Station	Sheung Wun Yiu	(AM1A)		Operator:	Gary	Choi	_
Cal. Date:	23-Jan-13			Next Due Date:	23-M	ar-13	_
Equipment No.:	A-001-53T			Serial No.	102	216	-
			Ambient	t Condition			
Temperatu	re, Ta (K)	293	Pressure,	Pa (mmHg)		763.2	
Debooking Postgrownson							
			Orifice Transfer S	tandard Information	on		
Seria	l No:	988	Slope, mc	1.97048	Interce		-0.0054
Last Calibra	ation Date:	15-May-12		mc x Qstd + bc	= [DH x (Pa/760) x	(298/Ta)] ^{1/2}	
Next Calibra	ation Date:	15-May-13		$Qstd = \{[DH x ($	Pa/760) x (298/Ta)]	^{1/2} -bc} / mc	
			Calibration of	of TSP Sampler			
		(Orfice	_	HV	S Flow Recorder	
Resistance Plate No.	I DH (oritica) I		(60) x (298/Ta)] ^{1/2}	Qstd (m³/min) X - axis	Flow Recorder Reading (CFM)	Continuous Flor Reading IC (CF	
18	9.0		3.03	1.54	50.0	50.53	3
13	6.2		2.52	1.28	40.0	40.42	2
10	4.7		2.19	1.11	33.0	33.35	5
7	3.6		1.92	0.98	27.0	27.29	3
5	2.3		1.53	0.78	20.0	20.2	1
Slope , mw = Correlation Coe	40.3367 fficient* = pefficient < 0.990,		. 9991 ibrate.	Intercept, bw =	-11.8	5614	-
			Set Point	Calculation			
From the TSP Fi	eld Calibration Cu	urve, take Qstd =	1.30m ³ /min				
	sion Equation, th						¥
							*
		mw	x Qstd + bw = IC	x [(Pa/760) x (298/	Ta)] ^{1/2}		1-29
		6.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	100 (D.) (T. 10)	00 11/2		40.45	
Therefore, Set P	oint; IC = (mw x	Qstd + bw) x [(7	760 / Pa) x (Ta / 29	ap)]=	55	40.45	-
							-
Remarks:							
Nomana.							
00 D	WS CA	IIA /	Signature:	21		Date:	113
OC Reviewer:	rvs (A	7/1/	olyllatule			Date, _ / 1 t	1

Station	Shan Tong New	Village (AM2)		Operator:	Shum Ka	m Yuen	-
al. Date:	31-Dec-12			Next Due Date:	28-Fe	b-13	_
quipment No.:	A-001-29T			Serial No.	102	02	s)
			Ambient	Condition			
Tananah	To ///)	286	Pressure, F			765.7	
Temperatu	ire, ra (N)	200	11000010,1	<u> </u>			
			Orifice Transfer S	tandard Informatio			1 00546
Seria	l No:	988	Slope, mc	1.97048	Interce		-0.00546
Last Calibra	ation Date:	15-May-12			= [DH x (Pa/760) x		
Next Calibr	ation Date:	15-May-13		Qstd = {[DH x (Pa/760) x (298/Ta)]	^{1/2} -bc} / mc	
			Calibration	of TSP Sampler			
			Orfice	10 Campier	HVS	S Flow Recorder	
Resistance		<u>`</u>	Jilliot .	2		Continuous Flov	w Pecorder
Plate No. DH (orifice), in. of water [DH x (Pa/760) x (298/Ta)]		60) x (298/Ta)] ^{1/2}	Qstd (m³/min) X · axis	Flow Recorder Reading (CFM)	Reading IC (CF		
18	9.1		3.09	1.57	48.0	49.18	}
13	6.9		2.69	1.37	42.0	43.03	3
10	5.1		2.31	1.18	36.0	36.89	}
7	4.0		2.05	1.04	30.0	30.74	1
5	2.5		1.62	0.82	24.0	24.59	}
Slope , mw = Correlation Cod	assion of Y on X 33.6543 efficient* = oefficient < 0.990	0	.9956 ibrate.	Intercept, bw =	-3.3	3962	_
			Sat Point	t Calculation			
From the TSD E	ield Calibration C	curve_take Ostd =		Calculation			
	ssion Equation, the						
rioni ine riegie	33ion Equation, t	10 1 10.00					
		mv	v x Qstd + bw = IC	x [(Pa/760) x (298/	(Ta)] ^{1/2}		(60 30
8				2 2 1/2		20.20	+39
Therefore, Set F	Point; IC = (mw x	Qstd + bw) x [(760 / Pa) x (Ta / 2	98)]"=		39.39	_
					8, 80		
Remarks:							
				× _ ×			
					1		1 >
OC Reviewer	WS (HA	NI	Signature:	KI	<u> </u>	Date: 2/1	13

tation	Riverain Bayside	(AM3)		Operator:	Shum Ka	
al. Date:	31-Dec-12			Next Due Date:	28-Fe	b-13
quipment No.:	A-001-69T			Serial No.	71	6
			Ambient	Condition		
Temperatu	re. Ta (K)	286	Pressure, F	Pa (mmHg)		765.7
Tomporata						
			Orifice Transfer S	tandard Informatio		
Serial	No:	988	Slope, mc	1.97048	Interce	
Last Calibra	ation Date:	15-May-12		mc x Qstd + bc	= [DH x (Pa/760) x	(298/Ta)] ¹¹²
Next Calibra	ation Date:	15-May-13		Qstd = {[DH x (l	Pa/760) x (298/Ta)] ¹	/2 -bc} / mc
**************************************			Calibration	of TSP Sampler		
		-	Orfice	n 13P Samplei	HVS	S Flow Recorder
Resistance			711106			Continuous Flow Recorder
Plate No.	Resistance Plate No. DH (orifice), in. of water [DH x (Pa/760) x		(60) x (298/Ta)] ^{1/2}	Qstd (m³/min) X · axis	Flow Recorder Reading (CFM)	Reading IC (CFM) Y-axis
18	8.9		3.06	1.55	46.0	47.13
13	7.7		2.84	1.45	42.0	43.03
10	5.9		2.49	1.27	34.0	34.84
7	4.8		2.24	1.14	30.0	30.74
5	3.0		1.77	0.90	22.0	22.54
Slope , mw = Correlation Coe	38.1510 2fficient* = pefficient < 0.990	0	.9958 librate.	Intercept, bw =	-12.	4964
			Set Point	t Calculation		
From the TSD F	ield Calibration C	urve_take Qstd =		Coalculation		
	ssion Equation, th					
1 Tolli lile region	SSION Equation, a	10 1 10 2 2 2 2 2	3			
		mv	w x Qstd + bw = IC	x [(Pa/760) x (298)	/Ta)] ^{1/2}	*
		Ootd I bur) v [/	760 / Do) v / To / 2	08 111/2-		36.21
Therefore, Set F	Point; IC = (mw x	Qstd + bw) x [(760 / Pa) x (Ta / 2	30)] -		
Remarks:						
				6	1	
					•	/ / 2
QC Reviewer: _	WIS CHI	AN	Signature:	KI		Date: 2/1/13

		ing Village (AM4)	/	Operator:	Cary	Choi
al. Date:	23-Jan-13			Next Due Date:	23-M	ar-13
quipment No.:	A-001-70T	Serial No 10273				
			Ambient	Condition		
Temperatu	re, Ta (K)	293	Pressure, F	Pa (mmHg)		763.2
		(Orifice Transfer S	tandard Informatio	n	
Seria	l No:	988	Slope, mc	1.97048	Interce	
Last Calibra	ation Date:	15-May-12			= [DH x (Pa/760) x	
Next Calibra	ation Date:	15-May-13		Qstd = {[DH x (I	Pa/760) x (298/Ta)]	^{1/2} -bc} / mc
			AND DESCRIPTION OF THE PARTY OF	f TSP Sampler		
		0	rfice		HVS	S Flow Recorder
Resistance Plate No.	DH (orifice)		Qstd (m³/min) X - axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis	
18 9.2		3.07	1.56	50.0	50.53	
13	<u> </u>		1.40	44.0	44.47	
10	5.3	2.33		1.18	37.0	37.39
7	3.5		1.89	0.96	30.0	30.32
5			1.50	0.76	22.0	22.23
lope , mw = orrelation Coe	ssion of Y on X 34.8938 fficient* = pefficient < 0.990,		9983 brate.	Intercept, bw =	-3.9	463
			Set Point	Calculation		
rom the TSP Fi	eld Calibration Cu	rve_take Ostd =		Calculation		
	sion Equation, the					
Tom the regres	Sion Equation, an	o i valdo docon	unig to			*
		mw	x Qstd + bw = IC	x [(Pa/760) x (298/	Га)] ^{1/2}	
herefore, Set P	oint; IC = (mw x	Qstd + bw) x [(7	60 / Pa) x (Ta / 29	98)] ^{1/2} =		40.98
eventario e terro de la composición de	SOMEON A				•	
					(a) (b)	
Remarks:						
0=0017001075			11.11	g K	4	
C Reviewer:	WS C+	IAN	Signature:	X1		Date: 24/1/(3



TISCH ENVIROMENTAL, INC.
145 SOUTH MIAMI AVE.
VILLAGE OF CLEVES, OH 45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Ma Operator		2 Rootsmeter Orifice I.I		438320 0988	Ta (K) - Pa (mm) -	295 751.84
PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1 2 3 4 5	NA NA NA NA NA	NA NA NA NA NA	1.00 1.00 1.00 1.00	1.3860 0.9700 0.8690 0.8290 0.6840	3.2 6.4 7.9 8.8 12.7	2.00 4.00 5.00 5.50 8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9951 0.9908 0.9887 0.9876 0.9824	0.7179 1.0215 1.1378 1.1913 1.4363	1.4137 1.9993 2.2353 2.3444 2.8275		0.9957 0.9915 0.9894 0.9883 0.9831	0.7184 1.0222 1.1385 1.1921 1.4372	0.8859 1.2528 1.4007 1.4690 1.7717
Qstd slop	(b) = ent (r) =	1.97048 -0.00546 0.99991		Qa slope intercept coefficie	c (b) = ent (r) =	1.23388 -0.00342 0.99991
y axis =	SQRT [H2O (H	Pa/760) (298/5	[a)]	y axis =	SQRT [H20 (7	[a/Pa)]

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = $1/m\{[SQRT(H2O(Pa/760)(298/Ta))] - b\}$ Qa = $1/m\{[SQRT H2O(Ta/Pa)] - b\}$

Type:				Laser Di	ust Moni	tor		
	facturer/Brand:			SIBATA				
Model	No.:		_	LD-3				
Equip	ment No.:			A.005.07				
Sensit	tivity Adjustment	Scale Setti	ng:	557 CPI	И	*		
Opera	ator:		_	Mike She	ek (MSKN	<i>d</i>)		
Standa	rd Equipment							
<u> </u>		_						
Equip			recht & Pa			-lN		
Venue			rport (Pui \	ring Seco	ondary So	cnooi)		
Model			s 1400AB	DAB2198	00000			
Serial	NO:	Conti				V . 40500		
Last C	Calibration Date*:	Sens 5 Ma	or: <u>120</u> y 2012	00C1436	59803	K _o : <u>12500</u>		
*Remar	ks: Recommend	ed interval	for hardwa	re calibra	tion is 1 y	year		
Calibra	tion Result	3500						•
-					8 0			
	tivity Adjustment					CP		
Sensit	tivity Adjustment	Scale Setti	ng (After C	alibration):	_ <i>557</i> CP	M	
ГП	D-4-	T:.		1 01	-!4		Tatal	C
Hour	Date	I II	me		oient	Concentration ¹	Total Count ²	Count/ Minute ³
	(dd-mm-yy)				dition	(mg/m³)	Count	Talk of a season of an
				Temp (°C)	R.H. (%)	Y-axis		X-axis
1	02-06-12	13:30	- 14:30	27.9	63	0.04070	1628	27.13
2	02-06-12	14:30	- 15:30	27.9	63	0.04167	1669	27.82
3	02-06-12	15:30	- 16:30	28.2	64	0.04283	1713	28.55
4	02-06-12	16:30	- 17:30	28.1	63	0.04146	1655	27.58
Note:						ashnick TEOM®		
	2. Total Count							
	Count/minut	e was calcu	ulated by (1	otal Cou	nt/60)			
Py Line	ar Regression of	VorV						
Slope	(K-factor):	1 01 7	0.0015					X
	ation coefficient:		0.9951					
Conte	ation coemcient.	•	0.0001					
Validit	y of Calibration R	lecord:	1 June 20)13				
Remark	s:		=					
	-	57						
								1
					C80*			
					11			
QC Re	eviewer: YW F	ung	Signa	ture:	1/	Date	e: 4 June	2012

Type:					Laser D	ust Ma	nitor		
	acturer/Brand:				SIBATA		intor		
Model	No.:				LD-3				
Equipn	nent No.:				A.005.0	8a			
Sensiti	vity Adjustment	Scale S	etting:		702 CF	M			
Operat	or:				Mike Sh	ek (MSI	KM)		
Standar	d Equipment				***		***		
								10,01	
Equipm					atashnick				iii.
Venue: Cyberport (Pui Ying Secondary School)									
Model No.: Series 1400AB						20000			
Serial No: Control: <u>140AB219899803</u> Sensor: <u>1200C143659803</u> K _o : <u>12500</u>									
Sensor: <u>1200C143659803</u> K₀: <u>12500</u> Last Calibration Date*: 5 May 2012									
Last Calibration Date									
*Remark	*Remarks: Recommended interval for hardware calibration is 1 year								
Calibrati	ion Result			**	2 2 2 2 2 2 2				
			10000		X22X X23X2X 0.000	- 100 - 100			1000
	vity Adjustment						702	CPM	
Sensitiv	vity Adjustment	Scale Se	etting (/	After C	alibration	1):	_702	CPM	
Hour	Date		Time		Amb	iont	Concentration	T-4-1	0
Tioui	(dd-mm-yy)		IIIIIE		Cond		Concentration ¹ (mg/m ³)	Total Count ²	Count/ Minute ³
	(dd-iiiii-yy)				Temp	R.H.	Y-axis	Count	X-axis
					(°C)	(%)	I-dais		A-axis
1	02-07-12	13:30	- 1	4:30	28.9	73	0.04127	1545	25.75
2	02-07-12	14:30		5:30	29.0	73	0.04163	1566	26.10
3	02-07-12	15:30	- 1	6:30	29.0	73	0.04334	1630	27.17
4	02-07-12	16:30		7:30	29.1	74	0.04426	1665	27.74
Note:							tashnick TEOM®		
	2. Total Count								
	3. Count/minut	e was ca	ilculate	d by (Total Cou	nt/60)			
Py Lincor	Regression of	VorV							
	K-factor):	1 01 1	0.0	016					
100	tion coefficient:			952					
Correla	tion coemcient.			302					
Validity	of Calibration F	Record:	1 J	uly 20	13				
D									
Remarks	:		100000000000000000000000000000000000000						
							×		
N.C.			The second						
00.0				0:		1/	_	North control	
QC Rev	riewer: YW F	ung		Signa	ture:	/		ate: 3	July 2012

Mode Equip	e: ufacturer/Brand: el No.: pment No.: sitivity Adjustmen	it Scale Se	etting:	Laser I SIBAT, LD-3 A.005.0 797 CI)9a	nitor		
Oper	ator:			Mike St	nek (MSK	M)		
Standa	ard Equipment							
Venu Mode Serial Last (l No.:	Ser Cor Ser : 5 M	nsor: <u>12</u> 1ay 2012	Ying Sec 10AB2198 100C1436	ondary S 899803 859803	K₀: _12500)	
Calibra	tion Result							•
Sensit Sensit	tivity Adjustment tivity Adjustment Date	Scale Set	ting (After C	alibration):	797 CF		
	(dd-mm-yy)		ime		dition R.H. (%)	Concentration ¹ (mg/m³) Y-axis	Total Count ²	Count/ Minute ³ X-axis
1	02-06-12	13:30	- 14:30	27.9	63	0.04070	1626	27.10
3	02-06-12	14:30	- 15:30	27.9	63	0.04167	1667	27.78
4	02-06-12	15:30	- 16:30	28.2	64	0.04283	1708	28.47
Note:	02-06-12	16:30	- 17:30	28.1	63	0.04146	1659	27.65
By Linea Slope (1. Monitoring d 2. Total Count 3. Count/minute or Regression of (K-factor): ation coefficient:	was logge e was calc	d by Laser [Oust Mon	itor	shnick TEOM®		
Validity	of Calibration R	ecord:	1 June 20	13				
Remarks	:							
QC Rev	riewer: YW Fu	ing	_ Signatu	ıre:	W	Date:	4 June 2	2012

Type:	:			Laser D	ust Mon	itor		
Manu	facturer/Brand:			SIBATA				
	el No.:			LD-3				
	ment No.:			A.005.1				
Sensi	itivity Adjustment	Scale Se	tting:	753 CP	М			
Opera	ator:			Mike Sh	ek (MSKI	M)		
Standa	ard Equipment							
Equip	mont:				TEO. 6			
Venue	ment:		precht & Pa			-h1\		
Mode			erport (Pui ies 1400AB	ring seco	oridary St	criooij		7 17
Serial				0AB2198	00803			
Octiai	140.			00C1436		K _o : 12500		
Last C	Calibration Date*		ay 2012	0001430	09003	K _o : <u>12500</u>		
		-				200		
*Remar	rks: Recommend	led interva	I for hardwa	re calibra	tion is 1 y	year		
Calibra	tion Result			***			***	
			Den Manner Wen	2007 00001 0000A	91			
	tivity Adjustment					_753 CF		
Sensit	tivity Adjustment	Scale Set	ting (After C	alibration):	753 CF	M	
Have	Data			T 4		1		T
Hour	Date (dd-mm-yy)	1	ime		pient	Concentration 1	Total	Count/
	(dd-mm-yy)				dition	(mg/m³)	Count ²	Minute
				Temp (°C)	R.H.	Y-axis		X-axis
1	02-06-12	12:45	- 13:45	27.9	(%) 63	0.04041	1613	26.88
2	02-06-12	13:45	- 14:45	27.9	63	0.04085	1631	27.18
3	02-06-12	14:45	- 15:45	27.9	63	0.04154	1663	27.72
4	02-06-12	15:45	- 16:45	28.1	64	0.04272	1711	28.52
Note:						shnick TEOM®	1777	20.02
11010.	2. Total Count					STITION TEOM		
	3. Count/minut							
	ar Regression of	Y or X	-240202-440					
100	(K-factor):		0.0015					
Correla	ation coefficient:		0.9939					
Validity	y of Calibration F	Record:	1 June 20)13				
Remark	s:							
	39,333,344 44,		750000		h			
QC Re	eviewer: _YWF	ung	_ Signat	ture:	_//	Date	: 4 June	2012

Type:			-	Laser D	ust Mon	itor		
Manu Mode	facturer/Brand:		-	SIBATA				
	ment No.:			LD-3 A.005.11	12			
	tivity Adjustment	Scale Sett	ina:	799 CP				
		Codio Cott	g	755 01	**			
Opera	ator:		-	Mike She	ek (MSKI	M)		
Standa	rd Equipment				-			
Equip	ment:	Rup	precht & Pa	atashnick	TEOM®			
Venue	e:	Cyb	erport (Pui	Ying Seco	ondary S	chool)		
Model	l No.:	Serie	es 1400AB					
Serial	No:	Con		0AB2198				
		Sens		00C1436	59803	K _o : _12500)	
Last C	Calibration Date*:	5 Ma	ay 2012	H				
*Remar	ks: Recommend	led interval	for hardwa	re calibra	tion is 1	year		
Calibra	tion Result							
	tivity Adjustment tivity Adjustment						PM PM	
Hour	Date	Ti	me	Amb	pient	Concentration ¹	Total	Count
0 0000000000000000000000000000000000000	(dd-mm-yy)	1500			dition	(mg/m ³)	Count ²	Minute
	·			Temp (°C)	R.H. (%)	Y-axis		X-axis
1	02-07-12	13:45	- 14:45	29.0	73	0.04152	1659	27.65
2	02-07-12	25 1955 AC 200	- 15:45	29.0	73	0.04194	1670	27.83
3	02-07-12	15:45	- 16:45	29.1	74	0.04318	1725	28.75
4	02-07-12	16:45	- 17:45	29.1	74	0.04443	1780	29.67
Slope	2. Total Count 3. Count/minut ar Regression of (K-factor):	was logge e was calc	d by Laser I ulated by (7 0.0015	Dust Mon	itor	ashnick TEOM [®]		
Correla	ation coefficient:		0.9928					
Validity	y of Calibration F	Record:	1 July 201	13				
Remark	s:							
Validity	=	Record:	0.9928 1 July 201	13	(A /	7		

Model Equipr	acturer/Brand: No.: ment No.: ivity Adjustment	Scale Setting:		Laser Du SIBATA LD-3B A.005.14 786 CPI	а	tor		
Opera	tor:		_	Mike She	k (MSKN	A)		
Standa	rd Equipment							
	e: No.: No: alibration Date*:		t (Pui Y 00AB 140 120	/ing Seco 0AB21989 00C14365	99803 99803	K _o : _12500)	
*Remark	ks: Recommend	ed interval for h	ardwar	e calibrat	tion is 1 y	year		
Calibra	tion Result							•
	ivity Adjustment ivity Adjustment						PM PM	
Hour	Date (dd-mm-yy)	Time	i.	Amb Cond Temp (°C)	dition R.H. (%)	Concentration ¹ (mg/m ³) Y-axis	Total Count ²	Count/ Minute ³ X-axis
1	02-06-12	13:15 - 1	14:15	27.9	63	0.04073	1746	29.10
2	02-06-12		15:15	27.9	63	0.04154	1778	29.63
3	02-06-12		16:15	28.1	64	0.04269	1830	30.50
4	02-06-12		17:15	28.1	64	0.04136	1769	29.48
Slope	2. Total Count	0.0	Laser [Dust Mon	itor	ISNNICK I EOM		
Validity	y of Calibration F	Record: 1 J	une 20	113				
Remark	s:							
QC Re	eviewer: YW F	-ung	Signat	ture:	4	Date	e: _4 June	2012



綜 合 試 驗 有 限 公 司 SOILS & MATERIALS ENGINEERING CO., LTD.

G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com

Tel: (852) 2873 6860 Fax: (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:

12CA1115 01-01

Page

of

Item tested

Description:

Sound Level Meter (Type 1)

Microphone

Manufacturer: Type/Model No.: B&K 2238

B&K 4188

Serial/Equipment No.:

2255680 / N.009.01

2250447

Adaptors used:

Item submitted by

Customer Name:

AECOM ASIA CO., LTD.

Address of Customer: Request No.:

Date of receipt:

15-Nov-2012

Date of test:

15-Nov-2012

Reference equipment used in the calibration

Description:

Model:

Serial No.

Expiry Date:

Traceable to:

Multi function sound calibrator Signal generator Signal generator

B&K 4226 DS 360 DS 360

2288444 33873

61227

22-Jun-2013 29-May-2013 29-May-2013 CIGISMEC CEPREI CEPREI

Ambient conditions

Temperature:

22 ± 1 °C

Relative humidity: Air pressure:

60 ± 10 % 1000 ± 5 hPa

Test specifications

- The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- 2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of +20%.
- The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference 3, between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Huang Jian Min/Feng Jun Qi

Actual Measurement data are documented on worksheets.

Approved Signatory:

Date:

17-Nov-2012

Company Chop:

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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Form No.CARP152-1/Issue 1/Rev.C/01/02/2007



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CERTIFICATE OF CALIBRATION

Certificate No.:

12CA1008 02

Page

of

2

Item tested

Description:

Sound Level Meter (Type 1)

Microphone

Preamp

Manufacturer:

Adaptors used:

Rion Co., Ltd.

Rion Co., Ltd. UC-53A Rion Co., Ltd. NH-19

Type/Model No.: Serial/Equipment No.: NL-31 00320528/N.007.03A

90565

75883

Item submitted by

Customer Name:

AECOM ASIA CO., LTD.

Address of Customer:

-

Request No.: Date of receipt:

08-Oct-2012

Date of test:

08-Oct-2012

Reference equipment used in the calibration

Description:Multi function sound calibrator
Signal generator
Signal generator

Model: B&K 4226 DS 360

DS 360

Serial No. 2288444 33873 61227

Expiry Date: 22-Jun-2013 29-May-2013

29-May-2013

Traceable to: CIGISMEC CEPREI CEPREI

Ambient conditions

Temperature:

(22 ± 1) °C

Relative humidity: Air pressure:

(60 ± 10) % (1000 ± 5) hPa

Test specifications

- The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
- The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

n/Feng Jun Qi

Actual Measurement data are documented on worksheets.

Huang Jian N

Approved Signatory:

Date:

08-Oct-2012

Company Chop:

SENGINESCOMPANION STORY OF THE STORY OF THE

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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Form No.CARP152-1/Issue 1/Rev.C/01/02/2007



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Tel: (852) 2873 6860 Fax: (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:

12CA0817 01

Page:

of

2

Item tested

Description:

Acoustical Calibrator (Class 1)

Manufacturer:

Rion Co., Ltd.

Type/Model No.:

NC-73

Serial/Equipment No.: Adaptors used:

10307223 / N.004.08

Item submitted by

Curstomer:

AECOM ASIA CO., LTD.

Address of Customer: Request No.:

Date of receipt:

17-Aug-2012

Date of test:

17-Aug-2012

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2412857	29-May-2013	SCL
Preamplifier	B&K 2673	2239857	05-Jan-2013	CEPREI
Measuring amplifier	B&K 2610	2346941	29-Dec-2012	CEPREI
Signal generator	DS 360	61227	29-May-2013	CEPREI
Digital multi-meter	34401A	US36087050	16-Dec-2012	CEPREI
Audio analyzer	8903B	GB41300350	29-May-2013	CEPREI
Universal counter	53132A	MY40003662	29-May-2013	CEPREI

Ambient conditions

Temperature:

22 ± 1 °C

Relative humidity: Air pressure:

60 ± 10 % 995 ± 5 hPa

Test specifications

- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference 3, pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

Details of the performed measurements are presented on page 2 of this certificate.

Approved Signatory:

Date:

17-Aug-2012

Company Chop:

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the instrument.

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Form No.CARP156-1/Issue 1/Rev.D/01/03/2007