cm volume of timber volume is calculated according to the original 14cm above calculation.

4.5 volume table Volume table in Appendix A.

## Appendix A

(Normative) Pit volume tables Table A.1 pit volume tables Inspection foot diameter cm Gauging length/m 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 5.0