

ICS 23.040.70

CCS G42



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

GB/T 10541-2023

Replacing GB/T 10541-2013

Rubber hose, oil suction and discharge, offshore mooring

近海停泊排吸油橡胶软管

Issued on: September 7, 2023

Implemented on: April 1, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

Foreword

1 Scope

About this edition

Classification and status

How a Chinese national standard is set out

About this English translation

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents" Drafting. This document replaces GB/T 10541-2013 "Oil Drainage and Suction Rubber Hose for Offshore Mooring". Compared with GB/T 10541-2013, except for the structure In addition to adjustments and editorial changes, the main technical changes are as follows:

---Changed the range, changed the working pressure of the hose to "-0.085MPa~2.1MPa", and changed the flow rate to "not greater than 21m/s", The inner diameter of the hose is changed to "600mm and below" (see Chapter 1, Chapter 1 of the.2013 edition);

---Added a method of classifying by structure (see 4.1.2);

---Added the types of materials used in the outer covering and the physical and mechanical properties requirements of the corresponding rubber materials (5.1.2);

--- Added requirements for flange connection materials (see

5.1.3.1 and 5.1.3.2);

---Added appearance requirements (see 5.2);

---In the kerosene resistance performance test, the vacuum performance test requirements after the kerosene test are added (see 5.11);

---Added hose dynamic fatigue performance requirements (see 5.14);

---In the bursting performance, bursting test requirements for single and double tube bodies have been added (see 5.15);

---Added hose flattening performance test requirements (see 5.16);

---Added size requirements for positioning collars of underwater hoses (see 5.17.3);

---Added hose buoyancy recovery test performance requirements (see 5.18.2);

1 Scope

GB/T 10541-2023 is the Chinese national standard on rubber hose, oil suction and discharge, offshore mooring, in the field of fluid systems and general-purpose components. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 7 September 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 April 2024. Classification: ICS 23.040.70, CCS G42. 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 document specifies the classification and structure, requirements, inspection rules, marking, packaging, storage and Storage and transportation. This document is applicable to raw materials where the ambient temperature is between -29°C~52°C and the aromatic hydrocarbon content does not exceed 50% when transported on the seabed or water surface. Hoses for oil or liquid petroleum products, the inner diameter of the hose is 600mm and below, the working pressure is between -0.085MPa~2.1MPa, the medium The temperature is between -20°C~82°C, and the flow speed is not greater than 21m/s. This document does not apply to hoses conveying liquefied petroleum gas and natural gas.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 528-2009 Determination of tensile stress and strain properties of vulcanized rubber or thermoplastic rubber

GB/T 532 Determination of bonding strength between vulcanized rubber or thermoplastic rubber and fabrics

GB/T 1690 Test method for liquid resistance of vulcanized rubber or thermoplastic rubber

GB/T 5567 Determination of vacuum resistance of rubber and plastic hoses and hose assemblies

GB/T 6036 Determination of low-temperature stiffness of vulcanized rubber or

thermoplastic rubber (Gimen test)

GB/T 7528 Terminology for rubber and plastic hoses and hose assemblies

GB/T 7762 Static tensile test for ozone cracking resistance of vulcanized rubber or thermoplastic rubber

GB/T 9572 Determination of resistance and conductivity of rubber and plastic hoses and hose assemblies

GB/T 9573 Rubber and plastic hoses and hose assemblies - Hose dimensions and hose assembly length measurement methods

GB/T 9576 Guide for selection, storage, use and maintenance of rubber and plastic hoses and hose assemblies

GB/T 9577 Rubber and plastic hoses and hose assemblies marking, packaging and transportation rules

GB/T 9711-2017 Steel pipes for oil and gas industrial pipeline transportation systems

GB/T 9867-2008 Determination of wear resistance of vulcanized rubber or thermoplastic rubber (rotating roller abrasion machine method)