Hazard Desensitization

December, 2nd 2022 by C Stonelake BEng (Hons), CEng MIET

Introduction

Introduction focused on the electrical industry, and why person's seemingly put them self's and others at risk, weather this is by not following the correct standards or procedures, not wearing the correct PPE etc. All control measures put in place to protect you the worker engaging in a Hazardous activity.

This article is an initial overview and insight, my aim is to develop this into a research Thesis and to understand the underlying Human route cause factors, only once we truly know the problem can we aim to fix the problem.

I have come up with the term 'Hazard Desensitization' to best describe the phenomena…….

Definition

'In environments where hazards are abundant or significant hazards are present, this can lead to persons becoming accustomed to high-risk hazards, a dulling/numbing effect or accustomed which gives inability to not recognise other hazard which maybe not be so obvious to see; such as electricity - 'Hazard Desensitization''.

Example Scenario

Example Scenario – Where your sense's maybe subject to hazards such as Molten metal, loud noises, high volume site HGV traffic, hazardous/noisy processes to which you would be in close proximity to such as a steel works, oil refinery's etc. If electrical personnel were subject to all these external high hazard stimuli on route to a substation, and then they step into an electrical substation again a very hazardous environment if not following the correct controls or procedures.

From the environment they just left to this quiet, non-busy electrical substation this can give a false sense of security to individuals, whom then may not truly evaluate the task in hand or identify hazards because they have been desensitized from earlier on-route stimuli and will perform a task with significant hazard or risk, without the right procedures/controls or PPE in place which leads to the phenomena known as; Hazard Desensitization.

Ask yourself, how many times have you seen an electrical task within a substation like switching, isolation or proving dead and the right controls or procedures haven't been met, I sure have…. But why? The people I'm talking about are trained competent people, so why this lack of judgement or down play to the risk they are taking when they should and do know better?

These are questions which plague me in my day-to-day job, and personal experiences.

When in an industrial environment with lots of thing's simultaneously happening around us, it's only biology that our brains start to ignore these familiar hazards regardless of how big or small, the simple fact is that we become accustomed to our surroundings, and without consistent re-fresher training, talks and awareness campaigns we will continue to fall foul of this trend.

Hazard Desensitization, cannot just be attributed to environmental/local surrounding factors, it can also be biological & just being human. What happen when an individual whom maybe have been working a 12-plus hour shift and is exhausted should they still be expected to carry out the same high-risk tasks? (There are plenty of documented electrical accidents that a primary factor was the person's state of exhaustion).

Stress induced Hazard Desensitization, we have all been there at some point in time, on a job time restraints are against us, your supervisor/manager are on your back, production can't start until you have done your part……. Sound familiar? The next though process is then well I will just skip those time-consuming safety processes, I have done this hundreds of times before! it's safe they just want me to do all this safety malarkey because it's a safety gone mad World!

Ask yourself, how many safety bulletins, articles, safety intervention days have you read and been involved in and some poor soul has either lost their life or been seriously injured with life altering injuries, and the route cause was majorly part due because safety controls or procedures weren't followed and hazards not appropriately identified.

What I'm trying to get across from this is that we can't escape the high-octane environments we work in with all their distractions, but we need to take time when moving from one hazardous area to another and before commencing with task's to stop, breath, take 5 minutes and reacclimatise to your new surroundings.

Please don't be the statistical reason why your company has its next safety intervention day!!

Thank You, the reader!

Thank You, for taking the time to read this short article but hopefully it has given you some things to think about and how you perceive your surroundings moving forward.

What's Next?

So, as I briefly mentioned at the beginning my aim is to move this into a formal research paper, to get the answer/answers to the under-pinning question 'Why?' ……. And for the science fiction fans reading this I can assure you the answer will not be 42!

Below I have out lined a very brief overview of what the research paper Thesis will be looking into;

Thesis

'To critically look at the correlation around high hazard sites, and or general unsafe environments where things maybe slipping into the realm of 'standardised deviation', and how this effects people within that environment and to what effect 'Hazard Desensitization' has on those persons and cognitive ability to assess hazards and risk'.

The Author

Hi, I'm Chris a Chartered Electrical Engineer encroaching on two decades within the electrical engineering sector, predominantly specialising in large scale Low voltage power distribution design works & HV/LV Power system analysis and Network system compliance standards. Starting my career as an electrical installation apprentice and working my way through various roles, and further education all experiences and challenges that have helped me to where I am today.

I want to share my experience and my view of how I see things, in the hope that this helps others in their day to day working life, and the belief that the more we shear the more we can learn from each other.