



ErgoWorks Sdn Bhd
INDUSTRIAL & OCCUPATIONAL ERGONOMIC SOLUTIONS PROVIDER



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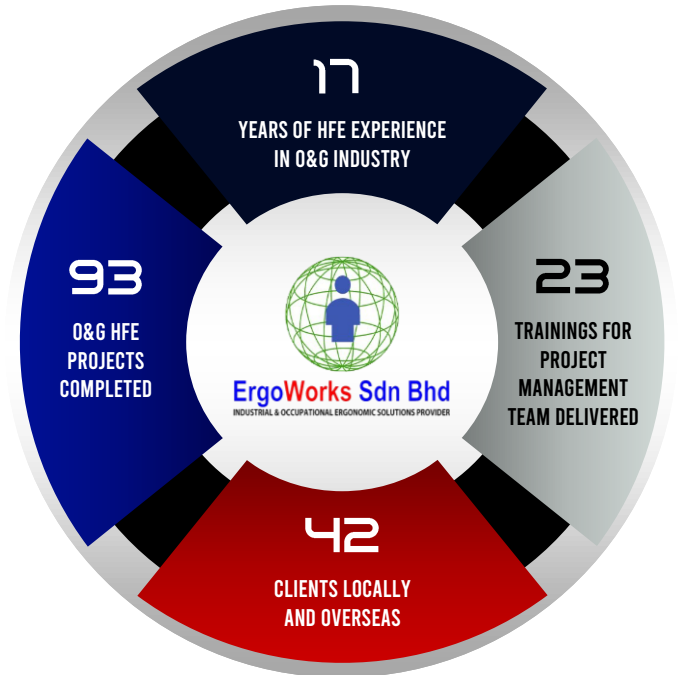


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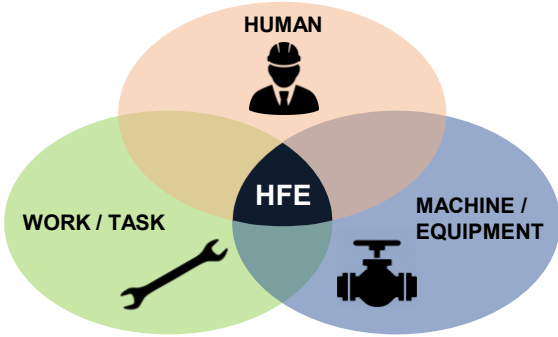
HUMAN FACTORS ENGINEERING (HFE) SERVICES



ErgoWorks services focus on integrating HFE specifications and implementation for our clients during project design cycle. The goals are to improve asset designs towards efficient human performance during operation and maintenance activities, reduce safety and health risk, and less likelihood for human errors to occur.

INTRODUCTION TO HFE

Human Factors Engineering (HFE) is a front-end study that focuses to optimise interaction between human, task and machine / equipment in a work system.



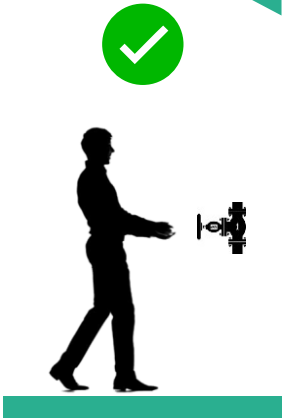
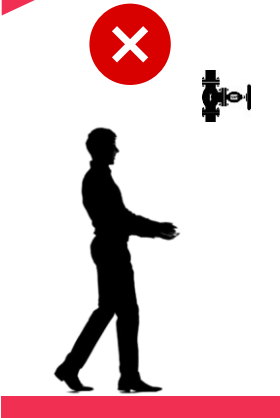
HFE TOUCH ON DESIGN

WITHOUT HFE

- Valve is at high location
- Valve lever is facing away from the personnel

WITH HFE

- Valve is at optimum height
- Valve lever is facing the personnel



BENEFITS TO COMPANY

OPERATIONAL PERFORMANCE

Improve human efficiency and productivity, thereby increasing operational performance

SAFETY

Reduce operational and process HSE risk of facilities

MUTUAL RELATIONSHIP

Establish mutual acceptance between PMT and Operations



CAPEX & OPEX

Optimise CAPEX and OPEX by contributing to more efficient design and avoiding re-work at later stage

HUMAN ERROR

Eliminate or reduce potential of human errors and its consequences

CAPEX – Capital Expenditure

HSE – Health, Safety & Environment

OPEX – Operational Expenditure

PMT – Project Management Team

TYPE OF SERVICES

Our experienced HFE Specialists and Engineers are competent in providing following HFE services:



CONSULTANCY



ADVISORY



TRAINING

1. CONSULTANCY

ErgoWorks provides consultancy services as aligned with **OPERATOR / COMPANY** HFE requirements during project design stage.

A. HFE Screening

Initial assessment of a new design facility for potential HFE risks, lessons learned and concerns for expected work system. Based on the findings, applicable HFE standards, organization, specifications, required scope of HFE activities and implementation plan are introduced for the design engineering and project teams to refer.

B. Development of HFE Design Specifications

Develop HFE Design Specifications to define minimum acceptable HFE requirements for assuring facility compliance with the project HFE Design Specifications.

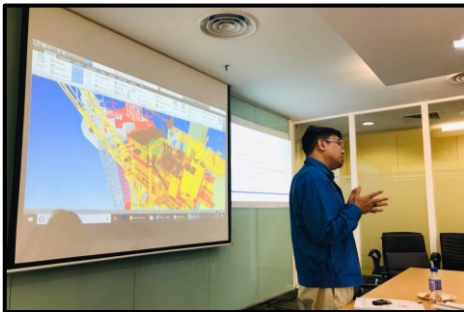
C. HFE Design Analysis

A systematic study to analyse a work system by examining its component parts and their interactions with human. The study is crucial in the work system design to facilitate efficient and safe operation / maintenance task. Examples of the analysis are:

- Valve Criticality Analysis (VCA),
- Safety Critical Task Analysis (SCTA).

D. HFE Model Verification

Assessment of a facility / equipment package using 3D Model. The purpose is to ensure the design follow HFE specifications, requirements and best practices. In addition, recommendations are provided for any deviations on the design.



HFE Model Verification Workshop

E. HFE Design Analysis for Central Control Room (CCR)

An assessment and analysis on CCR design to ensure layout and environment is as per HFE specifications and requirements.

F. HFE Construction Verification

Verification of a facility during construction stage to ensure HFE compliance (as per design intent) and mitigate unforeseen deviations.

G. HFE Offshore Verification

Identification of HFE level of achievement after commissioning through interviews and observation of operational / maintenance activities. The outcome will be kept as lessons learnt and used in the future projects.



HFE Construction Verification Walkthrough

2. ADVISORY

Our experienced HFE Specialists / Engineers will be part of the client management team to provide advisory services related to HFE implementation concerns, specifications or mitigations.

3. TRAINING

Our trainers provide various level of HFE training programs custom-made for management, engineering and technical teams, including construction teams and vendors.



OUR COLLABORATION & CERTIFICATION

In addition to 17 years of experience in performing HFE services to Oil and Gas industry, we are also:

**SAPURAOMV
IN-HOUSE
HFE CONSULTANT**

**PETRONAS
CERTIFIED
HFE CONSULTANT**

LIST OF CLIENTS

Brunei Shell Petroleum Co Sdn Bhd
 ExxonMobil Exploration and Production Malaysia Inc
 Kencana HL Sdn Bhd
 Mubadala Petroleum
 Murphy Sarawak Oil Company Ltd
 PETRONAS Carigali Sdn Bhd
 PETRONAS Carigali (Turkmenistan) Sdn Bhd
 PETRONAS Carigali Ketapang Limited
 PETRONAS Carigali Myanmar (Hong Kong) Limited
 PETRONAS Gas Berhad (PGB)
 PETRONAS RAPID
 PTT Exploration & Production Public Company Limited
 REPSOL Oil & Gas Malaysia Limited
 Sabah Shell Petroleum
 SapuraOMV Upstream (PM) Inc
 Sarawak Philippines Exploration
 Sarawak Shell Berhad
 Shell Philippines Exploration
 Brooke Dockyard & Engineering Works Corporation
 Malaysia Marine & Heavy Engineering Holding Berhad
 Muhibbah Engineering

OceanMight Sdn Bhd
 Sapura Fabrication Sdn Bhd
 2H Offshore Engineering Sdn Bhd
 BinaPuri (M) Sdn Bhd
 Bureau Veritas (M) Sdn Bhd
 Datumstruct (M) Sdn Bhd
 Expro Group Malaysia Sdn Bhd
 Integrated Process Solutions Sdn Bhd
 MIE Industrial Sdn Bhd
 Misi Setia Oil & Gas Sdn Bhd
 MMC Oil & Gas Engineering Sdn Bhd
 PT Meindo Elang Indah
 PT Synergy Indonesia
 Ranhill WorleyParsons Sdn Bhd
 RNZ Integrated Sdn Bhd (Petrofac)
 Sapura Energy
 Specialist Service
 SynergenOG Sdn Bhd
 TechnipFMC
 Total Exploration & Production Libya
 White Quest Synergy Sdn Bhd

GET IN TOUCH



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