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**THE ALCHEMY OF METTLE:
FACTORS IN STS CERTIFICATION EFFECTIVENESS**

Background

Companies using the Safety Trained Supervisor (STS) certification have produced significant improvements in safety performance as measured by injury rates, workers' compensation premiums, productivity, and other metrics. When implemented by managers and supervisors of workgroups at various levels, the STS certification also provides a leading indicator for safety.

What is the STS certification able to do that other tools used to achieve excellence in safety performance cannot? This alchemy of mettle that transforms an average workgroup leader into an STS-certified workgroup leader is as indefinable as it is powerful. What IS clear is that the multiplier or catalytic effect that the STS certification process exerts is real. As the familiar saying goes, "The whole is greater than the sum of its parts." The whole of STS certification brings together a number of varying factors often incorporated into safety programs that individually do not achieve the same results.

The STS certification program meets recognized standards for certification quality. It is not a certification awarded simply because someone completes a prescribed course. It includes demonstrated knowledge by examination.

Additional research and analysis are needed to fully understand the resulting changes the STS certification achieves in the reported safety results. The purpose of this review is to outline the likely factors that are involved.

The Factors

Some of the likely factors brought together through STS certification include:

- General safety training
- Measurement of safety knowledge
- Team building/teamwork

- Peer pressure
- Enhanced leadership
- Top management commitment to safety
- Workgroup involvement in safety
- Workgroup empowerment
- Understanding where to get assistance
- Effective safety communication
- Individual and company incentives and recognition
- Self-esteem and pride
- Providing a leading indicator for safety
- Contributing to a safety culture
- Continuity of safety knowledge
- Ability to compete when certification is specified in contracts

Understanding the Factors

This section describes each factor listed above and briefly explains what each factor is and how it relates to the STS certification.

General safety training. At every level, all employees need safety training to do their jobs. Safety training is also essential for workgroup leaders to understand safety protocols and how they work within and among workgroups. The STS certification requires candidates to have a minimum of 30 hours of safety and health training.

Measurement of safety knowledge. Most training programs do not include a comprehensive examination to assess whether its learning objectives are achieved. The STS certification includes a 100-item, multiple-choice examination. The examination includes an established passing score to show that candidates demonstrate an acceptable level of mastery of the subject matter. The examination is derived from studies of what managers and supervisors need to know in order to perform key safety tasks.

Team building/teamwork. Because there is a requirement to achieve a minimum score on the STS certification examination, several people preparing for the examination may work together to ensure that they are adequately prepared. They often form study groups that meet during work, over lunch or after work. Such study activity likely builds relationships and fosters positive work-related communication.

Peer pressure. Because there is a need to pass an examination, there are often various forms of peer pressure at work encouraging co-workers to achieve the certification. Co-workers may inquire if others have passed the examination and achieved the certification or if they have completed the training required to qualify for the certification. They may offer assistance in preparing. They may offer congratulations when the examination is passed or the certification has been awarded. Some employers mark STS achievement with ceremonies or awards the use of stickers on hard hats and others means that develop peer pressure.

Enhanced leadership. Achieving the certification provides a public way to demonstrate to the workgroup and to other leaders that one has mastered the safety knowledge essential for workgroup leaders.

Top management commitment to safety. Use of the STS certification demonstrates top management commitment to safety. In part, this results from the fact that the STS certification requires use of multiple factors for successful certification to occur. Because there are fees and costs involved in the training, operation, examinations, tracking of participation, and retention of the certification, top management of a company must establish a budget to participate in the certification program and in the activities surrounding it. In most cases, this expenditure provides significant returns on investment. Also, because the certification offers a leading indicator of safety performance, top management has a simple way to measure safety participation among business units, departments, and workgroups. No matter how the certification is implemented, its use is likely to be visible to—and receive support from—top management.

Workgroup involvement in safety. The training and certification allow workgroup leaders to extend knowledge and implementation of safety practices throughout the workgroups. Those holding the STS certification can initiate safety talks or conduct safety training to earn credit toward recertification while improving the safety knowledge and performance of the workgroup.

Workgroup empowerment. As workgroup leaders learn more about hazard recognition, evaluation, and control, workgroups are better able to identify safety problems and to remedy them on their own, often without the involvement of supporting organizations or full-time safety specialists. The workgroup is likely to control its own work and productivity better and be less likely to pass safety issues elsewhere in the organization—potentially delaying solutions.

Understanding where to get assistance. Training in safety and its protocols as covered in the STS certification helps workgroups know where to get assistance for safety matters that exceed their knowledge, skills or ability to resolve. By calling upon special support only when needed, the workgroup is seen as being more effective.

Effective safety communication. When the STS certification is implemented by an organization, the likely result is better communication on safety matters within and among workgroups and throughout the organization. All workgroup leaders are brought to the same minimum level of competency in safety and are measured in the same way.

Individual and company incentives and recognition. Safety programs have relied upon many kinds of recognition and incentives to encourage safety performance. The STS certification offers new forms of recognition and incentives. Here are some examples:

- One company publishes pictures of workgroup leaders who have achieved the STS certification on its website.
- One organization requires those managers eligible for a company car to achieve the STS certification before having a car assigned to them.
- One company recognizes the achievement of STS certification by awarding a gold watch with the company logo on the face and the certification date engraved on the back.
- One company lists individuals holding the STS certification in company publications.
- One company requires the STS certification as a qualification for workgroup leaders to be accepted into a training program intended to prepare them for more advanced job responsibility.

Self-esteem and pride. Individuals who have met a company standard for safety competency benefit from increased self-esteem for having achieved that standard. Their workgroups may experience increased pride in their work because its leaders have met that unambiguous company standard for safety. The frequent review of the safety standards while studying for the STS examination

leads to a paradigm shift, helping to drive change within a company and positively impacting the safety of its related industry.

Providing a leading indicator for safety. Injury rates and claims are trailing indicators that have a time lag after applying one or more safety improvement factors. Conversely, those individuals awarded STS certification help impact injury rates and claims before the fact, thus serving as a leading indicator for safety—easily measured at all levels by management.

Contributing to a safety culture. Safety culture has many definitions. In general, it infers some commitment to safety within and among workgroups and regular and effective communication about safety issues and their resolution. It may also include other aspects so that safety becomes part of the way work itself is planned and executed. Because the STS certification provides a public means for assessing participation in a company safety strategy, it strengthens the commitment of workgroup leaders to make safety a critical factor of work planning and execution.

Continuity of safety knowledge. The STS certification requires recertification every five years through reexamination or other activities. Certificants can earn credit for completing additional safety training, teaching safety to others or conducting workgroup safety talks. They can also recertify by retaking and passing an STS examination. They must continue to meet minimum requirements to stay current in safety matters—fulfilling their leadership responsibility to their workgroups.

Ability to compete when certification is specified in contracts. In an attempt to control losses, more and more owners (e.g., Department of Energy, Corps of Engineers, Naval Facility Command, etc.) specify CCHST certificants to oversee safety and health programs.

Benefits to the Employer

In addition to their employees, employers receive benefits from the STS certification process, including:

- Improved business/safety culture
- Reduced lost time injury/illness rates
- Reduced workers' compensation premiums
- Productivity increases
- More timely resolution of safety problems
- Reduced dependence on full-time safety specialists for worksite safety problems

Improved business/safety culture. Nearly every company using the STS certification has reported that the program has benefitted their safety culture by increasing safety knowledge and participation at the workgroup level.

Reduced lost time injury/illness rates. Major employers have explained that implementation of the STS certification and the surrounding training and recertification has resulted in lower injury/illness rates.

Reduced workers' compensation premiums. Employers with large reductions in injury/illness rates have experienced rate modifications, leading to reductions in workers' compensation insurance costs. When injury/illness rates fall, companies become more competitive and add more money to the bottom line.

Productivity increases. Some employers have documented productivity increases through both formal assessments and informal means. One plant measured a 15% productivity increase concurrent with STS implementation. Another employer with many field units reported that a radio operator supporting the field units received such a reduced number of calls after the workgroup leaders achieved STS certification that the position was nearly eliminated.

More timely resolution of safety problems. Employers report that workgroups with leaders holding the STS certification are more effective at detecting hazards and safety problems early and initiating actions to get them resolved more quickly.

Reduced dependence on full-time safety specialists for worksite safety problems. Employers have reported that workgroups with STS-certified leaders are often able to identify and resolve safety problems on their own without needing to contact the safety office or a safety professional for assistance. Employers have also reported that knowledge gained from the preparation for the STS certification examination—especially knowledge of safe work procedures, hazard recognition, and proper corrective action—means that work is organized confidently and safely before the job starts.

Conclusion

Why should companies use, and individuals achieve, the STS certification? After earning STS certification, a certificant has also earned the right to say four things—the first two from competence and the final two from confidence:

- 1. I know my safety-related responsibilities.*
- 2. Management realizes that I know my safety-related responsibilities.*
- 3. I am willing AND able to carry out my safety-related responsibilities.*
- 4. Management supports me AND expects me to carry out my safety-related responsibilities.*

And, in the world of safety, when you can say these four things, you've said it all.

The Safety Trained Supervisor (STS) Certification

The STS certification began in 1993. It was developed by the Council on Certification of Health, Environmental and Safety Technologists (CCHHEST) at the request of the construction industry. The program was expanded for general industry in 2003 and for the petrochemical industry in 2004. The STS certification holds accreditation from the National Commission for Certifying Agencies (www.noca.org/ncca).

The main users of the STS certification are employers committed to moving safety deeper into their organizational structure by getting workgroup leaders trained and certified in their safety responsibility. Most employers plan for use of the program by ensuring that key employees have the necessary training and qualifications before submitting applications for certification.

After meeting supervisory and safety training requirements, candidates can choose any of the STS examinations to qualify for the certification.

After achieving certification, those achieving the STS certification must meet certification maintenance requirements through additional safety training, by teaching safety to others or by leading safety topics with their workgroups.

For additional details about the STS certification visit the CCHHEST website at www.cchest.org or contact the CCHHEST office.