Welcome to today’s webinar on “Conducting an Internal Company Ergo Cup® Competition”

Richard D Pagnotta, MSPH, CIH
Manager Ergonomics & EHS Training, PPG Industries

Lisa M Brooks, MS, CIE
Global Manager, Ergonomics and Safety Programs, GE

Jose’ Carlos N Banaag, MS, CPE
Staff Engineer and Ergonomist, Honda of America
PPG Internal Ergo Cup Competition

Richard D. Pagnotta, MSPH, CIH
Manager, Ergonomics and EHS Training
PPG Industries
PPG is...

• A global manufacturer of paints, coatings, chemicals, optical products, specialty materials, glass and fiber glass

• Founded in 1883; Headquartered in Pittsburgh, Pa.

• Rank 161 Fortune 500

• 40,000+ employees

• >60 countries

• 140 manufacturing sites
Scope

• Internal competition started in 2005
• Global: North America, EMEA, South/Central America, Asia Pacific
• Same 3 categories as IIE
• Award First, Second and Third Place and:
  ➢ Best in Study and Experimentation
  ➢ Best Cost Savings
  ➢ Best Risk Reduction
  ➢ Best Innovation
• Budget: $10,000 travel subsidy for first place winner to represent PPG at conference
Timeline

May  – Conduct internal webinars on application process

July  – Competition announced

August    – Reminder

September  – Recruit judges/ Final reminders

October   – Applicant submission deadline; applications to judges for scoring

November – Tally scores and announce winners
Judging

- 10 judges
  - EHS – corporate staff and plant staff
  - Engineering and production managers
  - Plant managers
  - 1 Consultant
- Projects uploaded to Microsoft sharepoint site for judges to review
- Email with instructions and scoresheet
- Use 1 through 5 scale
- Give judges gift (select from PPG apparel and merchandise catalog)
Criteria: “The solution is a newly created device or process”
1 = project involves installation of an “off the shelf” device
2 = project involves modification of an “off the shelf” device
3 = project was designed and built by facility and is somewhat innovative (e.g. customized lift assist)
4 = project is an innovative device or process designed by facility
5 = project or process is a very innovative device or process that significantly changes the way something was done in the past

Criteria: “The solution provides an attractive return-on-investment and explains it’s financial success”
1 = project does not give any information on injury or production savings
2 = project gives minimal savings in one area (injury or production)
3 = project gives savings in both areas or considerable savings in one area but either does not explain how it arrived at the cost savings or assumptions are unrealistic
4 = project gives considerable savings in one area (injury or production), has good explanation, documentation and assumptions appear realistic
5 = project gives considerable savings in both injury and production areas, has good explanation, documentation and assumptions appear realistic

Criteria: “The solution significantly reduces or eliminates ergonomic risk”
1 = project does not significantly reduce or eliminate risk or not enough information given to evaluate
2 = project reduces risk somewhat but no supporting information given (risk assessment etc.)
3 = project reduces risk based upon risk assessment but there is no indication or history of documented injuries for the task in question
4 = project reduces risk based upon supporting information (risk assessment etc.) and/or demonstrates actual reduction in injury cases since implementation of project or process
5 = project eliminates risk completely based upon supporting information (risk assessment etc.) and/or demonstrates elimination of injury cases since implementation of project or process
Application

- Only official MSWord document application accepted
- Standardize applications for judging process
- Include detailed instructions for filling out application
- Instructed to detail how project satisfies each criteria
- Provide explanations under each criteria; don’t just answer YES or NO
- Include all names on the application who worked on the project
- Avoid acronyms and define plant specific terms
- Identify risk assessment tool used to define ergonomic risk
- Photos for before and after very important
Other considerations

- We do not allow videos; use digital photos only
- May submit more than 1 project
- Re-entries allowed if project did not win previous year
- Projects that affect more employees are preferable to those who affect a few employees (tie-breaker)
- Encourage use of Washington State Cost Benefit Calculator
**Announcements**

*Auburn Engineers E-tools Software Changes*
by Fagnotta, Rich

There are new features in e-tools ergo software including the ability to work in metric units. The operating program has been upgraded so you should find the software faster. Please refer to the Updates/What’s New link on the software.

*PPG Ergo Buddy Shoe Insole Discount Program*
by Fagnotta, Rich

PPG now has a corporate discount with Johnson Technologies, the maker of the “Ergobuddy” anti-fatigue shoe insoles. Get the discount by clicking the QuickLink below to access their website. Go to your product of choice (we recommend Ergo Comfort Plus or Ergo Comfort Plus Ultra) and enter PIN ppp08 in the appropriate field.

**Quick Links**

- Johnson Technologies Web Site to Order Ergo Insoles Click Buy Now and Enter PIN ppp08
- Cost Benefit Calculator
- Ergo Cup Judging

**Surveys**
Benefits

- Encourages innovation
- Professionally rewarding for all involved
- Promotes employee engagement and enthusiasm
- Recognition for employees, facility and business for ergonomic efforts – trophies, plaques, letters, IIE website
- Demonstrates **value** of EHS initiatives internally and externally to professional community and customers
- Supports sharing of successful solutions between facilities
Sylmar team’s idea takes a load off operators

Visitors to PPG’s aerospace products facility in Sylmar, Calif., may have scratched their heads in bewilderment had they witnessed several large men taking turns pressing a bathroom scale against a wall. They pushed as hard as they could to measure the force they were exerting. But they weren’t in a strength competition. Instead, they were helping a team of PPG engineers design a new system to prevent injuries, save time and lower costs.

The scale-pressers were among the Sylmar employees who routinely had to push racks of windshied parts up to 6,000 pounds, into an autoclave for laminating. And then they’d pull them back out. By having the employees press against a scale, an ergonomics team at Sylmar determined the amount of force — about 400 pounds, as it turned out — that the workers exerted collectively to perform those tasks. The team used the information to design a pneumatically powered automotive loading-unloading system, the first of which went into service last year and earned the Sylmar team first place in PPG’s companywide “Ergo Cup” competition.

“Automotive loading has been an ergonomically challenging operation for us for a long time and was identified as a high-risk for ergonomic injury based on risk assessments,” said Sam Gupta, lead industrial engineer at Sylmar and leader of the site’s ergonomics team.

“A lot of times the operator would have to go looking for people to help with the loading and unloading, and although we have been lucky that so far we’ve had only one minor injury, the old system was always an incident waiting to happen.”

In addition to the risk of hand, shoulder and back injuries from the strain of pushing the heavy racks, employees were exposed to possible burns when unloading the autoclave. The parts for armored military vehicles are heated to fuse multiple layers that make up the protective laminates.

The ergonomics team considered several solutions for a power-assisted system before choosing one that was effective and low cost in addition to being relatively simple. The system uses a large nylon Section wheel riding on an I-beam and driven by a small compressed air motor.

The team designed the system and built most of the first unit in-house at a cost of about $5,000. Two more units are under construction by a vendor, and each will serve two autoclaves that will be used primarily for aircraft parts.

“The operators love it and they can’t wait until the other units get here,” Gupta said.

Sylmar’s management team also loves the system. “It’s consistent with our goal of continually improving safety and efficiency, improving morale, and reducing workers’ compensation claims and related costs,” Gupta said. “Cost savings from this project — both in terms of labor and injury-cost avoidance — will pay back the investment in a little over six months.”

Gupta is exploring a commercialization deal with a manufacturer that could soon make this PPG-developed system available to other companies. In the meantime, the Sylmar team will head to Reno, Nev., to represent PPG in the International Ergo Cup competition.

“Ergonomics is the science of improving employee well-being and performance, and the Sylmar project is an excellent example of both,” said Allen Pride, senior safety and health specialist, and coordinator of the company’s Ergo Cup competition.

“The competition gives exposure to projects such as the one at Sylmar and encourages innovative ideas that make our workers safer, healthier and more productive.”

PPG’s Ergo Cup runneth over

In its fourth year in 2008, the PPG Ergo Cup competition drew a record 40 entries, representing all of PPG’s global regions for the first time.

“This competition continues to grow each year and so does the quality of the projects,” said Rich Poggiotti, manager of ergonomics and environment, health and safety training. “It’s estimated that this year’s Ergo Cup projects will save PPG more than $1.6 million annually in injury and production costs.”

In addition to the first-place team from Sylmar, Calif., other winning teams were:

- Stratford, England: Automotive refinish coatings plant earned second place for its project, “Capping of Plastic Containers After Filling.” The team designed a system comprising a pneumatic air wrench, bottle clamping device, and ergonomic work table to cap a variety of plastic bottles (each requiring individual torque settings). The solution eliminates the manual force, repetitive motion and awkward posture required to manually cap product containers.

- Lexington, Ala.: Fiber glass plant won third place for its “Direct Draw Package Extracting Tool.” The simple tool eliminates awkward posture associated with unloading fiber glass packages from winding machines. It also eliminates an acute safety risk and avoids the cost of automating the unloading operation.

- Bausar, Korea: Coatings plant received an honorable mention for its “4-Liter Can Lid Device.” An automated machine — rather than a person — applies and secures lids to paint containers. This reduces cycle time and eliminates the risk inherent in repetitive motions.

- Tullamarine, Australia: Coatings plant won for its “Decanting Elevator for Blending Vessels.” It used to take two employees to lift 330-pound, 55-gallon drums for emptying and cleaning. The Tullamarine team developed a small “elevator” (electrically activated air bags) that lifts a platform holding the large drums so they can be easily lifted and cleaned.

- Huntsville, Ala.: Aerospace facility named an honorable mention for its “Counter Sink Asst.” When mounting windshields to aircraft, hundreds of holes must be countersunk to ensure the hardware is flush. The Huntsville team designed a pneumatic tool to eliminate the need for employees to apply repeated pressure during the countersinking process.

Top: Frank Brookes, raisher, demonstrates the counter sink assist at Huntsville.

Above: Bob Hoey, maintenance supervisor, demonstrates use of the decanting elevator at Tullamarine.
Honda makes presence known in Ergo Cup: successful 2008 Conference draws more attendees, broadens topic coverage.

PPG Aerospace Transparencies in Huntsville, Ala., won in the category of team-driven workplace solution. The team's ergonomic solution, "Clamp Assist System," involved PPG technicians using spring clamps to assemble aircraft windows. Although not hazardous, it requires many employees to apply hundreds of clamps per day resulting in increased injury risks. The team developed a system to relieve ergonomic dangers without slowing the current process or creating new safety issues.
Lessons Learned

- Communication important; publicize via EHS directors, plant managers, manufacturing directors
- Help needed on calculating ROI for production and injuries
- Cost benefits to production actually exceed injury prevention benefits in most cases
- Regional awards were not effective for us
- Make clear rules of competition and expectations of winner
- A lot of work but a lot of benefits