



青岛创梦仪器有限公司

Qingdao ChuangMeng Instrument Co., Ltd.

含砂量测试仪 Sand Content Kit



使用手册

Instruction Manual

版本 1.0

Version 1.0

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请你仔细阅读《使用手册》，正确掌握本产品的安装和使用方法。阅读后请将本《使用手册》妥善保管，以备今后进行检修和维护时使用。

Carefully read this User Manual to learn how to install and use the product correctly. After reading, properly keep the User Manual as a reference for future maintenance and repair.

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一、型号 Model:

	含砂量测试仪 Sand Content Kit with Case	含砂量测试仪 Sand Content Kit without Case
型号 Model	1410	1413
图片 Photo		
重 Weight	0. 7kg	0. 5kg
尺寸 Size	320×170×130mm	380×250×120mm

二、简介 Introduction:

含砂量测试仪是一种简单、准确、廉价的确定钻井含砂筛分析仪器，由于试验的可靠性和设备的简易性，筛析法是测定砂含量的首选方法。沙粒的体积，包括颗粒间空隙的体积，通常是按钻井液体积的百分比来测量和表示的。

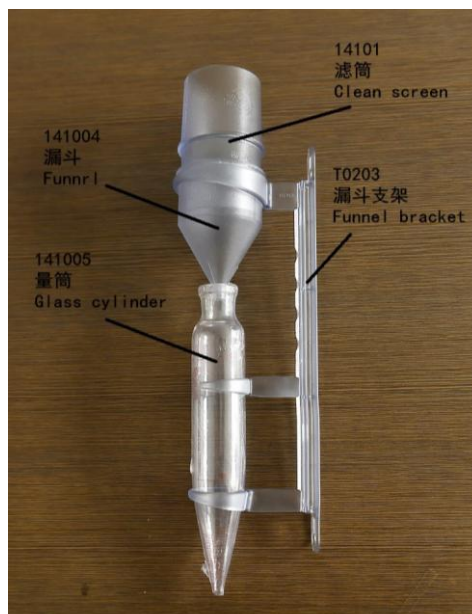
Sand content kit is a simple, accurate and inexpensive sieve analysis apparatus for determining the sand content of drilling mudsSieve analysis is the preferred method for sand content determination because of the reliability of the test and simplicity of equipment. The volume of sand, including that of void spaces between grains, is usually measured and expressed as a percentage by volume of the drilling fluid.

钻井液的主要功能之一是从井筒中携带钻井固体。这些固体是一种污染物，

如果留在系统中，可能会导致许多问题。砂粒含量测定仪测定钻井液中砂粒大小的颗粒体积百分比。API 定义了沙粒大小的颗粒物质大于 $74\mu\text{m}$ (200 目) 的大小。该试验可在低固体流体以及加权流体上进行。该成套工具包括一个玻璃管，刻度为 (%)，一个漏斗，一个 200 目滤网。

One of the primary functions of a drilling fluid is to carry drilled solids from the well bore. These solids are a contaminant, and if left in the system, can lead to numerous problems. The Sand Content Kit determines the volume percent of sand-sized particles in the drilling fluid. API defines sand-sized particles as any material larger than $74\mu\text{m}$ (200 mesh) in size. The test can be performed on low solids fluids as well as on weighted fluids. The kit consists of a glass tube graduated to read percent (%) by volume, a funnel, and a 200-mesh sieve contained in a cylindrical shaped holder.

三、步骤 Procedure:





1. 在玻璃量筒中装入定量钻井液，使用洗瓶加入适量清水（或油基钻井液的柴油），用手指盖住筒口，用力摇晃，使钻井液和水充分混合。

2. 将玻璃量筒中的混合液倒入上过滤筒内，再加水于玻璃量筒中，摇晃后倒入上过滤筒中并冲洗直至通过筛网的液体清澈透明为止。筛网上留下的全是不能通过 0.074mm 孔径的砂子。

3. 消除残留在沙子上的泥浆。

4. 将漏斗倒过来放在过滤筒上方。慢慢地将组件倒置，将漏斗尖端插入玻璃测量管的口中。通过洗瓶喷射液体，把沙子冲洗到管子里。（用刮刀手柄敲打筛网的侧面，可以促进这个过程）。让沙子沉淀。

5. 待砂子全部沉淀后，利用玻璃量筒上的刻度读出砂子的体积百分数。以体积百分数为单位记录泥浆的含砂量。报告里应标明泥浆样品的来源（振动筛，收集器，井等），不同于砂子的粗颗粒（堵漏材料，粗褐煤，重晶石等）比砂子粗的其它固相颗粒也会留在筛网上，应注明这类固相的存在。

1. Fill the sand content tube to the indicated mark with mud. Use the wash bottle to add water (or diesel oil for oil-based drilling fluids) to the next mark. Close the mouth of the tube and shake vigorously.

2. Pour the mixture into the filter cylinder, add water to the glass cylinder, shake and then pour into the cartridge and rinse until the liquid is clear and transparent. All left on the screen is the sand that cannot pass the 0.074mm aperture

3. Remove the mud that remains in the sand.

4. Invert the funnel and put it above the filter tube. Slowly invert the components and insert the funnel tip into the mouth of the glass measuring tube. Wash the sand



through the bottle and spray it into the pipe. (using a scraper handle to tap the side of the screen can facilitate this process). Let the sand settle down. Allow the sand to settle.

5. After the sand is all precipitated, the volume percentage of the sand is read out using the scale on the glass cylinder. The amount of sand containing mud is recorded by volume percentage. Report shall indicate the source of the mud sample (vibrating screen, collector, well, etc.), are different from those of coarse sand particles (plugging material, thick lignite, barite, etc.) other than the sand thick solid phase particles will stay on the screen, should indicate the existence of this kind of solid phase.

四、维护 Maintenance:

1. 每次使用后，从滤筒、漏斗、管中彻底冲洗沙子或钻井液。干燥所有设备。

1. Refill the wash bottle.

2. Thoroughly wash any sand or drilling fluid from the screen, funnel, and tube after each use. Dry all equipment.

五、部件 Parts:

1. 基本部件 Basic:

#G0208	洗瓶 Wash Bottle, 500ml
#14101	滤筒 Sieve, 200 目 Mesh (75 μ m) , 2.5 “直径 Diameter



#141004	漏斗 Funnel, PC 塑料 Plastic
#141005	玻璃刻度管 0-20%Graduated Tube, Glass
#T0203	支架 BracketPC

2. 可选部件 Optional:

#P0365	便携箱 Carrying Case
#1410-SP	一年的操作备件 Spare Parts for One Year' s Operation

青岛创梦仪器有限公司 装箱单 Qingdao Chuangmeng Instrument Co., Ltd. Packing list

生产企业: 青岛创梦仪器有限公司

Manufacturing enterprise: Qingdao Chuangmeng Instrument Co.,Ltd.

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Production address:No. 3 Xinghai Road, Liuting Street, Chengyang District, Qingdao

主机型号:

Model of the main motor:

出厂编号:

Manufacturing No:

序号 NO	编号	名称及规格 Name and specification	数量 Quantity	
			1410	1413
1	14101	过滤筒 Cartridge filter	1	
2	T0203	玻璃刻度管 0-20%Graduated Tube, Glass	1	
3	141004	塑料漏斗 Plastic funnel	1	
4	T0203	支架 Trestle		1
5	G0208	洗瓶 Wash bottle		1
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产品合格证

Product Quality Certificate

出厂编号:

Manufacturing No:

产品名称: Description:	
产品型号: Model:	
检验标准: Standard:	
生产日期: Date of Manufacture:	
产品编号: Product Code:	
结论: Conclusion: 经检验, 青岛创梦仪器有限公司生产的产品符合上述标准的要求。准予出厂。 After inspection, Qingdao Chuangmeng Instrument Co., Ltd The products produced meet the requirements of the above standards. Approved for delivery.	
本企业通过: IS0014004 环境管理体系认证; IS09001:2015 质量管理体系认证; IS018000 职业健康安全管理体系认证质检科; QC Department:	