



## **Review of Insole Pilot Test Program**

### **Applied Materials International May-July 2007**

#### **Summary of Statistics**

- Number of test subjects: 31
- Average Age: 37
- Pain Area: Feet followed by back and knees
- Average Test Period: 6 weeks
- Average Pain Level Pre PAM Insoles: 5.61
- Average Pain Level Post PAM Insoles: 2.68

#### **Overall Perceived Pain Reduction: 52.3 %**

- Majority of pain experienced at end of the shift
- Most participants stand for 75% of the time
- Nearly all participants stand on grated clean room tile.
- Type of footwear – mainly safety shoes or casual shoes
- Occurrence Rate decreased or stayed the same for over 90% of the test employees
- Fatigue Level decreased or stayed the same for **100 %** of the test employees with 80 % of the test employees stating they were less tired had more energy while wearing the test insoles
- Only 4 of the 31 participants were wearing other insoles pre survey.  
Average Pre PAM insole pain level for these employees was 4.5 with other insoles, after replacement 2.0  
44.4% overall pain reduction after switching insoles
- The MEGATHotics were supplied to employees with flat feet (6/31) whose pre insole pain level was 6.8 and reduced pain by over 49 %
- **All** employees rated the MEGAComfort Insoles as either Very Comfortable. or (17/30) as very comfortable only (14/30) as uncomfortable

#### **Some of the Positive Comments noted from the Test Employees**

- “Very pleased with the insoles. They were comfortable from Day 1.”
- “I am not feeling discomfort in my feet by the end of the day as I was before. Thank you !”
- “Great for feet. I found big difference using them”
- “I like the test insoles very much. Would like to purchase another set for my regular shoes. Thanks for the chance.”

**Insole Pilot  
Test Program  
Applied Materials  
May-July 2007**

Participant #	Sex	Age	Work Site	Duration (weeks)	Shoe Size	Insole	Question # 1	Question # 2	Question # 2	Question # 3	Question # 3	Question # 4	Question # 5	Question # 6
							Pain Area	(Pre Insole ONLY) Pain Level	(Post Insole ONLY) Pain Level	(Pre Insole ONLY) Occurrence Rate	(Post Insole ONLY) Occurrence Rate	Time of Day	% Standing	Floor Surface
1	Male	39	AR	6	12	PAM	FEET	5	1	3x week	1x week	End of Shift	75%	Grated Cleanroom Tile
2	Male	37	Israel	3	9	MEGATHOTIC	FEET	6	1	Daily	3x week	End of Shift	50%	Grated Cleanroom Tile
3	Male		TX		10	PAM	ANKLES & FEET	4	1	Daily	1x week	End of Shift	50%	Grated Cleanroom Tile
4	Male	29	ID		11	MEGATHOTIC	KNEES	7	3	3x week	1x week	End of Shift	50%	Grated Cleanroom Tile
5	Male	37	AR	6	7	PAM	BACK	4	2	Daily	Daily	End of Shift	75%	Grated Cleanroom Tile
6	Male	50	NM	5	8	PAM	FEET	4	1	3x week	1x week	End of Shift	75%	Grated Cleanroom Tile
7	Male	36	NY		14	PAM	KNEES & FEET	3	5	Daily	3x week	End of Shift	100%	Grated Cleanroom Tile
8	Male	52	NM	6	13	PAM	BACK	6	2	Daily	1x week	End of Shift	50%	Grated Cleanroom Tile
9	Male	45	AR		12	PAM								
10	Male	45	NM		9	PAM	BACK & KNEES	4	3	Daily	Daily	End of Shift	75%	Grated Cleanroom Tile
11	Male	44	NM	5	9	PAM	FEET	5	5	3x week	3x week	End of Shift	75%	Grated Cleanroom Tile
12	Male	42	NM	8	9	MEGATHOTIC	KNEES	5	5	Daily	Daily	End of Shift	75%	Floor
13	Male	31	UT	4	10	PAM	KNEES	4	2	3x week	3x week	End of Shift	50%	Grated Cleanroom Tile
14	Male	36	ID		10	PAM	BACK & FEET	5	3	3x week	3x week	End of Shift	50%	Grated Cleanroom Tile
15	Male	60	NM		11	PAM								
16	Male	31	NM		13	PAM	KNEES & FEET	5	2	3x week	1x week	End of Shift	75%	Floor
17	Male	44	NM		9	PAM	BACK	8	2	Daily	Daily	End of Shift	50%	Grated Cleanroom Tile
18	Male		Ireland		9	PAM								
19	Male	36	Israel		9	PAM								
20	Male	40	Israel		10	PAM	FEET	8	1	Daily	3x week	End of Shift	75%	Grated Cleanroom Tile
21	Male	30	Israel		10	PAM	FEET	8	1	Daily	Daily	End of Shift	75%	Grated Cleanroom Tile
22	Male	30	Israel		11	PAM	FEET	6	3	5x week	Daily	End of Shift	75%	Grated Cleanroom Tile
23	Male	27	Israel		8	MEGATHOTIC	FEET	7	3	2x week	Daily	1st part of shift	75%	Aluminum
24	Male	36	Israel		10	MEGATHOTIC	FEET	10	5	more	2x daily	End of Shift	75%	flat
25	Male	26	Israel		8	PAM	ANKLES	6	2	More	1x week	End of Shift	75%	Grated Cleanroom Tile
26	Male	34	Israel		12	PAM								
27	Male	36	Israel		10	PAM								
28	Male	33	Israel		9	PAM								
29	Male		Germany	6	11	PAM	FEET	4	1	3x week	5x week	End of Shift	75%	Cleanroom Floor
30	Male		Germany		11	PAM	BACK	2	3	Daily	3x week	1st part of shift	50-75%	Grated Cleanroom Tile
31														
32	Female		Crolles		8	PAM	FEET	9	2	Daily	1x week	End of Shift	75%	Grated Cleanroom Tile
33	Female	27	Crolles		7	PAM	FEET	7	3	Daily	Daily	End of Shift	75%	Grated Cleanroom Tile
34	Male		Crolles		10	PAM	FEET	6	1	3x week	1x week	End of Shift	75%	Metal Slab
35	Male		Crolles		9	PAM								
36	Male	38	Rousset		8	PAM								
37	Male	36	Corbeil	3	10	PAM	KNEES	3	2	1x week	1x week	End of Shift	50%	Cleanroom Floor
38	Male	34	Rousset		10	PAM	BACK & KNEES	8	5	Daily	3x week	End of Shift	75%	Cement
39	Male	0	Rousset		11	PAM								
40	Male	33	Crolles		8	PAM								
41	Male	34	Crolles	6	12	MEGATHOTIC	BACK	6	4	Daily	3x week	End of Shift	50%	Floor Tile
42	Male	30	France	7	10	PAM	FEET	7	5	3x week	1x week	End of Shift	75%	Grated Cleanroom Tile
43	Male	31	France		11	PAM	BACK	7	4	3x week	1x week	End of Shift	75%	Grated Cleanroom Tile
44	Male	40	Germany		8	PAM								
45	Male	50			9	MEGATHOTIC								
TOTAL		1339						174	83					
AVERAGE		37						5.61	2.68					
								<b>AVG PAIN REDUCTION</b>	<b>52.30%</b>					

**Insole Pilot  
Test Program  
Applied Materials  
May-July 2007**

Participant #	Question # 7 Anti-fatigue Mat	Question # 8 A (Pre Insole ONLY) Type of Footwear	Question # 8 B (Pre Insole ONLY) Brand of Footwear	Question # 8 (Post Insole ONLY) Comfort Level	Question # 9 (Pre Insole ONLY) Age of Footwear (months)	Question # 9 (Post Insole ONLY) Fatigue Level	Question # 10 A (Pre Insole ONLY) Insoles	Question # 10 B (Pre Insole ONLY) Insoles Brand	Question # 10 (Post Insole ONLY) Acceptance
1	No	SAFETY BOOTS & ATHLETIC SHOES	New Balance	VERY COMFORTABLE	6	Less Tired	Yes	Super Feet	YES
2	No	SAFETY BOOTS	Timberland	VERY COMFORTABLE	3	Less Tired	No		YES
3	No	CASUAL SHOES	Comfort Footwear	VERY COMFORTABLE	3	Less Tired	No		YES
4	No	SAFETY SHOES	Redwing	COMFORTABLE	20	Less Tired	No		YES
5	No	SAFETY BOOTS	Mack	COMFORTABLE	5	Less Tired	No		YES
6	No	CASUAL SHOES	Airwalk	VERY COMFORTABLE	2	Less Tired	No		YES
7	No	SAFETY SHOES	New Balance		3		No		
8	No	ATHLETIC SHOES	Asics	VERY COMFORTABLE	5	Less Tired	Yes	orthotics	YES
9									
10	No	MILITARY ISSUED	Belleville	COMFORTABLE	36	Less Tired	No		NO
11	No	CASUAL SHOES	Rockport	COMFORTABLE	5	Same	No		YES
12	No	SAFETY SHOES	MBT	COMFORTABLE	6	Less Tired	No		YES
13	No	CASUAL SHOES	London Underground	COMFORTABLE	4	Same	No		YES
14	No	SAFETY SHOES	Doc Martens	VERY COMFORTABLE	36	Less Tired	No		YES
15									
16	No	SAFETY BOOTS	Catapillar	COMFORTABLE	18	Less Tired	yes	Dr. Schools	YES
17	No	ATHLETIC SHOES	Dr. Scholls	VERY COMFORTABLE	6	Less Tired	No		YES
18									
19									
20	No	SAFETY SHOES		VERY COMFORTABLE	24	Less Tired	No		YES
21	No	SAFETY SHOES		VERY COMFORTABLE	12	Less Tired	No		YES
22	No	SAFETY SHOES		VERY COMFORTABLE	2	Less Tired	Yes		YES
23	No	SAFETY BOOTS	Unifloar	COMFORTABLE	6	Same	No		YES
24	No	SAFETY SHOES		COMFORTABLE	3	Less Tired	No		YES
25	No	SAFETY SHOES		COMFORTABLE	4	Less Tired	No		YES
26									
27									
28									
29	No	SAFETY SHOES	Schuerrur	VERY COMFORTABLE	30	Less Tired	No		YES
30	No	SAFETY SHOES	Cofra	VERY COMFORTABLE	12	Same	Yes	Abeba- static control	YES
31									YES
32	No	CASUAL SHOES	Good	VERY COMFORTABLE	6	Less Tired	No		YES
33	No	CASUAL SHOES	Kickers	COMFORTABLE	9	Less Tired	No		NO
34	No	CASUAL SHOES	Good	VERY COMFORTABLE	10	Less Tired	No		YES
35									
36									
37	No	SAFETY SHOES		VERY COMFORTABLE	6	Less Tired	No		YES
38	No	SAFETY SHOES		COMFORTABLE	12	Less Tired	Yes	Original	YES
39									YES
40									YES
41	No	CASUAL SHOES		VERY COMFORTABLE	14		No		YES
42	No	OTHER	Luftpolster	COMFORTABLE	36	Same	No		YES
43	No	CASUAL SHOES	Dr. Martens/Puma	VERY COMFORTABLE	24	Same	No		YES
44									
45									
TOTAL					368				
AVERAGE					12				



### **Some of the Positive Comments noted from the Test Employees – continued**

- “These inserts are very comfortable, I have used these in place of my Orthotics.”
- “Very comfortable”
- “They are better than any other insoles I have used”
- “Test is a success”
- “The insoles greatly reduced back pain and foot fatigue”

### **Conclusions**

1. The results presented are based on the data received from 31 participants of the MEGAComfort Insole Pilot Test Program.
2. Based on a Pre Insole average Pain Level of 5.61/10 there is a need for an effective ergonomic health and safety initiative to be introduced at the Applied Materials.
3. This high Pain Level is most likely due to the many long hours standing on hard unforgiving grated clean room tile.
4. Interestingly enough the majority of the pain is at the level of the feet followed by the back and knees
5. The feet although often neglected are the foundation of the body and foot problems over time can very easily lead to other debilitating musculoskeletal disorders.
6. Due to the nature of the worksite, expensive standard anti-fatigue floor matting is not used and as a result its effectiveness could not be compared to the Anti-Fatigue Insoles. In other similar Test Program, the MEGAComfort Insoles have proven to be far more effective.
7. All Insoles are not created equal. The results showed that allowing employees to purchase and choose their own insoles is not as effective as providing the MEGAComfort insoles.
8. The MEGAComfort Insoles produced an amazing **52.3 %** reduction in total perceived pain levels.
9. Based on other Insole Pilot Test Programs completed by MEGAComfort it is expected this relief will continue at about the same level for at least nine months.
10. Another major advantage of the Insoles is that they provide employees relief wherever they walk or stand throughout the Facility and the ease of implementation and dispensing.
11. The PAM insoles were accepted by an overwhelming majority of the test employees stating they would wear them if provided and all (100%) of the test participants also found the PAM Insoles very comfortable or comfortable to wear. This is important as for any health and safety initiative truly to be successful it must also be endorsed and wanted by the employees themselves.
12. From an employer standpoint, increased comfort and pain reduction of its employees leads to less injuries and health claims while at the same time increasing worker productivity.

**Based on the results from this Pilot Insole Test Program, the MEGAComfort PAM and MEGATHotic Insoles have proven themselves to be an extremely effective ergonomic health and safety initiative that could and should be implemented immediately on a corporate wide basis throughout all Applied Material Facilities.**

DR. KEVAN ORVITZ