

Zimbra

klimov@mbari.org

RE: 9690 for density measure on the bottom of the ocean?

From : Patrice Mauviel <pmauviel@proconsystems.com>
Subject : RE: 9690 for density measure on the bottom of the ocean?
To : Denis Klimov <klimov@mbari.org>

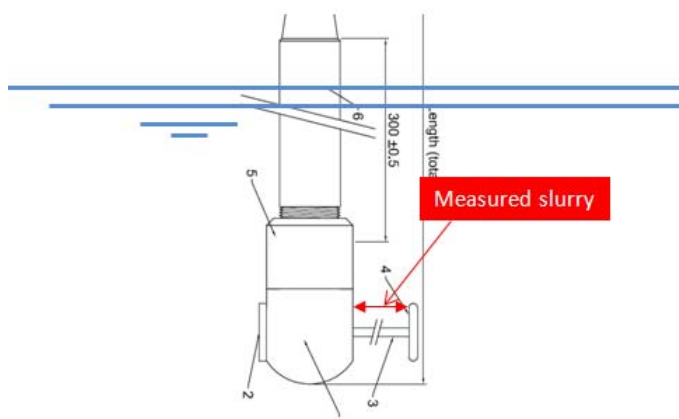
Tue, Nov 04, 2014 07:21 AM
9 attachments

Denis

1.

The sensor is just in immersion in slurry No problem with orientation

The SG or %Wt measured is the liquid in the gap with reflector and sensor head



2 Reflector length

Choice of the "Path" is according to measuring range and minimum % solids

To determine the right model we need from you the questionnaire back

Probe types	Clarity 0-2000 mg/litre	interface / mud (1 to 20 gpl	heavy mud (400pgl	Heavy mud (switch)
Rhosonics Diver Probes				
Ultrasonic in reflective mode*	xxx	xxxxx	xxxxx	xxxx

3

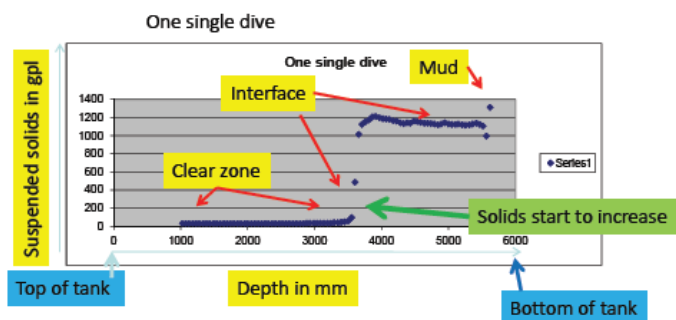
Picture installation of that probe with automatic diver system for tank

It is not a fix probe into the liquid but a scanning monitor

That model provide to the customer SG and position of the probe in the tank



Light mud probe. 1 dive. Flaring tank



Attached Operating manual with more details of the standard Probe with a fixed location of the sensor (immersion)

Patrice



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From: Denis Klimov [mailto:klimov@mbari.org]
Sent: Monday, November 03, 2014 5:17 PM
To: Patrice Mauviel
Subject: Re: 9690 for density measure on the bottom of the ocean?

Hello Patrice,

sorry just now getting back to this project...

So from what I have, it is not clear, how to mount the detector.

Do you have any documents where operating principles could be explained, for instance, how "reflector" is suppose to be oriented relative to process flow, and what is a role of different length reflector holders?

Perhaps, installation instructions?

Thank you!

Denis Klimov

From: "Patrice Mauviel" <pmauviel@proconsystems.com>
To: "Denis Klimov" <klimov@mbari.org>
Sent: Friday, September 5, 2014 6:54:48 AM
Subject: RE: 9690 for density measure on the bottom of the ocean?

Hello Denis

The Rhosonics 9680 Density gauge with a US diver Probe (picture attached) can be a solution.

Where and how you want locate the detector ?

Attached a basic questionnaire which help us to provide you technical information and a quotation

The Bulk price for a complete density gauge is approx.. 25K

Patrice

From: Denis Klimov [<mailto:klimov@mbari.org>]
Sent: Thursday, September 04, 2014 5:47 PM
To: Patrice Mauviel
Subject: 9690 for density measure on the bottom of the ocean?

Hello Patrice,

I did came across density sensors series 9690 and wonder if those could work for our application.

http://www.proconsystems.com/product_brochures/9690productsheet-psi~rhosonics~.pdf

We have the BEDS instruments which we deploy to the bottom of the underwater ocean canyon, to study motion of the sediment layer using on-board inertial sensors.

BEDS is self-contained, autonomous instrument, with acoustic communication interface (see document attached).

It normally sits on the top of sediment layer, or can be self-buries to about 1-2 meters into sediment layer, depending on the density of the instrument relative to sediments density.

Pressure rating of the instrument is 500m nominal, 700m absolute maximum rating.

Most of the time BEDS instrument just sits on the bottom, and once the motion of "event" (sort of underwater avalanche) is detected, the instrument records inertial motion data at high rate.

During single event, the instrument could move down the canyon, say from initial depth of 300 meters, to 380 meters, in say 20 minutes time, and then sits there until next event.

The sediments is a mix of sand and gravel with average density range about 1.0 - 2.2 kg/m³

Once the event starts, sediment layer liquifies into sort of slurry and start moving down the canyon.

We are interested to monitor the change of the density of the sediments around the instrument during those events with frequency of about 1-10 Hz.

Do you think your 9690 series could work for this?

Thanks!

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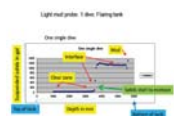


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R9680 Manual v2 2 12 Tank installation.pdf
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