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UNIVERSITI TEKNOLOGI MALAYSIA

OPENCOURSEWARE

CONSTRUCTION SAFETY: 10

SAFETY MANAGEMENT: IMPLEMENTATION, REVIEW AND AUDIT

SHASSIC ASSESSMENT TOOLS FOR SAFETY

SBC 3363

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Introduction and Background

- The **construction industry is unique** among other industries as the activities of construction often take place in the outdoor under conditions not conducive for safety and health. Workers in the construction sites have to face constant change in the **nature of work**, the location of work and the mix of workers.
- Most of the people tend to relate construction industry by dangerous working environment and high risk as compared to others. **The reputation of construction industry** is relying on the expertise of implementation and management of safety and also how it can be completed safely and meet the consumer's requirements (Mills, 2001; Loosemore *et al.* 2003; Root, 2005; Goetsch, 2005).



Accident, Safety and Culture

- Nowadays, **quality and safety** are two main issues in construction industry. ISO 9000 has been promoted in construction industry to ensure the quality of construction work done by a contractor.
- Apart from quality, **a safe working environment is very necessary** to put aside the current industry pictures of high risks in construction works. Construction safety is a standard of quality that is indicated in the contract and required by the client (Alves Dias and Coble, 1996).



Accident, Safety and Culture

- Revolution and changes in **safety system management** has become as a mandate in practicing safety action that can be managed interminable (Low and Sua, 2000).
- The **worldwide construction industry is still practicing work process by labour intensive** where based on wet trades. This factor contributes to the low quality of work due to the workers are lack of expertise and training and also exposed to the accident easily (CIDB, 2004).



Strategies

- Nowadays, several efforts had been initiated by government to prevent occupational safety and health problems in construction site. Various strategies have been planned and included in Building Construction Master Plan.
- It contains enforcement, standardization, training and promotion to monitor occupational safety and health performance at all level of construction.



Strategies

- This background eventually has inspired and gave the Construction Industry Development Board (CIDB) Malaysia the initiative to introduce Safety and Health Assessment System in Construction (SHASSIC) with the main objective to assess and evaluate safety and health performance in construction projects.
- It is believed that in the industry, there is a need to have a proactive safety assessment tool to predict future safety problems and measure the cost of injuries and even improve safety performance on construction sites.



Objective & Methodology

Objective

The objective is to illustrate the elements of SHASSIC as a safety and health assessment tool

Methodology

This paper is done by using a thorough Documentary Review on SHASSIC

SHASSIC Overview

- SHASSIC is an **independent method to assess and evaluate the safety and health performance** of contractor in construction works by Construction Technical Committee on Safety and Health in Construction with the assistance of Construction Industry Development Board, (CIDB) Malaysia. Basically, the SHASSIC is drafted with the purpose to **benchmark the level of safety and health performance of construction industry** in Malaysia.
- Nevertheless, it is a standard of safety and health assessment system for contractors in construction industry based on the approved standards. Eventually contractors are evaluated progressively based on based on the safety and health practice (CIDB, 2008).

Scope of SHASSIC

- This standard sets out the safety and health management and practices of contractor for various aspects of the construction work activities. SHASSIC covers **3 (three) main components** of assessment such as document check, workplace inspection and employees interview and covering components such as OSH policy, OSH organization, HIRARC, OSH training and promotion, machinery and equipment management, materials management, emergency preparedness, accident investigation and reporting and records management and performance monitoring.

Scope of SHASSIC

- Base on SHASSIC document, this assessment contain of **three components** such as document check, workplace inspection and employees interview.
- SHASSIC functions based on reference to Occupational Safety and Health Act and Regulation 1994, Factory and Machinery Act, 1967, Factories and Machinerics (Safety, Health and Welfare) Regulation, 1970 (Revised 1988), OHSAS 18001 : 2007 and MS 1722 (Part 1) : 2005

SHASSIC assessment will be carried out based on the phases as shown in Figure 1.

Generally, SHASSIC assessment will be carried out based on document checks, workplace instruction, and employee's interview. Start off with document checks phase, the assessor will initiate checking of construction occupational safety and health record keeping.

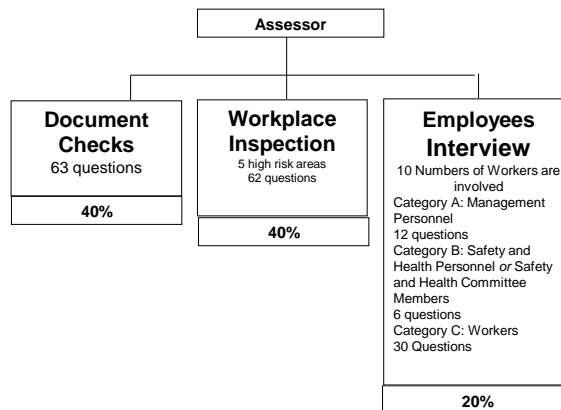


Figure 1: SHASSIC Assessment

SHASSIC Assessment

- The proportion for safety and health performance are allocated in accordance to these components, **Document Check** and **Workplace Inspection** (40%) and **Employees interview** (20%). All the questionnaire will be answer by tick one of the column contain C for comply, NA for not applicable and NC for not comply. Basic formulas for respective component weightage are:
 - Mark scored Document Check = Total no of 'C' x 40%
 - Mark scored Workplace inspection = Total no of 'C' x 40%
 - Mark scored Employees interview = Total no of 'C' x 20%

Total mark from three components shall justify the ranking stars awarded ranges from 1 star to 5 stars as shown in Figure 2.

SHASSIC (Scored Marks)	Star(s) Awarded	Justification
85 to 100	★ ★ ★ ★ ★	Potential and significant workplace high risks / hazards are managed and documented.
70 to 84	★ ★ ★ ★	Potential and significant workplace high risks / hazards are managed and documented but there are few low risks work activities are neglected.
55 to 69	★ ★ ★	Potential and significant workplace high risks / hazards are managed and documented but there are few medium risks work activities are neglected.
40 to 54	★ ★	Potential and significant workplace high risks / hazards are managed but not documented
39 and less	★	Workplace potential and significant risks / hazards poorly managed and not documented properly

Figure 2: Ranking of Stars for Total Marks

HIRARC

- SHASSIC contain HIRARC which stands for “Hazard Identification, Risk Assessment and Risk Control”. Required by Department of Occupational Safety and Health (DOSH)
- Purposes of HIRARC are : Identify all the factors that may cause harm to employees and others (the hazards), Consider what the chances are of that harm actually be falling anyone in the circumstances of a particular case and the possible severity that could come from it (the risks), and Enable employers to plan, introduce and monitor preventive measures to ensure that the risks are adequately controlled at all times.

SHASSIC Elements

SHASSIC incorporate critical elements for assessments. Although these elements may vary and different in each phase, however the essence of the elements in SHASSIC can be best summarized as listed in Table 1.

No	Elements in SHASSIC
1	Machineries registration
2	Personnel Protective Equipment
3	Risk Assessment and Hazard Identification
4	Colour code of signages
5	Traffic Management
6	Safety Policy
7	Safety and Health Organization Structure
8	Training and Promotion
9	Machinery and equipment Management
10	Material Safety and Health Data Sheet
11	Emergency Response Plan
12	Accident Investigation and Reporting System
13	Safety Working Environment
14	Proper health care

Table 1: Summary of elements in SHASSIC

Conclusion

- SHASSIC has three components of data gathering i.e. document check, workplace inspection and employees interview. The essence of the elements in SHASSIC accounts to almost 14 elements. Eventually SHASSIC has taken into account fundamental elements which deal with workers, worksites, policies, and even machineries.
- Optimistically, SHASSIC can function as an effective safety and health performance tool, which has been the corner stone for safety management in every vital company levels and fulfilling the industry's needs in having a proactive safety performance measurement tool.



**SAFETY
FIRST**

**THE SAFE WAY IS
THE BEST WAY**

THANK YOU

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