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

GB/T 34903.2-2017

**Petroleum, petrochemical and natural gas industries --
Non-metallic materials in contact with media related to oil and
gas production -- Part 2: Elastomers**

石油、石化与天然气工业 与油气开采相关介质接触的非金属材料 第2部分：弹性
体

(English Translation)

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Foreword

GB/T 34903 "Non-metallic materials in contact with oil, petrochemical, and natural gas industries and media related to oil and gas production" is divided into the following four section.

- Part 1. Thermoplastic plastics;
- Part 2. Elastomers;
- Part 3. Thermosetting resins;
- Part 4. Reinforcing fibres.

This part is part 2 of GB/T 34903.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the translation method equivalent to the use of ISO 23936-2:2011 "oil, petrochemical and natural gas industries and oil and gas exploration related media access.

Touched non-metallic materials - Part 2. Elastomers".

The Chinese documents that have a consistent correspondence with the normatively cited international documents in this standard are as follows.

- GB/T 528-2009 Determination of tensile stress and strain properties of vulcanized or thermoplastic rubbers (ISO 37:2005, IDT)
- GB/T 533-2008 Determination of Density of Vulcanized or Thermoplastic Rubber (ISO 2781:2007, IDT)
- GB/T 6031-1998 Determination of hardness of vulcanized rubber or thermoplastic rubber (10~100IRHD) (idt ISO 48:1994)
- GB/T 7758-2002 Determination of low-temperature properties of vulcanized rubber Temperature recoil method (TR test) (ISO 2921:1997, IDT)
- GB/T 7759.1-2015 Determination of the compression set of vulcanized or thermoplastic rubbers - Part 1. At room temperature and High temperature conditions (ISO 815-1:2008, IDT)

1 Scope

GB/T 34903 provides general principles for the selection and evaluation of non-metallic materials used in petroleum and natural gas production facilities.

Requirements, Recommended Practices, and Product Quality Assurance Guidelines. Failure of equipment caused by failure of non-metallic materials will result in public health, personal safety and Environmental risk. This standard helps to avoid such costly corrosion

damage to the equipment. This standard supplements and does not replace the design of equipment.

Materials and technical requirements that are already in the standard or legal specification.

This part of GB/T 34903 specifies the assessment requirements and procedures for elastomer materials used in oil and gas extraction equipment.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. For undated references, the latest version (including all amendments) applies to this document.

GB/T 3452.2-2007 O-shaped rubber seals for hydraulic and pneumatic applications. Part 2. Specification for the inspection of external appearance (ISO 3601-3.

2005, IDT)

ISO 34-1:2010 Determination of tear strength of vulcanized or thermoplastic rubbers. Part 1. Pants, right-angled and crescent-shaped test (Rubber, vulcanized or thermoplastic-Determination of tear strength-Part 1: Trouser, angle and Crescent test pieces) Determination of Tensile Stress-Strain Properties of ISO 37 Vulcanized or Thermoplastic Rubber (Rubber, vulcanized or thermoplastic-Determination of tensile stress-strain properties) ISO 48 vulcanized or thermoplastic rubber hardness determination (10~100 IRHD) (Rubber, vulcanized or thermoplastic-Determination of hardness (hardness between 10 IRHD and 100 IRHD) ISO 815-1 Determination of compression set of vulcanized or thermoplastic rubbers - Part 1. At ambient or elevated temperatures (Rubber, vulcanized or thermoplastic-Determination of compression set-Part 1. at ambient or elevated temperatures) ISO 2781 Determination of Density of Vulcanized or Thermoplastic Rubber (Rubber, vulcanized or thermoplastic-Determination of density) ISO 2921 vulcanized rubber determination of low temperature performance temperature retraction method (TR test) (Rubber, vulcanized-Determination of flow-temperature characteristics-Temperature-retraction procedure (TR test)) ISO 7619-1 vulcanized rubber or thermoplastic rubbers. Test method for indentation hardness. Part 1. Durometer method (Rubber hardness) (Rubber, vulcanized or thermoplastic-Determination of indentation hardness-Part 1: Durometer method (Shore hardness)) ISO 13628-10:2005 Petroleum and natural gas industries - Design and operation of subsea production systems - Part 10. Specification for connecting hoses (Petroleum and natural gas industries-Design and operation of subsea production systems-Part 10.

Specification for bonded flexible pipe) API 17K Specification for bonded flexible pipe ASTM D297

Standard Test Method for Rubber Products Chemical Analysis Method
(Standardtestmethodsforrubberprod-ucts-ChemicalAnalysis)