

SAMPLE COPY. CLICK HERE TO PURCHASE THE FULL E-BOOK.

Introduction

Rotary drilling hose is the flexible connector between the top of the standpipe and the swivel, which allows for vertical travel. It usually comes in lengths of 45 ft and longer (**Figure HP-1**).

Rotary vibrator hoses are flexible connectors between the mud pump manifold and the standpipe manifold to accommodate alignment and isolate vibration. They are normally 30 ft in length or less (**Figure HP-2**).

High-pressure cement hose functions as a flexible connection between the cementing pump and the overhead drilling system (**Figure HP-3**).

High-pressure mud hoses should not be used for gas service or operations where it is intended or likely that the hoses will be exposed to well effluent. These hoses are covered by API RP 17B - Flexible Pipe, 5th Ed. Mud and cement hoses should not be used as choke and kill lines, which are covered in API Spec 16C - Choke and Kill Systems.

Note: work at API is in progress to include requirements for flexible hoses used in air, gas, foam or mist drilling.

Mechanical properties

Dimensions and tolerances

The length of each hose assembly should comply with the dimension specified in the purchase agreement within the tolerances specified below and in **Figure HP-4**. All dimensions discussed in the following paragraphs are detailed in **Figure HP-4** and **Table HP-1**.

For hose assembly lengths up to 6 m (20 ft), the finished unpressurized hose length tolerance should be ± 65 mm (± 2.5 in.). For hose assembly lengths up to 6 m (20 ft), the lengths of the hose assembly after pressurization to its specified working pressure should not differ by more than 65 mm (2.5 in.) + $0.01L$, where L is the length of the hose assembly.

The tolerance for finished, unpressurized hose assembly lengths exceeding 6 m (20 ft) is $\pm 1\%$. For longer hoses, the lengths of the hose assembly after pressurization to its specified working pressure should not change by more than $\pm 2\%$.

Connections

Rotary hose assemblies should be furnished with either swaged or chemically bonded couplings. Hose couplings should be designed and manufactured to be fit for purpose with the hose assembly they are attached to. End connectors that are attached to the hose couplings with line pipe threads should not be used in hose assemblies with working pressures exceeding 34.5 MPa (5,000 psi). The end con-

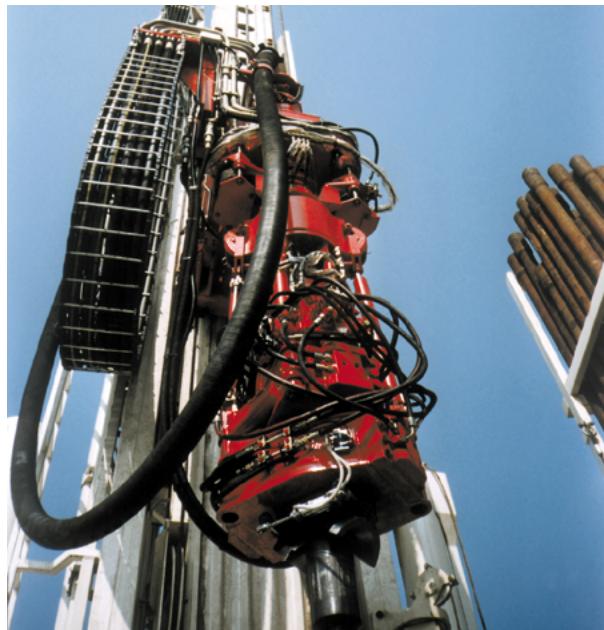


Figure HP-1: Example of a rotary hose. Courtesy ContiTech.



Figure HP-2: Vibrator hoses. Courtesy ContiTech.



Figure HP-3: Cement hoses. Courtesy ContiTech.