

**From:** Watson, Neil (Brazil)  
**Sent:** Thursday, June 03, 2010 12:43 AM  
**To:** Florence, Ewen (DWH Proj)  
**Subject:** RE: AMF Deadman  
Ewen,

When do you leave for Houston. I always check my hotmail account.

Be safe

Neil

Neil Watson • • Bryan Keeton • •  
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**From:** Florence, Ewen (DWH Proj)  
**Sent:** Thursday, June 03, 2010 1:38 AM  
**To:** Ken Yeo; Watson, Neil (Brazil)  
**Subject:** RE: AMF Deadman

Thanks Ken,

Yes we are all looking for reason and answers at the moment. Some very interesting reading on not having the ability to test batteries to find out there condition. You would think being a critical function it would have some form of read back/procedure for testing, also I find it very unusual not having the batteries trickle charged, in that way would have a read back and better known condition.

Regards,  
Ewen Florence • •  
**Transocean**

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**From:** Ken Yeo [mailto:kyeo@prideinternational.com]  
**Sent:** Wednesday, June 02, 2010 11:12 AM  
**To:** Watson, Neil (Brazil); Florence, Ewen (DWH Proj)  
**Subject:** RE: AMF Deadman

Neil, Ewen,

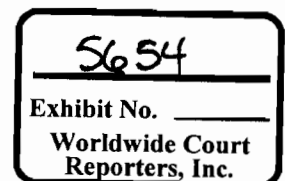
In my other email I mentioned that Cameron went to the Horizon site and pulled the Yellow Pod and tested it. They did say that although the deadman on the Yellow Pod worked ok They also said that the Yellow Pod may not have been the Active Pod.

Most rigs it does not matter as all SEMs are Armed or Disarmed.  
But I seem to remember that Transocean changed things so that only the Active Pod would be armed or Disarmed.  
That could make a difference if the Blue Pod was Active and Armed but batteries were no good.  
You would have to get Cameron to tell you the specifics for the Horizon.

Just trying to help you with information you need to gather.

We are all very interested in why this happened and what can be done to avoid it happening again.

Regards,



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TDR085-221040

Ken

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**From:** Watson, Neil (Brazil) [mailto:Neil.Watson@deepwater.com]  
**Sent:** Wednesday, June 02, 2010 9:50 AM  
**To:** Florence, Ewen (DWH Proj)  
**Cc:** Ken Yeo  
**Subject:** RE: AMF Deadman

Ewen,

Apart from what was noted in the email below, testing at the pins I am not aware of a test procedure. I hate asking all the time but Ken is the number one Tech for the Cameron System I know, he may know of a procedure.

I don't envy your job at the moment Ewen but it's seam's to be a number of 'issues' hit that rig at the same time.

No doubt it will come in the near future but having an Acoustic System you can interrogate the battery's, similar should be for the AMF. We know Brasil favour the acoustic system as it is a totally stand alone POD, only thing I would add to that would be an ROV actuation, we all know the Acoustic can be quite unreliable mainly with the send \ receive hence an ROV control.

Anyway, is all ahead of us

Cheers

Neil

Off with the kids to the village, great weather over here just hope it stays

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**From:** Florence, Ewen (DWH Proj)  
**Sent:** Wednesday, June 02, 2010 12:23 AM  
**To:** Watson, Neil (Brazil)  
**Subject:** RE: AMF Deadman

Thanks Neil.

So there is no Cameron official recommendation on testing the Batteries?

Regards,  
Ewen Florence ♦ ♦

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**From:** Watson, Neil (Brazil)  
**Sent:** Tuesday, June 01, 2010 5:26 PM  
**To:** Florence, Ewen (DWH Proj)  
**Subject:** RE: AMF Deadman

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TDR085-221041

Ewen,

For me the only way would be to arm it then take a reading, with cables plugged in not sure, I can only suggest open a can and take reading.  
Have you checked you hotmail, interesting note from Ken. Cameron were recently on the Rig, removed the Yellow Pod and Tested the dead man.....

Cheers

Neil

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**From:** Florence, Ewen (DWH Proj)  
**Sent:** Sunday, May 30, 2010 3:49 PM  
**To:** Watson, Neil (Brazil)  
**Subject:** RE: AMF Deadman

No did not see the written below. Sorry, thanks for this. how would you put a load and measure the voltage to confirm the batteries.

Regards,  
Ewen Florence ♦ ♦  
**Transocean**

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**From:** Watson, Neil (Brazil)  
**Sent:** Friday, May 28, 2010 10:53 PM  
**To:** Florence, Ewen (DWH Proj)  
**Subject:** RE: AMF Deadman

Ewen,

Did you read the email I attached earlier, see below regarding testing. I am looking to find a procedure and also to make sure I answer your questions 150 %

Thanks

Gary,

The answer to your question regarding the number of 60 sec actuations you can get out of the Lithium batteries is indeed 27 actuations. After that the batteries may begin to deteriorate. I said "may" because of the large safety factor used in the calculations. The batteries will most likely continue to operate for quite a while after that.

The answer to your other question regarding drain on the batteries when the DeadMan System is "armed" is this:  
"Arming" the DeadMan System applies 9V battery power to the DeadMan Controller card and puts it in a mode of operation in which the conditions triggering an Emergency Shutdown are continuously monitored. This drains the 9V

battery at a rate of 1.75 mA continuously! Although this is a very small current, over a period of one year (24 hours a day) this reduces the capacity of the 9 V battery by about 15 Ah which is more than half the total capacity of the battery. And by the way, the 27 actuations we discussed earlier were calculated after one year of operation in the Monitoring Mode (DeadMan armed).

Determining the condition of the 9V battery remotely is difficult. The MarkII SEMs have test points brought out to some of the spare connectors pins that allow monitoring of the 9V and 27V batteries. But without a load, just measuring the voltages will not tell you very much regarding the condition of the batteries.

Hoping this answers some of your questions, please let us know if we can be of further help.

Sincerely,

Jean Bertholon

----- Original Message -----

From: "Cameron Express Account" <cameron@express.rig.sedco-forex.com>  
To: "Jean Bertholon" <bertholonj@camerondiv.com>  
Cc: "Werner Menz" <menzw@camerondiv.com>  
Sent: Tuesday, December 05, 2000 9:34 AM  
Subject: FW: AMF Batteries.

> Jean,  
>  
> Below this email can you answer the questions/queries on the AMF Batteries  
> please.  
>  
> with thanks,  
> Gary Birnie  
> Field Service Engineer,  
> Cameron Controls, ABERDEEN.  
> Mobile +44 (0)410 576 577  
>  
>  
>  
> -----Original Message-----  
> From: Cameron Express Account  
> [mailto:cameron@express.rig.sedco-forex.com]  
> Sent: Tuesday, December 05, 2000 7:55 AM  
> To: Sabine Bartholomew  
> Cc: Werner Menz  
> Subject: RE: AMF Batteries.  
>  
>  
> Sabine,  
>  
> Thank you for sending me document regarding the Deadman Batteries.  
>  
> Can you tell me:  
>  
> If my deadman sequence duration is 60 seconds and the total amount of  
> executions is (55 see diagram 5) a safety factor =  $55/2 = 27.5$ .  
> Does this mean I can function the Deadman sequence 27 times before the  
> Batteries are presumed dead?  
>  
> When the Deadman system is ARMED on the Control Panels but not

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> executed/operated are the batteries used while ARMED? Both SEM's monitor  
> each others power supply does this consume battery power?  
>  
> What I was told was Cameron Controls recommended a maximum of 10 Deadman  
> Executions before replacing the batteries, is this so?  
>  
> Thanks for you're assistance.  
>  
> regards,  
> Gary Birnie  
> Field Service Engineer,  
> Cameron Controls, ABERDEEN.  
> Mobile +44 (0)410 576 577  
>

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**From:** Florence, Ewen (DWH Proj)  
**Sent:** Friday, May 28, 2010 11:19 PM  
**To:** Watson, Neil (Brazil)  
**Subject:** AMF Deadman

Neil,

If at all possible can you red line the system, firstly where/what gives the signal to starts the sequence of the AMF/Dead Man. Also does these Solenoids on the D/M get monitor same as the normal system every 4 seconds is that right the rest of the system solenoids get monitored every 4 second?

Do you have the way to test the batteries while installed and does Cameron have a test procedure? Do you remember how AMF is armed? Do you remember every function testing the D/M AMF on the Sedco Express?

Regards,  
Ewen Florence ♦♦  
**Transocean**

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