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Utgåva 1

**Slang och slangledningar av gummi för  
borrtröstning – Specifikation**  
(ISO 6807:2003)

**Rubber hoses and hose assemblies for rotary  
drilling and vibration applications – Specification**  
(ISO 6807:2003)

ICS 75.180.10; 83.140.40

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The European Standard EN ISO 6807:2003 has the status of a Swedish Standard. This document contains the official English version of EN ISO 6807:2003.

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EUROPEAN STANDARD

**EN ISO 6807**

NORME EUROPÉENNE

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ICS 75.180.10; 83.140.40

English version

## Rubber hoses and hose assemblies for rotary drilling and vibration applications - Specification (ISO 6807:2003)

Tuyaux et flexibles en caoutchouc pour forage rotatif et amortissement des vibrations - Spécifications (ISO 6807:2003)

Gummschläuche und -schlauchleitungen für die Anwendung beim Rotary-Bohren und bei Vibrationen-Spezifikation (ISO 6807:2003)

This European Standard was approved by CEN on 1 October 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This document (EN ISO 6807:2003) has been prepared by Technical Committee ISO/TC 45 "Rubber and rubber products" in collaboration with Technical Committee CEN/TC 218 "Rubber and plastics hoses and hose assemblies", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by June 2004.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

**NOTE FROM CMC** The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

## Endorsement notice

The text of ISO 6807:2003 has been approved by CEN as EN ISO 6807:2003 without any modifications.

## Introduction

In rotary drilling for oil, fluid muds are pumped at high pressure in large volumes to drill heads. High-pressure hoses are used as flexible connectors in the mud supply circuit.

Rotary drilling hoses are used between the top of the standpipe and the swivel that allows vertical travel. They are also used between barges and offshore drilling rigs, usually in lengths greater than 13,5 m.

Rotary vibrator hoses are shorter (9 m or less) and used between the pump and the derrick or standpipe manifolds to accommodate misalignment and to isolate vibration.

# Rubber hoses and hose assemblies for rotary drilling and vibration applications — Specification

**WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This standard does not purport to address all the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate health and safety practices and to ensure compliance with any national regulatory conditions.**

## 1 Scope

This International Standard specifies the requirements for textile- and steel-reinforced rubber hoses and hose assemblies for use with water-based and/or oil-based muds, up to a maximum temperature of 82 °C, which are pumped at high pressure in large volumes in rotary drilling service and which, when tested in accordance with ISO 2977, have a minimum aniline point of 66 °C.

This International Standard applies to hoses which are suitable for use at ambient temperatures between – 20 °C and + 52 °C, unless changed by a supplementary requirement on request of the purchaser, and are resistant to ageing and tropical conditions.

This International Standard does not apply to hoses which are intended for use with gases.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 1402:1994, *Rubber and plastics hoses and hose assemblies — Hydrostatic testing*

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static strain test*

ISO 1746:1998, *Rubber or plastics hoses and tubing — Bending tests*

ISO 1817, *Rubber, vulcanized — Determination of the effects of liquids*

ISO 2977, *Petroleum products and hydrocarbon solvents — Determination of aniline point and mixed aniline point*

ISO 4649:2002, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

ISO 4671, *Rubber and plastics hoses and hose assemblies — Methods of measurement of dimensions*

ISO 7233:1991, *Rubber and plastics hoses and hose assemblies — Determination of suction resistance*

ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary*

ISO 8331, *Rubber and plastics hoses and hose assemblies — Guide to selection, storage, use and maintenance*

ISO 10422, *Petroleum and natural gas industries — Threading, gauging, and thread inspection of casing, tubing and line pipe threads — Specification*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8330 apply.

### 4 Classification

Hoses and hose assemblies are classified into five grades according to the maximum working pressure at which they are intended to be used (see Table 1).

**Table 1 — Grades according to maximum working pressure**

Grade	Maximum working pressure bar <sup>a</sup>	Proof pressure bar <sup>a</sup>
A	103	206
B	138	276
C	276	552
D	345	690
E	517	1 034

<sup>a</sup> 1 bar = 0,1 MPa

### 5 Materials and construction

#### 5.1 Hoses

The hose lining shall consist of an oil- and water-resistant rubber.

The hose reinforcement shall consist of layers of textile and/or steel material.

The hose cover shall consist of an oil-, abrasion- and weather-resistant rubber and have a coloured line along its length to aid laying in a straight line.

#### 5.2 Hose assemblies

Hoses shall be connected to external couplings (built in during manufacture or swaged). These couplings shall be manufactured out of carbon steel or stainless steel traceable to the steel manufacturer. Rotary hose assemblies may be furnished with external connections threaded with line-pipe threads as specified in ISO 10422.

The marking “ISO 6807” may be retained on hose assemblies when other connections are attached, upon agreement between the manufacturer and purchaser, and provided the assembly is pressure tested in accordance with Table 1 with the connections in place.

**NOTE** It is the responsibility of both manufacturer and purchaser to ensure that the couplings are suitable for the intended pressures and that the connecting elements are compatible with any fixed or mobile fastenings to which the assembly will be attached.