Internal Angle Worksheet

Date: 7/15/2006

By: Hall

RAM: 012

CalTube: 033310 1.256

SGC: Pine 125x

SN: 015

	44-mm Ring		64-mm Ring	
	Top	Bottom	Top	Bottom
Run 1:	1.13	1.16	1.08	1.13
Run 2:	1.12	1.16	1.07	1.13
Run 3:	1.13	1.16	1.06	1.13
Avg:	1.127	1.160	1.070	1.130
Internal Angle (deg)	**1.143**		**1.100**	

Graphing Data

Eccentricity (mm)	Tilting Moment (N-m)	Average Internal Angle (deg)	*Frame Stiffness (deg/N-m)*
22	116.633	1.143	
44	233.266	1.100	0.00037

Internal Angle Worksheet

Date: 7/15/2006

By: Hall
Tran

HMS: 106

SGC: Pine 125x

SN: 015

	18-deg Cone		21-deg Cone	
	Top	Bottom	Top	Bottom
Run 1:	1.175	1.146	1.168	1.134
Run 2:	1.169	1.157	1.17	1.136
Run 3:	1.173	1.143	1.169	1.121
Avg:	1.172	1.149	1.169	1.130
Internal Angle (deg)	**1.161**		**1.150**	

Graphing Data

Eccentricity (mm)	*Cone (rad)*	*Eccentricity (mm)*	Tilting Moment (N-m)	Average Internal Angle (deg)	*Frame Stiffness (deg/N-m)*
18	0.31415927	18.68	198.095	1.161	
21	0.36651914	22.07	234.031	1.150	0.00030

Calibration Worksheet: Pine Gyratory Compactor

Equipment ID: Pine Compactor
Manufacturer: Pine Instruments
Model #: AFGC 125X
Serial #: 15
UofA ID: 229874
Location: HM(225)

Date: 9/28/06
Performed by: Stacy Williams-Kevin Hall
Next Calibration Due: 9/28/07
Last Calibration: 9/29/05

Calibration Items: Speed, Pressure, Height, Angle
Calibration Procedure: Follow Manufacturer's Instructions (summarized below)
Calibration Equipment: Calibration kit supplied by manufacturer

SPEED

Press ENTER and SELECT at the same time.
Scroll to enter code (125)
Select VERIFY from menu and press ENTER. Press START.
Record stopwatch reading for 10 gyrations

Target Time: 20 seconds
Actual Time: 19.92
Tolerance: +/- 0.3 sec
Pass / Fail: Pass SGW

RAM PRESSURE

Place proving ring and 1/8" block in compactor.
Select VERIFY from ram force calibration menu.
Follow screen prompts.

Load (N)	Target Dial Rdg.	Actual Dial Rdg.
1500	34.0	33.9
3500	79.7	79.7
5500	124.6	124.4
7500	169.9	169.6
9500	215.0	214.9
11500	261.8	261.8
13500	307.9	308.2
15500	354.4	354.2
17500	400.1	400.2

Tolerance: ±1% or ±3%
Pass / Fail: Pass SGW

HEIGHT

Select VERIFY from ram position calibration menu.
Place blocks under ram as directed.
Follow screen prompts.

Target (mm)	Actual (mm)
254.00	253.98
228.60	228.59
203.20	203.19
177.80	177.80
152.40	152.39
127.00	127.01
101.60	101.60
76.20	76.21

Tolerance: ± 0.05 mm
Pass / Fail: Pass SGW

ANGLE

1) CHECK ROLLER CLEARANCE.
Set dials to zero. Lift gauge at each roller.

	Tolerance:	Actual:
Right	0.0015 - 0.002	.0015
Left	0.002 - 0.004	.0020
Back	0.002 - 0.004	.0030

Pass / Fail : Pass (adjusted)

2) CHECK ZERO POSITION.
Set dials to 0.3500. Spin to 180° and read.
Tolerance: 0.3500 ± 0.001
(Pass) / Fail: 0.3505 SGW (zero position adjusted)

Initial by: SGW

3) VERIFY ANGLE.
Zero dials. Place hot mold / sample in compactor.
Clamp jig to mold. Record dial readings (A1, B1)
Remove jig. Press START. Press ANGLE before ram applies pressure to sample.
Clamp jig to mold. Record dial readings (A2, B2)
Remove jig. Press START. Press ANGLE after 40-50 gyrations.
Clamp jig to mold. Record dial readings (A3, B3)
Use angle calculator to figure angle.

A1 = .2000 **B1** = .2000
A2 = .1480 **B2** = .2080
A3 = .0752 **B3** = .1691

ANGLE = 1.257 Tolerance: 1.25 ± 0.02° (Pass) / Fail: SGW