

J-Lab Apex Magnet Small Coil - Coil Test Record

Test Item:

Test Item:	(1) Water Circuit Leak Test.
Detail:	Apply water pressure of 1.5 [Mpa] to each cooling circuit for 30 minutes and check for leakage.

Unit Under Test:

Contract:	Customer J-Labs	Purchase Order # 5100002741	Magnet Serial Number 01
Part:	Drawing No. 0006A000	Revision C	Description Small coil assembly
Coil Serial Number:	89715		

Equipment:

Pressure Gauge:	Model Dwyer DPGW-09	Serial Number BSL-0004-DPG	Calibration Due Date 23/07/2014
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Test Condition:

Date:	18/07/2014	[DD / MM / YYYY]
Ambient Temp:	16.5	[°C]
Humidity:	71	[%]

Criteria:

Observation:	No water leaks detected.
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Results:

Pancake 1:	Leaks	/	No Leaks
Pancake 2:	Leaks	/	No Leaks
Pancake 3:	Leaks	/	No Leaks
Pancake 4:	Leaks	/	No Leaks

Strike through whatever is not applicable

Judgement:

PASS	/	FAIL
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Strike through whatever is not applicable

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Test Item:

Test Item:	(2) Water Circuit Flow Test.
Detail:	Measure the flow rate of each cooling circuit at a pressure drop of 32.5 [PSI] and water inlet temperature of 35 [°C].

Unit Under Test:

Contract:	Customer J-Labs	Purchase Order # 5100002741	Magnet Serial Number 01
Part:	Drawing No. 0006A000	Revision C	Description Small coil assembly
Coil Serial Number:	89715		

Equipment:

	Model	Serial Number	Calibration Due Date
Flow Meter:	RS	FG5	10/01/2015
Pressure Gauge:	Dwyer DPG-09	BSL-0003-DPG	23/07/2015
Pressure Gauge:	Dwyer DPG-09	BSL-0003-DPG	23/07/2015

Test Condition:

Date:	29/07/2014	[DD / MM / YYYY]
Ambient Temp:	16.3	[°C]
Humidity:	59	[%]

Criteria:

Measurement:	Water flow rate \geq 2.60 [L/min] @ 32.5 [PSI] pressure drop
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Results:

	Pressure [PSI]			Flow Rate [l/min]
	Inlet	Outlet	Drop	
Pancake 1:	44.5	8.40	36.1	2.60
Pancake 2:	47	10.30	36.7	2.60
Pancake 3:	46.1	10.0	36.1	2.60
Pancake 4:	46.1	10.60	35.5	2.60

Judgement:

PASS / FAIL

Strike through whatever is not applicable

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Test Item:

Test Item:	4-4 (1) (b) (i) Resistance Measurement of Magnet.
Detail:	Measure the resistance of each pancake and the whole coil by 4-terminal method. Measure the temperature and correct the resistance measurement to 20 [°C].

Unit Under Test:

Contract:	Customer J-Labs	Purchase Order # 5100002741	Magnet Serial Number 01
Part:	Drawing No. 0006A000	Revision C	Description Small coil assembly <input checked="" type="checkbox"/>
Coil Serial Number:	89175		

Equipment:

	Model	Serial Number	Calibration Due Date
Thermometer:	HH506RA Omega	11000285	11/04/2015
Power Supply:	Isotech IPS303DD	321C095G2	25/10/2014
Voltmeter:	Isotech IDM72	25900022	8/05/2015

Test Condition:

Date:	29/07/2014	[DD / MM / YYYY]
Ambient Temp:	13.5	[°C]
Humidity:	71	[%]

Criteria:

Measurement:	Record the resistance and temperature measurements below.
Observation:	No abnormalities

Results:

	Pancake 1	Pancake 2	Pancake 3	Pancake 4	Coil	
R _{meas} :	2.58	2.59	2.57	2.61	10.35	[Ω]
T _{meas} :	15.0	15.0	15.0	15	15.0	[°C]
R _{20°C} :	2.631	2.641	2.621	2.661	10.553	[Ω]
$R_{20^{\circ}\text{C}} = R_{\text{meas}} (1 + 0.00393 (20 - T_{\text{meas}}))$						

Judgement:

PASS / FAIL
Strike through whatever is not applicable

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Test Item:

Test Item:	(4) Induced Voltage Test.
Detail:	Perform a 300V impulse test on the completed coil to verify the inter-turn insulation. Record the resulting waveform.

Unit Under Test:

Contract:	Customer	Purchase Order #	Magnet Serial Number
	J-Labs	5100002741	01
Part:	Drawing No.	Revision	Description
	0006A000	C	Small coil assembly
Coil Serial Number:	89715		

Equipment:

	Model	Serial Number	Calibration Due Date
Impulse Tester:	Leaptronix	IWAT-5000A	4/12/2014

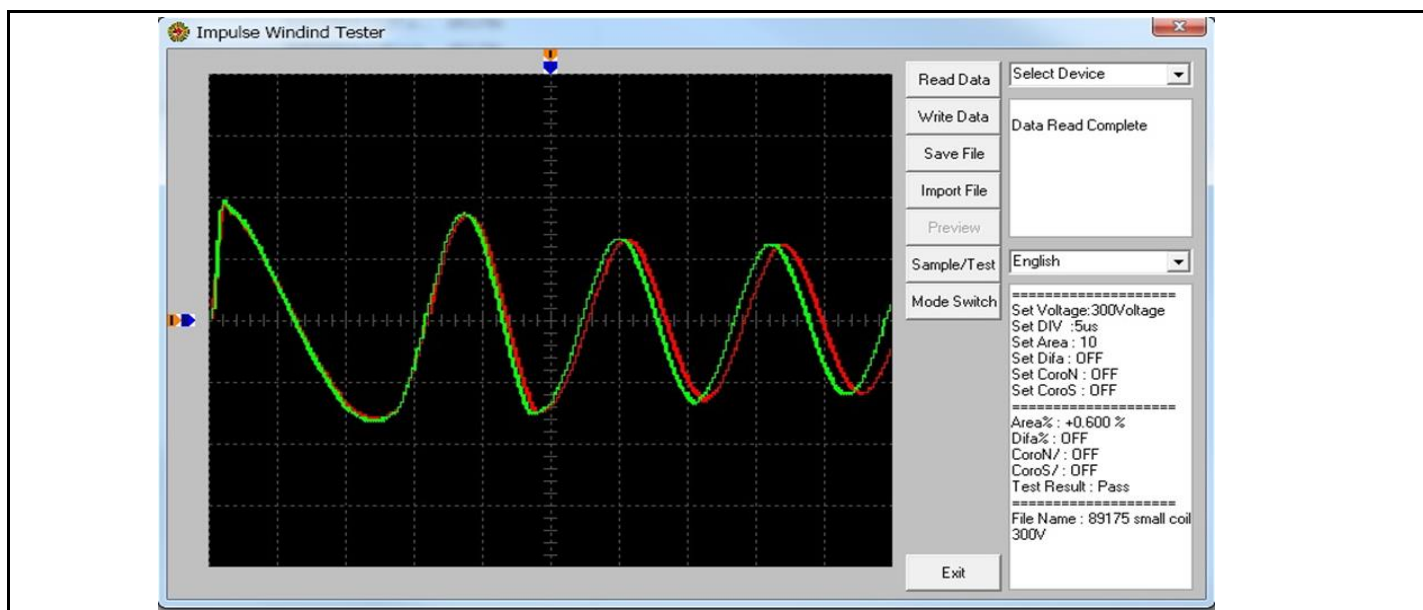
Test Condition:

Date:	29/07/2014	[DD / MM / YYYY]
Ambient Temp:	14.5	[°C]
Humidity:	68	[%]

Criteria:

Measurement:	Record the resulting waveform and insert below.
Observation:	No significant difference between the measured waveform and the reference waveform.

Results:



Judgement:

PASS / FAIL
Strike through whatever is not applicable

J-Lab Apex Magnet Small Coil - Coil Test Record

Test Item:

Test Item:	(5) DC Hipot Test.
Detail:	Immerse the completed coil in tap water and then measure the leakage current between the coil terminals and the water bath at 4.8[kVDC] for 1 minute.

Unit Under Test:

Contract:	Customer J-Labs	Purchase Order # 5100002741	Magnet Serial Number 01
Part:	Drawing No. 0006A000	Revision C	Description Small coil assembly
Coil Serial Number:	89715		<input checked="" type="checkbox"/>

Equipment:

	Model	Serial Number	Calibration Due Date
Hipot Tester:	Quad sentry 20plus	4376876	16/05/2015

Test Condition:

Date:	29/07/2014	[DD / MM / YYYY]
Ambient Temp:	14.0	[°C]
Humidity:	73	[%]

Criteria:

Measurement:	Record the leakage current @ 4.8 [kVDC]
Observation:	No evidence of breakdown or significant change in insulation resistance.

Results:

Leakage Current:	0.8	[μA] @ 4.8 [kVDC]
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Judgement:

PASS / FAIL

Strike through whatever is not applicable