

ICS 75.180.10
CCS E 92

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

SY/T 5324-2013

**Pre-Stress Insulated Tubing
(English Translation)**

Issued on: November 28, 2013

Implemented on: April 1, 2014

Issued by: National Energy Administration

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Foreword

This Standard was drafted as per the rules specified in GB/T 1.1-2009 Directives for Standardization - Part 1. Structure and Drafting of Standards.

This Standard replaced SY/T 5324-1994 Prestressed Insulated Tubing; compared with SY/T 5324-1994, this Standard has the major technical changes as follows besides the editorial modifications.

- Modified the product code (see 4.3 of this Edition; 4.3 of Edition 1994);
- Deleted the specific numerical requirements for anti-repulsion and anti-extrusion (see 5.1 of Edition 1994);
- Modified the requirements for working conditions (see 5.1 of this Edition; 5.1 of Edition 1994);
- Modified the basis for determining the thermal insulation life (see 5.8 of this Edition; 5.8 of Edition 1994);
- Modified the technical requirements for product flatness (see 5.9 of this Edition;

5.9 of Edition 1994);

- Modified the test program for apparent thermal conductivity (see 6.2.2 of this Edition; 6.2.2 of Edition 1994);
- Modified the size requirements for drift diameter gauge (see 6.5 of this Edition;

6.3 of Edition 1994);

- Modified the requirements for product mark (see 8.1 of this Edition; 8.1 of Edition 1994);
- Added the health, safety, environmental control requirements (see Clause 9).

Please note that some contents of this document may involve patents. The issuing authority of this document doesn't assume the responsibility to identify these patents.

This Standard was proposed by and under the jurisdiction of Technical Committee for

Standardization of Oil Tube Profession.

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Pre-Stress Insulated Tubing

1 Scope

This Standard specifies the product classification, technical requirements, test methods, inspection rules, and mark, package, transportation, storage, and health, safety, environmental control requirements for the pre-stress insulated tubing for oilfield heat injection carrier.

The pre-stress insulated tubing uses viscous oil well to inject steam and produce. This Standard is applicable to the production, inspection and acceptance rules of the pre-stressed insulated tubing for steam injection.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

GB/T 3198 Aluminum and Aluminum-Alloy Foil

GB/T 3323 Methods for Radiographic Inspection and Classification of
Radiographs for Fusion Welded Butt Joints in Steel

GB/T 4338 Metallic Materials - Tensile Testing at Elevated Temperature

GB/T 5117 Covered Electrodes for Manual Metal Arc Welding of Non-Alloy and
Fine Grain Steels

GB/T 5118 Low Alloy Steel Covered Electrodes

3 Terms and Definitions

The following terms and definitions are applicable to this document.

3.1 Apparent thermal conductivity

The heat in the insulating layer of the pre-stress insulated tubing transferred in the three modes of heat conduction, convection and radiation is regarded as the heat of the "imaginary solid" with the same insulating thickness transferred in the purely heat conduction mode;

4.1 Product level

The pre-stress insulated tubing can be divided into 5 levels according to the apparent thermal coefficient for inner wall of the inner tube at 350°C; see Table 1.

4.3 Product code

Example. YG114x62D, which indicates the Level-D pre-stress insulated tubing with outer diameter of outer tube 114.3mm, and inner diameter of inner tube 62.0mm.

5.1 Requirements for working conditions

The anti-repulsion, anti-extrusion and tensile load, etc. of the pre-stress insulated tubing shall meet the working conditions with the temperature of heat injection carrier

5.5.1 After treatment, the outer surface of inner tube and inner surface of outer tube

shall be exempt from the rust and dirt; all can see is metal color; weld after drying and assembling.

5.6 Tensile load

For the tubular columns with different specifications, their tensile load at normal temperature shall be determined by the well-descending depth; see Table 3.

Table 3 -- Requirements for Tensile Load with Different Well-Descending Depths