Safety Climate Analysis at Power Station

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ABSTRACT

Safety is one of the main important issues for all workers in the industrial sector. Safety contains many subjects/concepts such as safety culture and safety climate. Those two concepts are considered as one of the main concern across the industrial sector today. For both concepts still there is no universal definition but we can find many corresponding definitions for these concepts. As simple definition is that the safety culture is “Making sure people are not harmed is how we do things here”. The safety climate can be defined as “Safety climate is a summary concept describing the safety ethic in an organization or workplace which is reflected in employees’ beliefs about safety”.

The present work evaluate the safety climate as it is a reflection of the safety culture and it is considered as a fast tool to evaluate safety culture with minimum resources required. The evaluation is done for two private power companies, which is Al Ezzel power plant. As well as another Al Dur power and water production plant. Both plants are located in Bahrain and under the management of Al Ezzel Operation and Maintenance (O&M) Company. The evaluation was done through questionnaires including all the staff (around 200). The questionnaire is designed based on literature review and previous questionnaires. In order to validate and support the questionnaire, interviews were conducted. Analysis has been done by different statistical methods using Microsoft excel software.

The results of safety climate evaluation showed that the level of safety for Al Ezzel O&M is above average (3.67 of 5). In addition, the safety level for Al Ezzel site (3.93) is higher than Al Dur site (3.49). By studying the safety level for different departments, four groups were identified, which are: 1) Al Ezzel daytime workers, 2) Al Ezzel shift workers, 3) Al Dur daytime workers, and 4) Al Dur shift workers. The level of safety for daytime workers was higher than shift workers. Also, the study reveal some factors that affect the safety climate level, such as, the nature of the work, the experience and the number of attended safety workshops.

Recommendations are provided such as communicating safety culture definition and reevaluating safety culture periodically.