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Version: 1.0

Title-Radcom pipe pressure testing

(Issue 2)

Radcom pipe pressure testing – guide to getting good results

When you carry out a pipe pressure test there are three very important points -

Point 1. Logger sample rate relative to pressure ramp up time

It is imperative that the logger is configured to take enough readings during the pressure ramp up period – some smaller pipes can achieve the required pressure in less than a minute – if the logger is configured at a 15 second sample rate this could only get three points on the ramp up curve which would not be enough.

You should be looking for 6-10 readings in this phase of the test – so divide the ramp up time by 10 and use the result to select the correct logger sample rate when you set up the logger.

Configuration Summary:		Configuration Option:	
 Logger Type: Connection Type: Baud Rate: Logger Type: Zone: Location: Connection Type: Baud Rate: Channel 1: Sample Rate: 	Lo-Log Flash Direct (RS232) Baud Rate: 9600 Lo-Log Flash AVEP : RES : Direct (RS232) Baud Rate: 9600 Analogue (Pressure) 1 Seconds	Sample Rate: Select the required data logging interval. 15 minutes is advisable for standard applications.	
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Point 2. Logger recording before pressure ramp up starts

It is also imperative that the logger is recording before the pipe pressure test commences i.e before the start of the operation to pressurise the pipe. In the example below this is not the case –



The graph starts at zero but the first pressure reading is at 29.9 metres head and the result is a failed test with the error message 'There is probably air in the pipe'

If the logger is recording before the Pressurisation of the pipe starts the result will be as follows:-

Note:- there is a steady ramp up pressure graph all the way from zero to peak pressure.





Point 3 Check the Pressurisation start time and the Time System Test pressure reached

Note:- for this, when you a viewing the graph in Radwin View you need to select from 'Data Options', 'Cursor values' which puts the cursor values to the right hand top side of the graph.

If you now put the cursor at the far left of the graph you will see the value of Zero pressure in the Cursor value display.

Move the cursor to the right until you see the very first pressure reading – note the time of this in hours/minutes and seconds.

Then move the cursor to the exact peak pressure and again note the time.

These two times are absolutely critical to the Pressure Test calculation – accurate times are key. (Note – if you are having difficulty because the ramp up pressure time is short use the X Axis Zoom time key (Magnifying glass with horizontal red arrow icon – situated on left of the screen) to magnify the ramp up time to allow you to get more accurate times)

Then go to Advanced and Pipe Test and enter the times in the table by editing the hours, minutes and seconds (or at least check the values already there are the <u>same</u> as your noted times).

Pipe Test				×			
Performs the pipe test on the current graph. The calculated 'Pressurisation Start Time' and 'Time System Test Pressure Reached' should be checked and adjusted if necessary, and the							
Test Configuration							
Location:	_116116: La	angley Road St Fe	ergus : M0003	: Channel 1 :			
Pressurisation Start Time:		09:47: <mark>21</mark>	<u>•</u> 02/07/	2010 🔻			
Time System Test Pressure Read	hed:	09:52:33	• 02/07/	2010 👻			
Pipe Material:		Polyethylene		•			
Correction Factor:		0.400					
			ОК	Cancel			

Then select 'OK' – and you should get a successful pipe test.

Try applying this to failed tests where you have 'air in the pipe' error messages – you can very often correct these by ensuring the times are absolutely correct. (See below)



Graph 1			Radcom View
1 Pressur	: _116116 : Langley Road St Fergus : M0003 : Channel 1 :	Cursor: 09:54:24 02/07/2010 1 J 97.900	Search:
PE Head	₩2 Pipe Test 1 ■ 1 Pressure: _116116 : Langley Road St Fergus : Mol □ 100 6	003 - Channel 1 :	Introduction Cetting Started Setting Started Setting Lond Abase Path Setting Comm Ports Configuing a Logger
- 50 Lessance - We	21 - 22 - 24 - 27 - 27 - 27 - 27 - 27 - 27		Introduction View is the graphing package of Radlog for Windows. It provides advanced graphing functionality, data statistics, data export, and
0.~~			allows loggers to be compured and downloaded using wizards.
0 09:47:3 GMT 02/07/20	25 09:46:57 10:16:57 10:46:57 11:16:57 GMT 02/07/2010 02/07/2010 02/07/2010 02/07/2010 0	1146:57 12:16:57 12:46:57 13:16:57 13:46:57 14:16:57 2207/2010 02:07/2010 02:07/2010 02:07/2010 02:07/2010 02:07/2010	allows loggers to be configured and downloaded using wizards.
09:47:3 GMT 02/07/2(4 III	ес 22 0 09:46.57 10:16:57 10:46:57 11:16:57 смит 0:2007/2010 0:2000000 0:2000 0:2000 0:200000000	11-46.57 12-16.57 12-46.57 13-16.57 13-46.57 14-16.57 22017/2010 02/017/2010 02/017/2010 02/017/2010 02/017/2010 PIPE PRESSURE TEST IS OK 02/07/2010	allow's loggers to be configured and downloaded using wizards. Getting Started It will be necessary to specify where the data is stored.
0 09:47:3 GMT 02/07/20 4 III	© 22 0 0 0 0 0 0 0 0 0 0 0 0 0	1148.57 12.18.57 12.46.57 13.18.57 13.48.57 14.18.57 220772010 020772010 020772010 020772010 020772010 020772010 PIPE PRESSURE TEST IS OK 020772010 	downloaded using wizards. Getting Started It will be necessary to specify where the data is stored. Setting the Database Path Menu - Configuration / Basic Configuration

Document History:

Edition	Date of Issue	Modification	Notes
1st	03/01/13	Release	
2nd	21/09/15	Format update	