

# Quality info

**Volume 18, Issue 14**
*Fortnightly, Free soft copy*
**15<sup>th</sup> October 2016**

**D. L. Shah Trust - ASSE HSE India 2016 Award**
**Program Announcement**


Dear HSE Professionals in India,

As you know, ASSE Chapters in India are gearing up for its Third Professional Development Conference and Exposition, 2017 HSE India PDC, which is scheduled to take place in Hyderabad on February 16-18, 2017 ([www.asseindiapdc.org](http://www.asseindiapdc.org)). Our first such conference in May 2014 in Chennai and the second in Mumbai in October 2015, were very successful and we hope that this upcoming conference will be even bigger and better building on the success of the previous events

In order to promote and enhance the Occupational Safety and Health profession and the professionals in India, ASSE has partnered with D. L. Shah Trust and instituted national-level country-wide awards on HSE, consisting of three equal awards in these fields:

- Occupational Safety and Health
- Environment
- Sustainability

Three recipients, (HSE professionals) working in India, who are making significant contributions in Occupational Safety and Health; Environment; and Sustainability (OSH/E/S), will each receive an honorarium in Indian Rupees and an engraved statuette or a plaque. The inaugural presentation of these awards will take place at 2017 HSE India PDC to be held in Hyderabad on February 16-18, 2017

Purpose, Eligibility and judging criteria are very much available at award guide. However, for nomination and Endorsement forms please refer attachments, which are also cited on the websites of the HSE India PDC 2016 and also on the websites of all the four chapters in India. **Last Date** for nomination / submission of documents is **on or before October 31<sup>st</sup> 2016** by email to: [patelj2002@yahoo.com](mailto:patelj2002@yahoo.com) and [yduinn@asse.org](mailto:yduinn@asse.org)

**Event Calendar**

August 22, 2016	Announcement of awards
October 31, 2016	Last Date of nomination
November 15, 2016	Verify education and credentials including work location in India. And petitions will be sent out to the committee members for evaluation
December 10, 2016	Results of the Committee members deliberations shared with the Committee Chair
December 20, 2016	The Committee will hold a conference call meeting to finalize decisions to conclude three finalists
December 22, 2016	The Committee Chair will present award decisions to the DL Shah Trust & ASSE
December 27, 2016	The Committee Chair to send out Formal notification inviting to receive the awards at the HSE India 2016 PDC, Hyderabad
February 16-18, 2017	Award presentation at the PDC in Hyderabad

Best regards,

**Hari K. Taneja, Chair**  
D. L. Shah Trust

**Jitu C Patel, CPEA, Co-Chair**  
Awards & Honors Committee

**Dennis Hudson, Ex. Dr**  
ASSE

Encl : 1. Awards Guide

2. Endorsement-Form-DLShahTrustASSE HSE India

3. Nomination-Form-DLShahTrustASSE HSE India Award .

## **The Relationship Between Reliability Goals and Statistical Confidence** **From the desired state to a reflection of sample risk during measurement**

We establish reliability goals and measure reliability performance. Goals and measures can be related; however, they're not the same, and neither do they serve the same purpose.

Recently, we have seen a few statements that seem to confuse the role of statistical confidence when establishing a goal. Thus, we would like to relate how we think about the difference between goals and statistical confidence, along with how they are related.

### **The purpose of a reliability goal**

Setting any goal provides tangible direction or a meaningful target for a team. A reliability goal is a balance of:

- What the customer expects
- What is technically possible
- An expression of business objectives

A reliability goal establishes the probability that a function will successfully operate over a specific duration, given a specific use and environment. For example, my smart phone will make and receive calls in Maharashtra with a 99-percent probability of successful operation over two years.

The purpose of a reliability goal is to define to the engineering team, marketing team, and customers the item's expected or desired reliability performance. It's not the actual reliability performance; it's what we would like to happen. It's a goal, an objective, a target, and its purpose is to provide guidance, alignment, and requirements for creating a new product or system.

### **The purpose of statistical confidence**

Statistical confidence is a statement of the acceptable risk we are willing to accept. The risk is based on the ability of a specific sample to accurately represent the entire population.

The chance that a single sample's reliability performance will be the same as the population's average reliability performance is very low. As we measure more samples from the population, the ability of the sample to estimate the population's performance increases. There's some statistical law about this phenomenon.

Sometimes a policy is set concerning the amount of risk we are willing to accept when using a sample to create an estimate. Other times we determine the statistical confidence based on how many samples we have evaluated.

The purpose of statistical confidence is to manage the risk that the sample will provide misleading information.

The goal is often to minimize sample-size-related risk within the constraints that exist in limiting sample sizes.

## The relationship between goals and confidence

Reliability goals are a desired state of performance. Statistical confidence reflects the risk that a sample-based result is close to being true.

Stating a reliability goal that includes a confidence in effect defines the desired sample size to measure the reliability performance. That is not a bad relationship. Yet stating we want a reliability goal of 90-percent reliability over two years with 90-percent confidence, is not, in my mind, a goal.

We would like the actual reliability of the item to have a 90-percent chance of surviving two years. We may want to minimize sample risk by measuring the reliability performance with a 90-percent confidence.

The estimate from a sample of the actual reliability performance will always be an estimate. The statistical confidence provides a figure of risk indicating that the results we are viewing actually reflect the real and unknown reliability performance.

If we use a one-sided lower bound for the confidence, we are looking for evidence that the reliability is at least above the lower-bound value. We could set the threshold for the lower bound at the goal value. With 90-percent confidence, we are accepting the risk that the actual population reliability is less than 90 percent, and that the sample results will end with a value higher than the goal; thus, we believe the product's reliability performance is better than actual.

The relationship between a goal and confidence is that they both provide information about the unknown actual reliability performance. A goal is the desired state; confidence is a reflection of sample risk during measurement.

**Readers may please note that D. L. Shah Trust brings out two e-journals on a fortnightly basis. These are mailed to those persons or institutions who are desirous of receiving them: These two e-journals are:**

- 1. Safety Info**
- 2. Quality Info**

**If you or your friends or colleagues wish to receive these journals, you may send us an e-mail requesting for the same. There is no charge for these journals. Our e-mail address is:**

**[dlshahtrust@yahoo.co.in](mailto:dlshahtrust@yahoo.co.in) or [haritaneja@hotmail.com](mailto:haritaneja@hotmail.com) or [dlshahtrust@gmail.com](mailto:dlshahtrust@gmail.com)**

**You can also access these journals on our website: [www.dlshahtrust.org](http://www.dlshahtrust.org)**

Sponsored by: **D. L. Shah Trust**  
**For Applied Science, Technology, Arts & Philosophy**  
Mumbai. email: [dlshahtrust@yahoo.co.in](mailto:dlshahtrust@yahoo.co.in)  
Ph: 022-22838890

Edited by Hari Taneja, Mumbai and  
Published by R. Ramamurthy, Bangalore  
560084.  
email: [dlshahtrust@yahoo.co.in](mailto:dlshahtrust@yahoo.co.in)