

Application of the Work Environment Improvement Methodology - Occupational Health and Safety Standards

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Our research solved the problem of the lack of reliability of the company of the central refineries (Daura Refinery) of the occupational health and safety management system in accordance with the specification. (ISO 45001: 2018). This has created a performance gap between the requirements of the standard and the actual reality of the refinery. This has negatively affected performance improvement measures. The research focused on providing an appropriate framework for controlling risks, reducing injuries and accidents and improving the working environment. In order to obtain data and information, interviews were conducted with departmental and laboratory managers as well as access to records. The checklist has been relied upon to achieve the research objectives. A number of statistical analysis methods have been used, most notably the arithmetical mean, weights, percentages and diagrams. The results of the research and analysis show that the occupational health and safety management system compared to the requirements of the standard (ISO 45001: 2018). In all its main and subsidiary paragraphs, the average of conformity is around (3.22), the percentage of conformity is around (41%) and the gap is around (59%), they are certified in the application of the requirements of the standard (45001: 2018).

Key words: *Occupational, safety, health, management System, occupational.*

Introduction

The risk to human beings has increased significantly, especially the industrial organizations because of the emergence and use of new technology in all areas and the complexity of life, where the conditions vary from the normal lifestyle in terms of temperature and humidity and purity of the atmosphere of the environment because of the sources of risk and pollutants such as manufacturing And the presence of many unusual substances, we find them toxic and suffocating and other types of occupational diseases, which vary in form, size and duration of impact.

The issue of the health and safety of workers is the main challenge facing organizations, both service and industrial. Occupational health and safety is a protective shield that provides protection for the three components of production - manpower, machinery, equipment and materials - because creating a safe working environment from the hazards of different industries and upgrading the efficiency of the means of prevention will inevitably help reduce injuries and occupational diseases and protect workers from accidents on their performance. The research included four topics (the first topic includes the methodology of research), (the second section includes the theoretical side), (the third section includes the practical side) (the fourth section includes conclusions and recommendations). The research consisted of four topics (the first topic includes the research methodology), (the second topic includes the theoretical side), (the third topic includes the practical side), (The fourth topic contains the conclusions and recommendations).

Methodology:

Problem of Research

The problem of research is the suffering of the Central Refineries Company (Daura Refinery) of the lack of interest in the subject of health and safety of professional workers, despite the fact that the Human resource is important in the production process. This weakness in the attention caused the occurrence of injuries and accidents in many work because of the lack of eligibility of the environment of the refinery for the workers and this has reflected negatively on the productivity of workers. In order to create an appropriate working environment, the Occupational Health and Safety Standard (ISO 45001: 2018), which is the scientific basis for facing the problems that accompany the continuous industrial development and aims to control the work environment and minimize accidents and injuries, should be applied. The problem can be raised through the following questions: The extent to which occupational health and safety measures are implemented at Daura refinery. The following inquiries arise from this question:

1. What is the extent of improvement in the work environment through the application of the standard (ISO 45001: 2012)?
2. How did the liquidator take care to implement the requirements of the standard system (ISO 45001: 2018)?
3. Is there a suitable environment in the refinery to obtain the international standard (ISO 45001: 2018)?
4. What is the size of the gap between the realities of the refinery and the requirements of the standard (ISO 45001: 2018) and what are the reasons?

The Consideration of Research

The significance of research is highlighted by the importance of the research institution, which is considered the backbone of the oil industry in Baghdad.

1. Research is an attempt to employ the positive results of the occupational health and safety system in order to provide the appropriate working environment in the refinery
2. Preserving the life of the workers in the research sample by developing appropriate treatments to bridge the gap between the actual reality of the applied occupational health and safety system and the international standard requirements of ISO 45001: 2018.
3. Pay attention to the lives of workers and their requirements to be keen on the assets of the refinery and increase their loyalty to their organization.
4. Defining the basic requirements for achieving the framework according to the international standard (ISO 45001: 2018).
5. To guide the Dora Hospital to the importance of increasing the awareness and awareness of the management and employees of concepts related to occupational health and safety.

Objectives of Research

The research aims at achieving the basic objective of applying the requirements of the Occupational Health and Safety Management System (ISO 45001: 2018) and the following sub-objectives:

1. Guide the liquidator to the appropriate solutions to improve the working environment.
2. Diagnosis and guidance of the liquidator to the strengths and weaknesses in the application of health and safety requirements by identifying the gaps in the documentation and application of requirements.
3. Diagnosis of the gap between the reality of the actual refinery and the requirements of the standard.
4. Obtain a suitable working environment for the life of the workers in the refinery for the purpose of increasing their productivity.

The Community of Research

The Company at the Daura refinery, which was founded in 1953 and began production in (1955), and is characterized by geographical location important, as it occupies an estimated area (1.25 million / m²), and is located in the south of the province of Baghdad on the western side of the Tigris River, and is drained from the center of the province is about (4 / km). The refinery is made when it was founded from the head of the liquidation and treatment unit White oil and gasoline, as well as complementary facilities such as water filter, electric power plant and warehouse generation, pumping station oil products to warehouses in Baghdad.

Statistics and Tools

Search adopted a checklist based on the international standard requirements ((ISO 45001: 2018 with the aim gap analysis and diagnosis of their causes, have been identified relative weights of those requirements, and the use of Likert heptachlor weight scale to measure the extent of matching the actual implementation of those requirements by assigning a specific weight of each paragraph of paragraphs of the scale. the table shows (1) the paragraphs of the scale and weights ranging from full implementation and documentation (weighing six degrees) and the lack of implementation and documentation (weight of zero). using the arithmetic mean and percentages, as well as diagrams to illustrate the size of the improvement made in the work environment.

Table 1: Checklist scale

The sequence	Paragraph of measurement	Weight of measurement
1	Entirely executed, fully documented	6
2	Fully implemented, partially documented	5
3	Totally implemented, undocumented	4
4	Partially implemented, fully documented	3
5	Partially implemented, partly documented	2
6	Partially implemented, undocumented	1
7	Not implemented, not documented	0

Source: Vagias, Wade M. ,(2006), . Likert-type scale ., clemson international institute for tourism , department of parks , recreation and tourism management , clemson university ,USA, p:2.

The weighted arithmetic mean, the percentage of the extent of conformity and the size of the gap were calculated according to the following laws:

Total (weights * repetition .1) The weighted arithmetic mean= Total duplicates
Total (weights * repetition .2) Percentage of conformity range= Total Duplicates * 6 (Highest Weight in (Scale)

Conceptual Framework

Occupational Health and Safety Concept

Concept of Occupational Health and Safety (OSH) is composed of two parts. There is a difference between the terms Occupational Health and Occupational Safety. Occupational Safety refers to the provision of preventive and precautionary services to protect and prevent individuals from hazards to work resulting from the exercise of work to protect facilities and production elements the other (Bisio, 2018). Occupational health refers to the physical, mental and psychological state of a person. A health person is a person free of diseases, injuries or problems that weaken his productive activity (Mathis & Jackson, 2003). The most important definitions of occupational health and safety (Shannon & Norman, 2009) is the early discovery and prevention of workplace problems before they become actual incidents as they have known (Mansour & A'mir, 2014) is a philosophy that identifies and eliminates workplace hazards by providing an environment for everyone as well as the significant role it plays in reducing the cost of Organization by reducing accidents and associated diseases (Sallis, 2014; Sahbat et al., 2018)

The Importance of Health and Safety Management

The lack of attention of organizations to occupational health and safety will have a negative impact on the organization at all levels as well as additional financial costs due to accidents, injuries and chronic diseases that may occur in the work environment (Benjamin, 2008). For example, there are approximately 6.2 million accidents Non-fatal and work-related illness as in the United States is an average of 8.4 incidents per 100 workers per full-time period each year and highlights the importance of HSE management by achieving (Gheorghe, 2017):

1. Protection of workers: by reducing the risk of accidents and occupational diseases and increasing the awareness of employees and their responsibilities towards the risks of health and safety.
2. Provide the appropriate work system through the provision of equipment and equipment and the use of regulations on injuries or accidents of work and work diseases
3. Reducing costs as direct and indirect economic costs, injuries and serious diseases can be accompanied by the time lost from work and the workers' caliber that affect the productivity of workers and the efficiency of their performance
4. To support the human relations between the administration and the two parties by creating humane working relations between the two processes which increases the

worker's efficiency to sense the responsibility of the administration and its concern for its safety.

5. meet the legal requirements and impose penalties in the event of violation of the laws of health and safety

Objectives of the Health and Safety Department

The implementation of the occupational health and safety system aims to reduce occupational health and safety risks by reducing accidents, improving productivity, safety and health of employees and recognizing that occupational health and safety is an effective tool for occupational hazards. It is a Metranita group in developing and implementing policy and objectives and achieving them for risk management (Kadasah ,2015).

Industrial Accidents and Injuries Industrial Accidents

especially those that result in injuries or serious damage, are a problem that is becoming more serious with the increase in industrial development, which calls for the importance of applying the principles of occupational safety and health, especially in developing countries with limited experience in industry and labor (Mohammed, Flayyih, Mohammed & Abbood, 2019). As the provision of a safe working environment from the hazards of different industries and raise the level of efficiency and means of prevention will undoubtedly reduce injuries and lead to the protection of workers from accidents and then reduce the number of work hours lost due to absence due to illness or injury, as well as reduce the costs of treatment and rehabilitation and compensation, Which will reflect on improving and increasing the level of production and pushing the economic strength of the state. (Singer, 2006), there are a large number of occupational injuries and occupational accidents occurring all over the world each year. According to the International Labor Organization (ILO), some 200,000 workers lose their lives every year due to occupational accidents at the workplace, and 120 million workers are injured or ill because of their hazardous jobs. Occupational injuries cause workers economic costs. The diseases are resulted from inadequate working conditions with a 4% increase in production costs. This figure also includes medical expenses and insurance expenses for workers, But The accident is defined as an unexpected and unplanned event due to unsafe working conditions or unsafe workings which may or may not cause injuries.

As for the injury, the worker's injury is a coin called a professional injury, which causes an amputation or fracture and results from an accident related to work or exposure to an accident due to work such as machinery and machinery used or because of the individual itself (Desler, 2009) The professional incident (any incident that harms a worker or a group of them

according to their positions during or because of the work, whatever the cause of the accident or his place in the work) is known (Roger, 2004).

Results

Presentation and Analysis of the Results of the Field Work

This course aims to evaluate the requirements of the occupational health and safety management system in the Daura refinery according to the standard (ISO 45001: 2018), which includes a presentation and analysis of the data collected from the Daura refinery according to compliance and authentication of each of the requirements of the standard (ISO 45001: 2018). Checklists were adopted to clarify the results of occupational health and safety activities in Daura refinery according to the standard (45001: 2018).

1. The field.
2. Normative references.
3. Terms and definitions.
4. The context of the organization.

Table 2: Shows the results of the analysis of the organization context checklist: Table (2)
Organization context requirement

Requirements	Not outlet Notarized (0)	Partially outlet (1) Notarized	Partially outlet (2) Partially documented	Partially outlet (3) Fully documented	Fully outlet (4) Notarized	Fully outlet (5) Partially documented	Fully outlet (6) Fully documented	Weighted mean	Number of paragraphs	percentage	Gap
Understanding the organization and its context	0	2	0	0	0	0	0	2	1	0.33	0.67

Understand the needs and expectations of workers and other parties	$\frac{0}{0}$	$\frac{1}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{4}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	2.5	2	0.41	0.59
The scope of the Occupational Health and Safety Administration	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{4}{2}$	$\frac{6}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	2.5	4	0.41	0.59
Occupational Health and Safety System	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{9}{3}$	$\frac{4}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	3.2	4	0.53	0.47

Understanding and context of the organization

ISO 4501: 2018 defined the requirement of understanding the organization through a set of paragraphs as in Table (2). The requirement of (1.4) recorded the extent of application and documentation in the Daura refinery, a rate of (2) (67%) because of the partial application and lack of documentation in the identification of internal and external issues in the system of the above, as well as the partial application and non-documentation in the appointment of internal issues including management changes, individuals etc. .

Understanding the Needs and Expectations of Employees and Other Parties

The results of the requirement (2.4) showed in the Daura refinery, a rate of (2.5) degrees out of (6) degrees and the percentage of matching to (0.41) from the previous and a gap of (0.59) (4.3) (Occupational Health and Safety Management) because of the limited documentation of the needs and requirements of workers and other interested parties (poor documentation of planned activities), as well as poor identification of occupational health and safety.

Occupational Health and Safety Management: Standard (ISO 4501: 2018) The results of the examination for the application and documentation of the requirement (4.3) in the Doura

refinery were determined at a rate of (2.5) degrees out of (6) A non-conformance gap (0.59) indicates a lack of documentation and layout of the range.

Occupational Health and Safety System: The examination list recorded the results of the application and documentation of the requirement (4.4) in the Daura refinery, a rate of (3.2) and a percentage of matching (0.53), indicating a gap of non-conformance (0.47) Process for the establishment and implementation of occupational health and safety management system in accordance with the requirements of the standard in accordance with the standard (ISO 4501: 2018). In addition to the lack of periodic symposia for approval of continuous improvement initiatives according to the mentioned specifications was found.

Leadership: Table (3) shows the results of the analysis of the driving requirement check list as shown below:

Table 3: Results of the checklist related to the driving requirement

Requirement	Not outlet Notarized (0)	Partially outlet (1) Notarized	Partially outlet (2) Partially documented	Partially outlet (3) Fully documented	Fully outlet (4) Notarized	Fully outlet (5) Partially documented	Fully outlet (6) Fully documented	Number of paragraphs	percentage	Weighted mean	Gap
Leadership and commitment	$\frac{0}{0}$	$\frac{2}{2}$	$\frac{8}{4}$	$\frac{12}{4}$	$\frac{12}{3}$	$\frac{0}{0}$	$\frac{0}{0}$	13	$\frac{0.4}{3}$	$\frac{2.6}{6}$	$\frac{0.5}{6}$
Occupational Health and Safety Policy	$\frac{0}{0}$	$\frac{1}{1}$	$\frac{0}{0}$	$\frac{9}{3}$	$\frac{4}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	6	$\frac{0.3}{8}$	$\frac{2.3}{3}$	$\frac{0.6}{2}$
Organizing roles and powers	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{6}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	2	$\frac{0.5}{0}$	3	$\frac{0.5}{0}$
Consultation and employee engagement	$\frac{0}{1}$	$\frac{0}{0}$	$\frac{4}{2}$	$\frac{3}{1}$	$\frac{4}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	5	$\frac{0.3}{6}$	$\frac{2.2}{2}$	$\frac{0.6}{4}$

Leadership and commitment: in the Daura refinery, a rate of (2.6) degrees out of (6) and a corresponding percentage (0.43), which indicates a gap of non-conformity by (0.56), due to the lack of The existence of written goals and advertised standards of health and safety professional for the purpose of maintaining the safety of workers and protecting them from work accidents

Policy: The examination list recorded the results of the applicability and documentation of the requirement (2.5) at a rate of (2.3) and a score of (0.38), indicating a gap of (0.62), which resulted from the absence of a written and declared policy for health and safety, Non-compliance and regulatory requirements.

The organization of roles and powers: The standard (ISO 4501: 2018) specifies this requirement with two paragraphs recorded at a rate of (3) out of (6) degrees and a corresponding percentage (0.50) indicating a gap of non-conformity by (0.50) Responsibilities and powers related to health and occupational safety within the job description of the liquidator.

Consultation and employee participation: The results of the examination of this requirement showed a weighted average of (2.2) and a corresponding percentage (0.36) with a discrepancy gap of 0.64 due to lack of commitment of the liquidator to ensure continuous improvement and weakness of the mechanisms of consultation and participation with workers with weak requirements Training needs and training evaluation.

Planning

Table (4) shows the results of the analysis of the planning requirement check list as shown below:

Table 4: Results of the inspection list related to the planning requirement

6.1 Actions to address risks and opportunities	Not outlet Notarized (0)	Partially outlet (1) Notarized	Partially outlet (2) Partially documented	Partially outlet (3) Fully documented	Fully outlet (4) Notarized	Fully outlet (5) Partially documented	Fully outlet (6) Fully documented	Number of paragraphs	percentage	Weighted mean	Gap
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6.1.1 General Actions to address risks and opportunities	$\frac{0}{0}$	$\frac{2}{2}$	$\frac{6}{3}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	5	$\frac{0.2}{6}$	$\frac{1.}{6}$	$\frac{0.7}{4}$
6.1.2 Hazard identification and assessment of risks and opportunities	$\frac{0}{0}$	$\frac{1}{1}$	$\frac{4}{2}$	$\frac{9}{3}$	$\frac{8}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	8	$\frac{0.4}{5}$	$\frac{2.}{7}$	$\frac{0.5}{5}$
6.1.3 Determination of legal requirements and other requirements	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{4}{2}$	$\frac{6}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	4	$\frac{0.3}{8}$	$\frac{2.}{3}$	$\frac{0.6}{2}$
6.1.4 Planning action	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{2}{1}$	$\frac{9}{3}$	$\frac{12}{3}$	$\frac{0}{0}$	$\frac{0}{0}$	7	$\frac{0.5}{3}$	$\frac{3.}{2}$	$\frac{0.4}{7}$
6.2 OH&S objectives and planning to achieve them 6.2.1 OH&S objectives	$\frac{0}{0}$	$\frac{2}{1}$	$\frac{6}{3}$	$\frac{12}{4}$	$\frac{8}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	10	$\frac{0.4}{6}$	$\frac{2.}{8}$	$\frac{0.5}{4}$
6.2.2 Planning to achieve OH&S objectives	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{2}{1}$	$\frac{12}{4}$	$\frac{8}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	7	$\frac{0.5}{1}$	$\frac{3.}{1}$	$\frac{0.4}{9}$

Procedures for dealing with risks and opportunities: Standard (ISO 45001: 2018) specifies the requirement of procedures for dealing with risks and opportunities (6.1) through a set of requirements totaling 24 paragraphs. The examination list recorded the results of application and documentation of the requirement through (6.1.1, 6.1.2, 6.1.3, 6.1.4) in the Doura refinery, weighted averages ranged from the highest average of (6.1.4) where it reached (3.2) with a corresponding percentage of (0.53) (47) and the lowest average (6.1 for dealing with risks and opportunities out of (6) with a corresponding percentage (0.26). This indicates a gap of non-conformity by 0.74 due to the adoption of a remedial strategy to overcome weaknesses through exploiting for the opportunities available, and not to focus on avoiding the threats associated with the authentication mechanism required according to the mentioned standard.

Occupational health and safety goals: This requirement appears through a set of paragraphs recorded in its entirety (17) paragraphs by (10) paragraphs for (6.2.1) with a weighted average of (2.8) a matching ratio of (0.46) and a non-conforming gap of (0.54) and (7) paragraphs For (6.2.2) an average of (3.1) degrees out of (6) degrees with a matching ratio (0.51), which indicates a gap of non-conformity at a rate of (0.49), resulting from the lack of documentation of occupational health and safety goals and the process of calculating it is not subject to quantitative indicators Set a time limit for reaching the occupational health and safety goals.

The Support

Table No. (5) Shows the results of the analysis of the operating requirement checklist, as shown below:

Table 5: Results of the checklist for the support requirement

Requirement 7 Support	Not outlet Notarized (0)	Partially outlet (1) Notarized	Partially outlet (2) Partially documented	Partially outlet (3) Fully documented	Fully outlet (4) Notarized	Fully outlet (5) Partially documented	Fully outlet (6) Fully documented	The number of paragraphs	percentage	Weighted mean	Gap
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7.1 Resources Actions to address risks and opportunities	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{2}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	1	0.3 3	2	0.6 7
7.2 Competence	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{4}{2}$	$\frac{6}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	4	0.4 1	2. 5	0.5 9
7.3 Awareness	$\frac{0}{0}$	$\frac{2}{2}$	$\frac{4}{2}$	$\frac{6}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	6	0.3 3	2	0.6 7
7.4 Communication 7.4.1 General	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{8}{4}$	$\frac{9}{3}$	$\frac{12}{3}$	$\frac{5}{1}$	$\frac{0}{0}$	11	0.4 3	2. 6	0.5 7
7.4.2 Internal communication	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{2}{1}$	$\frac{3}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	2	0.4 1	2. 5	0.5 9
7.4.3 External communication	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{2}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	1	0.3 3	2	0.6 7
7.5 Documented information 7.5.1 General	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{2}{1}$	$\frac{3}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	2	0.4 1	2. 5	0.5 9
7.5.2 Creating and updating	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{2}{1}$	$\frac{6}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	3	0.4 3	2, 6	0.5 7
7.5.3 Control of documented information	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{4}{2}$	$\frac{9}{3}$	$\frac{4}{1}$	$\frac{5}{1}$	$\frac{0}{0}$	7	0.5 1	3. 1	0.4 9

Resources: The specification (ISO 45001: 2018) determined the resource requirement through one paragraph clarified in Table (7), as the checklist recorded the results of the application and documentation of the requirement (7.1) in the course refinery, an average of (2) degrees out of (6) degrees and a corresponding percentage (0.33), which indicates a gap of non-conformity at a rate of (0.67). This gap was crystallized due to the lack of full documentation for the establishment, implementation, maintenance and improvement of the occupational health and safety system, in addition to the lack of approval by the liquidator of sufficient documented plans to ensure the provision of the resources required to implement the system, as well as not adopting a systemic entry in Planning the resource requirements to contribute to the implementation of the standardization system, improving its effectiveness, and trying to reduce it To the specific restrictions to provide the necessary resources.

Skill: The skill requirement is determined by (4) paragraphs, as the checklist recorded the results of the extent of application and documentation of this requirement in the course refinery, a weighted average of (2.5) degrees out of (6) degrees with a matching ratio (0.41), which indicates a gap for non-conformity with a percentage (0.59) Although there is a system for assessing individuals annually, but it lacks some of the key performance evaluation criteria for individuals, as well as a lack of understanding of some training needs annually in light of training plans provided by the various implementing agencies for training, therefore some paragraphs are still far from the requirements of the standard, which is reflected in the rate The application then led to a decrease in the percentage of matching.

Awareness: The awareness requirement includes (6) items, and the checklist showed the results of the extent of application and documentation of this requirement in the course refinery, a weighted average of (2) degrees out of (6) degrees with a matching ratio (0.33), which indicates a gap of non-conformity with a rate of (0.67) , Due to the weak awareness among workers of the requirements of the occupational health and safety system and its legal and organizational requirements and their role in meeting them, which results in the inability to determine the effects of inconsistency with the requirements of standardization and employee awareness.

Telecommunications: The communication requirement includes (7.4), (14) paragraphs that appear in table (7), distributed on the requirement (7.4.1) by (11) paragraphs, a weighted average score of (2.6) and a matching rate of (0.43) and a non-conforming gap of (0.57) And the requirement (7.4.2) by (2) paragraphs recorded a weighted average of (2.5) degrees out of (6) degrees and with a matching ratio (0.41), which indicates a gap of non-conformity at a rate of (0.59) and the last requirement within (7.2) is (7.4.3) In one paragraph, I recorded a weighted mean of (2) with an identical percentage of (0.33) and a non-conforming gap of (0.67), and this is due to the liquidator's reliance on traditional methods of communication and the failure to document the information needed by the standard system (ISO 4501: 2018)

Add the J The limited performance of interested third parties when developing the communication process.

Information Documentation: The communication requirement includes (7.5), (12) paragraphs that appear in table (7), distributed on the requirement (7.5.1) by two paragraphs that recorded a weighted average of (2.5), with a matching rate of (0.41) and a non-conforming gap of (0.59) and the requirement (7.5.2) by (3) paragraphs recorded a weighted average of (2.6) degrees out of (6) degrees and with a matching ratio (0.43), which indicates a gap of non-conformity at a rate of (0.57) and the last requirement within (7.5) is (7.5). 3) B (7) paragraphs recorded a weighted average of (3.1), with a corresponding percentage of (0.51) and a non-conforming gap of (0.49). The lag of the electronic archiving system, which aims to create an easy and simplified environment for the preservation and classification of books, official letters and documents , And there is no classification of information on the basis of its importance and confidentiality.

Employment

Table No. (6) Shows the results of the analysis of the operating requirement checklist, as shown below:

Table 6: Results of the checklist related to the operating requirement

Requirement	Not outlet Notarized (0)	Partially outlet (1) Notarized	Partially outlet (2) Partially documented	Partially outlet (3) Fully documented	Fully outlet (4) Notarized	Fully outlet (5) Partially documented	Fully outlet (6) Fully documented	Number of paragraphs	percentage	Weighted mean	Gap
8.1 Operational planning and control 8.1.1 General	0 0	0 0	6 3	6 2	0 0	0 0	0 0	5	0 · 4 0	2 · 4	0.60

8.1.2 Eliminating hazards and reducing OH&S risks	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{4}{2}$	$\frac{6}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	6	$\frac{0}{50}$	3	0.50
8.1.3 Management of change	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{4}{2}$	$\frac{9}{3}$	$\frac{8}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	9	$\frac{0}{41}$	2	0.59
8.1.4 Procurement	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{4}{2}$	$\frac{9}{3}$	$\frac{12}{3}$	$\frac{0}{0}$	$\frac{0}{0}$	8	$\frac{0}{51}$	3	0.49
8.2 Emergency preparedness and response	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{6}{3}$	$\frac{12}{4}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	7	$\frac{0}{41}$	2	0.59

Operating planning and Tuning: The requirement of operations includes (8.1), (28) paragraphs distributed over the requirement (8.1.1) by (5) paragraphs recorded a weighted average of (2.4) and with a corresponding rate of (0.40) and a non-conforming gap of (0.60) and requirement (8.1.2) By (6) paragraphs, a weighted average score of (3) degrees out of (6) degrees and a matching ratio of (0.50), indicating a gap of non-conformity of (0.50) added to the requirement (8.1.3) b (9) Paragraphs recorded a weighted average of (2.5), with a matching percentage of (0.41), a non-conforming gap of (0.59) and the last requirement within (8.1) is (8.1.4) where he recorded a weighted average of (3.1) and eight paragraphs with an identical rate of (0.51) and a gap Non-conformity amounted to (0.49), and all this is due to the control segment p The operations required to meet the requirements of occupational health and safety and rely on internal control only, which are the responsibility of internal control and auditing of the filtered departments all of them in addition to the absence of alternative plans to deal with emergency or exceptional conditions, as well as poor maintenance of documented information to an appropriate extent.

Emergency Preparedness and Response

The checklist recorded the results of the extent of application and documentation of the requirement (2.8) in the course refinery with a weighted average of (2.5) degrees out of (6) degrees resulting from (7) paragraphs included in the requirement, where it recorded a matching ratio (0.41), which indicates a gap for non-conformity with a percentage (0.59) Resulting from the failure to apply and document the process of analyzing the impact on

occupational health and safety work, i.e. the lack of a historical documentation of the effects that may lead to the failure of occupational health and safety activities.

Performance evaluation: Table (7) shows the results of the analysis of the performance evaluation checklist requirement, as shown below

Table 7: Results of the checklist related to the performance evaluation requirement

Performance evaluation	Not outlet Notarized (0)	Partially outlet (1) Notarized	Partially outlet (2) Partially documented	Partially outlet (3) Fully documented	Fully outlet (4) Notarized	Fully outlet (5) Partially documented	Fully outlet (6) Fully documented	Number of paragraphs	percentage	Weighted mean	Gap
9.1 Monitoring, measurement, analysis and performance evaluation	$\frac{0}{0}$	$\frac{2}{2}$	$\frac{6}{3}$	$\frac{6}{2}$	$\frac{12}{3}$	$\frac{0}{0}$	$\frac{0}{0}$	10	0.43	2.6	0.57
9.1.2 Evaluation of compliance	$\frac{0}{0}$	$\frac{1}{1}$	$\frac{4}{2}$	$\frac{6}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	5	0.36	2.2	0.64
9.2 Internal audit	$\frac{0}{0}$	$\frac{2}{2}$	$\frac{4}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	4	0.25	1.5	0.75
9.2.1 General	$\frac{0}{0}$	$\frac{2}{2}$	$\frac{4}{2}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	4	0.25	1.5	0.75
9.2.2 Internal audit programme	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{4}{2}$	$\frac{9}{3}$	$\frac{4}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	6	0.46	2.8	0.44
9.3 Management review	$\frac{0}{0}$	$\frac{4}{4}$	$\frac{14}{7}$	$\frac{21}{7}$	$\frac{12}{3}$	$\frac{5}{1}$	$\frac{6}{1}$	23	0.45	2.7	0.55

Monitoring, Measurement, Analysis and Evaluation: The specifications specify (ISO 45001: 2018) the requirements for monitoring, measurement, analysis and evaluation through two requirements, namely (9.1.1) and (9.1.2), so the former recorded the sub-requirement average weighted (2.6) including There are ten paragraphs, and therefore the matching ratio came (0.43), and therefore the nonconformity gap became (0.57), while the second sub-requirement that included (5) resulted in a weighted average of 2.2 and a matching ratio of (0.36), while a gap Non-conformity is equal to (0.64) in the session refinery due to the lack of

application and documentation of the process of evaluating the performance and effectiveness of the OSH system that caused the lack of I see documented this work. In addition, there is no documented procedure that clarifies the monitoring information related to the expectations of the beneficiaries and indicates the rate of the liquidator meeting its requirements. There is no internal audit program for the course filter. Also, there is no monitoring and measurement of other operations inside the refinery, such as training, operation, planning, performance evaluation and product quality control. The liquidator has procedures for inspecting and inspecting the materials from the moment they are received until delivery to the beneficiary, according to specific requirements and in three stages (upon receipt, during production, and the final product) while keeping some records prepared for this purpose.

Internal audit: The internal audit requirement includes (9.2), (10) items distributed to the requirement (9.2.1) by (4) paragraphs recorded a weighted average of (1.5), which is the lowest average score recorded by a requirement for the specification that is the subject of research among all other requirements that resulted in The lowest matching rate was (0.25) and the largest non-conforming gap was (0.75) and the requirement (9.2.2) by (6) items recorded a weighted average of (2.8) degrees out of (6) degrees and with a matching ratio of (0.46), which indicates The existence of a gap for non-conformity amounted to (0.44), and the reason for this increase in the size of the gap is due to the lack of a special audit of the occupational health and safety system due to the lack of a plan and program for internal auditing, but only Adoption on the periodic audit of administrative orders. In addition to the liquidator's being subject to the audit of the administrative, financial and governmental bodies (the Financial Supervision Bureau and the Integrity Commission), there is no external audit authority on the system.

Management Review

The specification (ISO 45001: 2018) determines the requirement for a management review through a set of paragraphs of (23), as the checklist records the results of the extent of application and documentation of the requirement (3.9) in the course refinery, an average of (2.7) degrees out of (6) Degrees with a matching ratio (0.45), which indicates a gap for non-conformity with a rate of (0.55), resulting from the lack of any audit that determines the suitability of the requirements in the refinery to achieve the occupational health and safety requirements according to the aforementioned specification in addition to the refiner's lack of an information system that enhances Requirements for the administration to review the liquidator's policy, goals, and objectives, and to follow up the procedures for their proper implementation and the absence of Dr. Yale according to a system that could be adopted for the purposes of the audit.

Improvement

Table No. (8) Shows the results of the analysis of the improvement requirement checklist, as shown below:

Table 8: Results of the checklist related to the improvement requirement

Improvement	Not outlet Notarized (0)	Partially outlet (1) Notarized	Partially outlet (2) Partially documented	Partially outlet (3) Fully documented	Fully outlet (4) Notarized	Fully outlet (5) Partially documented	Fully outlet (6) Fully documented	Number of paragraphs	percentage	Weighted mean	Gap
10.1 General	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{2}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	1	0.43	2.6	0.57
10.2 Incident, nonconformity and corrective action	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{8}{4}$	$\frac{12}{4}$	$\frac{12}{3}$	$\frac{0}{0}$	$\frac{0}{0}$	15	0.33	2.2	0.64
10.3 Continual improvement	$\frac{0}{0}$	$\frac{1}{1}$	$\frac{6}{3}$	$\frac{3}{1}$	$\frac{0}{0}$	$\frac{0}{0}$	$\frac{0}{0}$	5	0.33	2	0.67

Improvement: The improvement requirement is determined (10.1) with a single paragraph that recorded a rate of (2.6) degrees out of (6) degrees with a matching ratio (0.43), which indicates a gap of non-conformity at a rate of (0.57) and the reason for this is due to the lack of analysis, monitoring and measurement of the existing process To verify the results and not to set goals and improvement plan in line with the quality policy .Failure to adopt the principle of preventive action by setting a documented procedure for follow-up, monitoring and disposal of the causes of non-conformity and preventing their occurrence. Preventive action includes some measures, including identifying the reasons for non-conformity and evaluating them to reduce the gap of non-conformity and review the preventive action and amend documentation if required.

Corrective Procedures for Non-Conformity: The requirement for corrective procedures for non-conformity consists of (15) paragraphs. The checklist recorded the results of the application and documentation of this requirement in the course refinery, a weighted average of (2.2) degrees out of (6) degrees and with a matching ratio (0.36), which A gap of non-conformity is indicated at a rate of (0.64), resulting from the weakness of identifying the case of similar incidents in the event of non-conformity or the probability of occurrence and failure to inform relevant workers and stakeholders of the documented information.

continuous improvement: The requirement (10.3) was determined by (5) paragraphs that appear in Table (10), so he recorded a rate of (2) degrees out of (6) degrees with a matching ratio (0.33), which indicates a gap of non-conformity with a percentage (0.67), resulting On the lack of completion of the improvement processes regarding information maintenance operations, adding to the lack of a plan to implement continuous improvement based on the results of the corrective actions, the lack of monitoring and measurement of the existing system operations.

The methodology of the proposed improvement for the course refiner: The administration of the period refiner must define its main goal and accurately is to fill or reduce the size of the application gap between the requirements of the health and occupational safety specification and what was identified through the refiner's checklist, based on the adoption by the higher management of these goals and documented and announced to each Workers in the refinery so that those goals are divided and commensurate with the administrative level for each department and every job level and define powers and responsibilities so that each worker and according to his position of position contribute to achieving part of those goals, and the policies must be based on data and information d It is valuable from inside and outside the refinery and this information includes all technical, marketing, financial and other elements, so that this data is classified and analyzed in a way that helps in setting policies and taking the necessary decisions to implement the policies, and the appropriate information is directed to the appropriate section at the appropriate time as there must be a specific timetable It has a final time to complete the implementation, and the necessary means must be identified and chosen to achieve the goals by setting operating and technical standards, organizing resources and training individuals on the required tasks.

Conclusions

- 1- The liquidator does not apply the research sample to an occupational health and safety standard.
- 2- The lack of interest of the liquidator in the subject of occupational health and safety.
- 3- A major weakness in documenting OSH activities, events and processes.



- 4- Weakness in identifying internal and external issues related to the organization's ability to reach the intended results and weak determination of the needs of workers and other interested parties.
- 5- The liquidator has a suitable working environment to work and partially provide the necessary resources to implement the OHS system

REFERENCES

- Benjamin , O. (2008). Fundamental principles of occupational health and safety. , international labor office , Geneve.
- Bisio, P. (2018). Evolution of management in the quality of OS&H up to ISO 45001. Geam-Geoengegneria Ambientale E Mineraria-Geam-Geoengineering Environment and Mining, (154), 52-58.
- Desler, D. (2009). Human resources management. Al-Merikh Publishing, Riyadh - Kingdom of Saudi Arabia.
- Gheorghe, C. (2017).Study regarding the Steps of Occupational Health in Safety Management System. International Journal of Economics and Management Systems ROMANIA, Volume, (2) , 147-186. ISSN: 2367-8925 .
- Kadasah, A. (2015) An Assessment of the Occupational Health and Safety Environment among Organizations on the Light of OHSAS 18001: The Case of Saudi Arabia.vol (6) No(4). 155-166.
- Mansour, I., & A'mir, O. (2014). The extent of applying total quality management in the Applied Science University according to academic staff view. International Journal of Educational Research and Information Science, 1(2), 20.-26.
- Mathis , Robert L. & Jackson, J. H. (2003) . Human resource management. 10th ed , Thomson , South Western ,U.S.A.
- Mohammed, B. H., Flayyih, H. H., Mohammed, Y. N., & Abbood, H. Q. (2019). The effect of audit committee characteristics and firm financial performance: An empirical study of listed companies in Iraq stock exchange. Journal of Engineering and Applied Science, 14(4), 4919-4926.
- Roger ,venicentini (2004). Les risqué peri-essioneis. Edition organization. paris.
- Sahbat, A. H., Khashea, B. A., & Hammood, F. H. (2018). Environmental quality costs and their role in strategic decision making: Evidence from Iraq. International Review,15, (3-4), 48-57.
- Saliha, J. I., & Flayyihb, H. H. (2020). Impact of audit quality in reducing external audit profession risks. International Journal of Innovation, Creativity and Change, 13(7), 176 – 197. www.ijicc.net
- Sallis, E. (2014). Total quality management in education. Routledge.



Shannon, H. S., & Norman, G. R. (2009). Deriving the factor structure of safety climate scales. *Safety Science*, 47(3), 327-329.

Singer, G. H. (2006). Meta-analysis of comparative studies of depression in mothers of children with and without developmental disabilities. *American journal on mental retardation*, 111(3), 155-169.

Vagias, Wade M. ,(2006), . Likert-type scale ., clemson international institute for tourism , department of parks , recreation and tourism management. Clemson University ,USA, p:2.