PII NEWSLETTER

A Quarterly Publication of Performance Improvement International

Re-defining the quality standard by reducing errors to zero, in the Error-Free Zone®.

The Vision

PII's ultimate vision is a world where there are no preventable mishaps - and with Error-Free® Technology - the highest level of performance and quality can be achieved by eliminating all possible errors, in the Error-Free Zone®.

PII's Error-Free® Predictive Methodology and Software revolutionizes the quality standard, where companies can avoid all costly consequences of unexpected operating events, and individuals can rid their fears of unexpected injuries.

Error-Free® Tip

Did you know that being surrounded by plants can increase productivity by 15%?

Inside this Issue

Intro to Error-Free Inc.

"Doing the right things, right".

For three decades, Performance Improvement International has amassed more knowledge about human errors than any other company. We've learned why human errors occur, and more importantly, how human errors can be prevented.

Since 1987, Dr. Chong Chiu and Performance Improvement International started an ambitious R&D journey in pursuit of finding methods to stop all "preventable and consequential" errors from happening. The ultimate vision was to achieve an error free existence for every person, every organization, every company, and even for the entire world. Yes, this is an impressive, lofty goal – but we believe it IS possible and we believe we know how. Using an integrated database of over 80,000 data points and over 300 man-months of field observation on human error behavior, PII developed a unique and entirely new proactive, predictive, quantitative methodology to achieve injury-free, event-free, and error-free environments.

PII would like to announce the next evolution of performance improvement with the establishment of Error-Free Inc. Error-Free Inc., a subsidiary of Performance Improvement International, will continue to advance this new unique and

entirely re-engineered approach to reducing errors and events. In order to fulfill and advance PII's objectives and strategy and to constantly enhance today's products and services along with the development of new ones, Error-Free Inc. is comprised of four divisions, each with its own dedicated staff focused on providing the best product and service.

Error-Free Institute (EFI): Training and Certification

The Error-Free Institute strives to provide training courses and certify individuals and organizations as Error-Free®. Experienced trainers and consultants deliver burden-free, on-site customized training that can be easily accepted and assimilated by all levels of the workforce in any industry. Also in development, online eLearning courses so that Error-Free education can be accessible from anyone in the world.

Error-Free® Software

KALE™ was developed as an Error-Free® Intelligence Software that empowers engineering and maintenance staff to not only troubleshoot existing problems, but also to calculate error probability and mitigate risk through a patented predictive technology. This software enables and maintains the highest level of quality by eliminating all possible errors, guiding individuals and organizations into the Error-Free Zone®.

With KALE™ software's many interactive Error-Free® modules and the largest failure database in the world, PII is confident that KALE™ is a valuable and effective tool to prevent and diagnose failures.

KALE™ is an ever changing product, not only continually improving current applications in design and utility, but also committed to developing new applications that help guide individuals and organizations to attain and sustain Error-Free® status.

Error-Free® Consulting

Performance Improvement International and Error-Free Inc. has the largest, most comprehensive database of more than 7,000 O&P and equipment failure modes. Servicing hundreds of leading companies to solve complex cases, more than 5,000 to date, PII and Error-Free Inc. experts consult at enterprises large and small, bringing knowledge to bear on the industry's most challenging situations.

With this experience and knowledge, Error-Free Inc. offers four types of consulting services with the utmost expertise:

1. Human Performance Improvement

Assess organizational human performance with predictive quality technology. We predict, confirm and solve human performance problems in the speediest, and most cost effective way.

2. Equipment Performance Improvement

Reduce critical component failure rates through prediction, prevention, detection, and correction of their likely failure modes.

KALE™ 1.8.5 Release Update!

KALE™ is an Error-Free® Intelligence Software that empowers engineering and maintenance staff to not only troubleshoot existing problems, but also to calculate error probability and mitigate risk through a patented predictive technology. This software will help achieve the highest level of quality by eliminating all possible errors, guiding each company into the Error-Free Zone®.

What's new in KALE™:

- Remote Verification NEW Module

- Notification Center for report sharing and remote verification

- Human Performance and Equipment Performance Data Bank Advanced Search Features

- Server upgrades for a faster user experience

- Company and user report statistics

3. Event Investigation

Investigate complex and significant events in the most efficient way with a 100% success rate.

4. Expert Witness

Provide expert witness services related to the areas of human error and equipment failure.

Error-Free® R&D

This division is solely focused on the advancement of our technology and data, fueling and empowering the other three divisions with the latest research and event data.

As a subsidiary of Performance Improvement International, Error-Free Inc. is here to help establish an Error-Free Zone® within a division, a group, or operation, or throughout the entire enterprise. PII and Error-Free Inc. continue to be uniquely qualified to address even the most difficult challenges and committed to stay at the forefront of the industry's most innovative, cost-effective approaches to error and event reduction.

With these four divisions of Error-Free Inc., each with its own suite of products and services, we hope that every individual and every organization can achieve the highest level of performance and quality.

More on Error-Free Inc.

Please visit our NEW website at ErrorFree.com.

PII at Chinese Nuclear Power Energy Company

Chinese Nuclear Power Energy Company (CNPEC) partners with PII to roll out 7 training sessions to the majority of CNPEC commission test personnel. This first quarter of 2016 has been a busy start for PII in China, training and certifying over 400 CNPEC employees as Error-Free® Commission Test Professional by the end of April.

Commission Test Managers and Personnel. Daya Bay site, CNPEC.

Each 6-day training session contains 4 training courses: (1) Error-Free® Commission Test Engineer, (2) Error-Free® Commission Test Supervisor, (3) Error-Free® LOP Management, and (4) Error-Free® Job Observation. In order to ensure that every engineer receive the best quality, despite their constant, heavy workload, PII instructors traveled to each site available, spending the most time at Yang Jiang site, Fang Cheng Gang site, Daya Bay site and Taishan site. In addition to training all commission test engineers, all managers also attended training at Daya Bay.

CNPEC has committed to making their company Error-Free® by offering Error-Free® training to everyone, from an engineer to a manager. PII was very pleased and impressed by CNPEC's commitment evident in the 99% outstanding attendance rate. Given each employee's very demanding responsibilities and busy schedule, designating a full 6 days to complete the training session is not an easy task. CNPEC commission test personnel and managers are dedicated to be role models to the rest of their organization by implementing Error-Free® culture and leading CNPEC into the Error-Free Zone®.

Training sessions thus far have received tremendous, positive feedback. The feedback score ranges from 1 to 5, 3 being average and 5 being perfect. PII trainers have scored a near perfect score of 4.9 so far and have received a 100% satisfaction rate.

Some topics covered in training include:

•   Why humans make errors

•   How to prevent inattention-to-detail errors

•   How to use Error-Free® skills and techniques to better personal performance and work efficiency

•   How to detect single point vulnerabilities and high-risk situations

After identifying possible errors and error-prone situations, PII instructors help provide students with solutions to mitigate them. Reaffirmed by student feedback, this is a huge asset for students as a take away from training, giving them guidance and confidence to immediately implement Error-Free® improvements. All tools provided have been specifically customized for the CNPEC commission test organization.

Training courses are set up in a workshop style, so in addition to lectures, many activities are planned for attendees to practice being Error-Free®. An example of an activity taught in these training sessions is to train personnel and managers how to conduct an Error-Free® Pre-Job Brief. To kick off each training day, instructors lead attendees to exercise Error-Free® mindfulness by using critical thinking to aim for success and prevent possible high-risk situations. Instructors also use videos as illustrating points.

To date, PII instructors have completed 70% of training at CNPEC, with the commitment of fulfilling the remainder by end of the second quarter in 2016. After the 7 training session commitment, a total of 700 people from CNPEC will be Error-Free® certified.

We are pleased to hear that students loved interacting with PII instructors in class, praising them to be highly knowledgeable, engaging, and even, humorous. Students also appreciated the instructors for their instant feedback and patience to clarify points of confusion and willingness to go more in depth to help the students learn. Also, by learning through participation in group discussions, self-reflections, and case studies, attendees found it easier to connect new knowledge learned with personal experience. We hear they are eager to combine newly taught Error-Free® tools to their daily work and after training, attendees immediately found that being Error-Free® simply makes life easier! Ultimately, the most common response received is that students feel that the opportunity for Error-Free® certification brought them a new perspective for not only professional development, but also personal growth.

Q1 2016 Highlights

PII at BWXT

BWX Technologies, Inc. (BWXT) partners with PII for a series of the following courses:

- Error-Free® Safety Management for Safety Professionals
- Error-Free® Procedure Design

PII forms an Oversight Committee

PII forms a Senior Nuclear Safety Oversight Board to review processes at Ningde site.

PII at Exelon

PII continues their partnership with Exelon for Error-Free® equipment troubleshooting at Dresden Station.

PII at a Major Energy Distribution Company

PII asked to provide consulting services to review a project involving the construction of a 100-mile power line.

PII Publishes Error-Free® Book

PII publishes the first edition of a 400-page book, Error-Free®, given to partnering clients with a commitment to Error-Free® technology, methodology, and implementation.

ErrorFree.com

Check out our new and improved website at ErrorFree.com!

What CNPEC is saying about PII

"This training course completely opens my mind in new ways."

"It gives me great skills to be free of error, not just to reduce my error rate."

"Comparing with the human performance stuff taught to US and international industries, this is by far more actionable."

"This is a WOW training for six consecutive days, packed with real-life data and personable interactions."

"Great interaction in class, examples were easily understood to relate to the content."

"Instructor took time to make sure all knowledge was clearly stated, as well as used a lot of reviewing techniques to make sure we constantly remember what was taught."

"Great demonstration of KALE to illustrate data points."

"Methodology is useful for me to implement in field."

"HOPS is taught in great detail, very useful."

"Team mix, accountability and observation are well taught."

"Participating in discussions and group activities made learning effective."
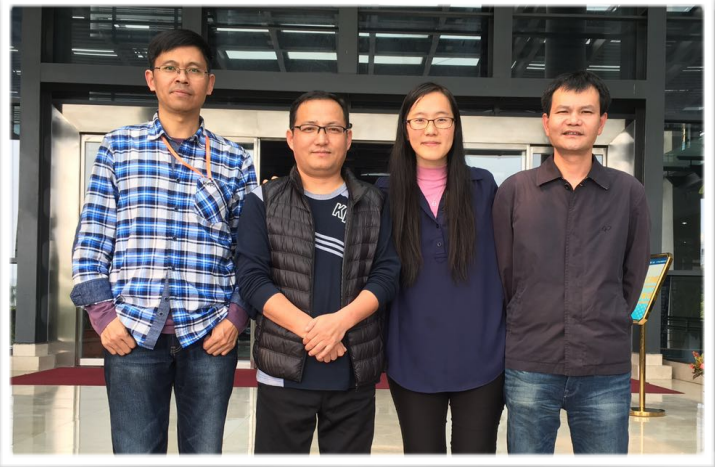
Gallery

Training Classroom, Yiang Jiang site, CNPEC.

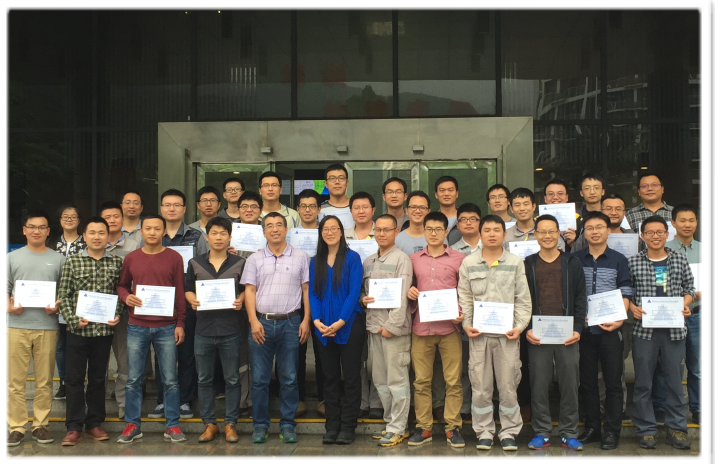Yiang Jiang site, CNPEC.

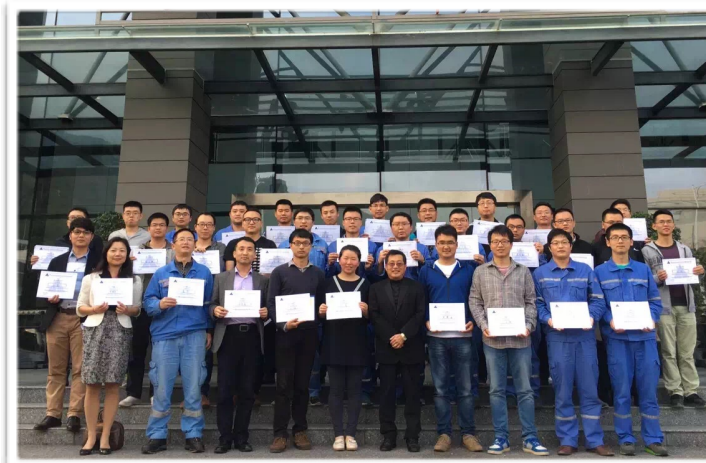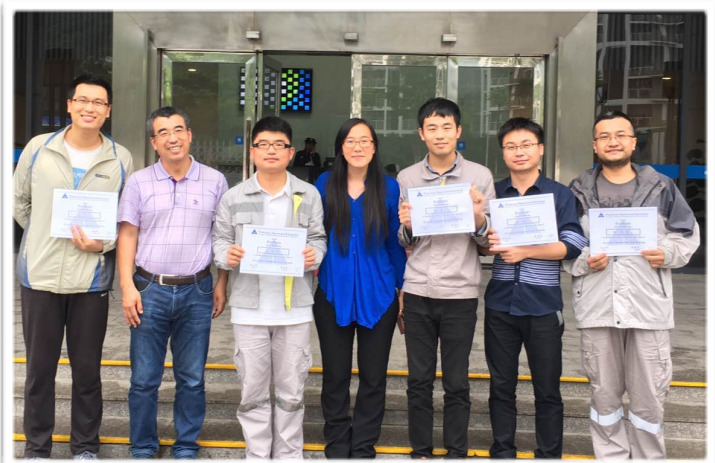Fang Cheng Gang site, CNPEC.

Daya Bay site, CNPEC.

Training Class, Daya Bay site, CNPEC.

Taishan site, CNPEC.

Training Class, Yiang Jiang site, CNPEC.

Taishan site, CNPEC.

KALE™ Remote Verification Module

Independent verification (or independent check) is a critical LOP to ensure that critical steps (single-point-vulnerabilities) in action-by-action procedures are performed correctly. The sum of the error rate of each critical step determines the overall failure rate of the action-by-action procedure.

Further, independent verification is used to ensure that occupational safety related LOPs (such as voltage check of de-energized equipment, pressure check of the system before disassembly a valve in the system, equipment ID check of a de-energized equipment, etc.) are also performed correctly.
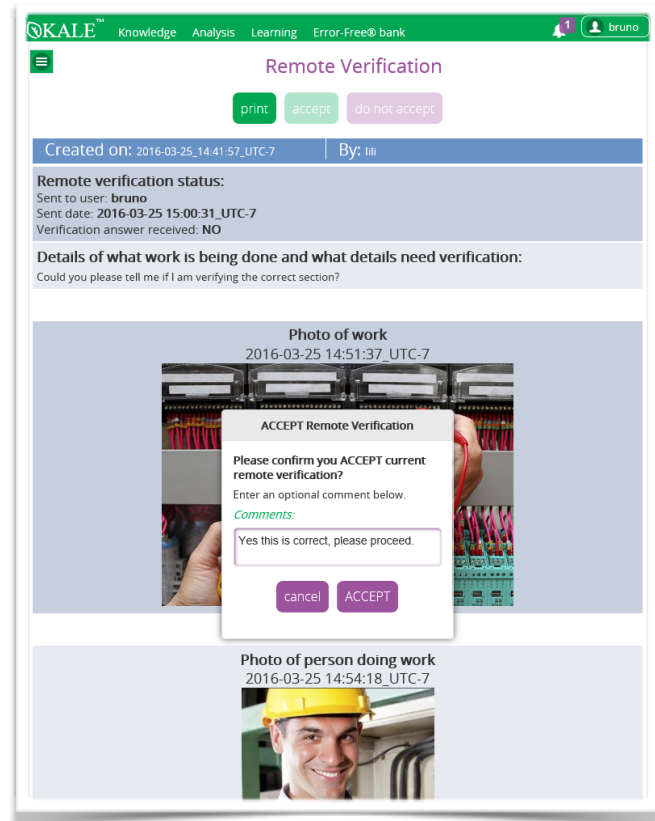
Generally, performing an independent verification occupies about 20%-30% of the work force and about 20% of the procedural execution time due to waiting on the independent verifier. This can be a very burdensome process.

Independent verification can fail because of two reasons. (1) Blind trust of the verifier in the doer, thus performing the verification without independency. (2) The other is distraction of the verifier, often related to non-job related conversations with the doer or attempting to multitask during verification.

To reduce the burden and error rate of independent verification, we have developed an independent verification feature in KALE™, called the Remote Verification module.

The remote verification module eliminates the need and time wasted spent on coordination between the verifier and the doer, as well as physical travel to a site to verify the job. Instead, a photo of the performed action (such as the voltage reading of an de-energized system) and the doer are sent via KALE™ to the verifier for review and approval. Regardless of location or schedule, this verification process can be carried out instantly. The verifier, whom can be located anywhere, reviews the job performed and either approves or rejects the performance. With this instant feedback and approval, the doer can proceed to the next action without delay.

The entire process of verification from sending the request, the approval/rejection, and feedback and receipt is documented and can be viewed in the notification center and report center to track and record the progress of a job.

Remote verification can save up to 20% of work effort and a 20% reduction of execution time of a typical job:

- Elimination of the time and effort spent on coordination between the doer and the verifier to schedule time and travel to a job site

- Elimination of field time for the verifier

- Elimination of time wasted while the doer waits for the verifier

Moreover, separating the doers from the verifiers eliminates the effects of blind trust and distraction, thus reducing the error rate of independent verification.

Overview of KALE™ Error-Free® Intelligence Software

KALE™ is an Error-Free® Intelligence Software that empowers engineering and maintenance staff to not only troubleshoot existing problems, but also to calculate error probability and mitigate risk through a patented predictive technology. This software will enable and maintain the highest level of quality by eliminating all possible errors, guiding an organization into the Error-Free Zone®.

With KALE™ software's many interactive Error-Free® modules and the largest failure database in the world, Error-Free Inc. is confident that KALE™ is a valuable and effective tool to prevent and diagnose failures. With every Error-Free® training and adoption of KALE™ in regular use, an organization can achieve the highest level of performance and quality.

KALE™ is a cloud-based software, accessible from anywhere as long as internet is available.

For more information, please visit ErrorFree.com or contact us at info@errorfree.com.

Contact Us

Performance Improvement International, LLC
462 Stevens Ave, Suite 306
Solana Beach, CA 92075
(760) 722-0202
info@piionline.com