



# API 61

# CRANE LIFT PLANNER / APPOINTED PERSON TRAINING PROGRAM

安全培训

APPROVED TRAINING PROVIDER



## COURSE OVERVIEW

The course is designed to focus on the technical aspects of rigging and lifting operations, it focuses on the relevant legislation and regulations, planning and risk assessment and includes practical rigging and lifting scenarios which cover the performance criteria, range statement and knowledge requirements of standard competence.

The course comprises a mix of theoretical and practical sessions. Delegates will be required to participate in Q&A, solve mathematical equations. At the end of the course, delegates will be examined through a Theory Question Paper and a Practical Lifting Plan Assessment. They will be awarded the API Accredited Certificate Crane Lifting Planner Certification should they passed both the theory and practical test.

### TRAINER: Lt. Colonel (CD) Frank Tan, PMP, PJK, PBP, PAP:

Frank and his trainers served as Expert Panel Specialist appointed by DSD (JPK) Department of Skills Development, Ministry of Human Resources to develop the only National Occupational Skills Standard for Malaysia:

- Certificate in Crane Lifting Operations
- Certificate in Rigging, Signaling & Tagline Holding
- Certificate in Crane Lifting Supervision
- Diploma in Crane Lifting Coordination
- Advanced Diploma in Crane Lifting Planning

He holds professional certifications & qualifications in Crane Lifting / MHE / MEWP Operations and Vocational Training Officer (JPK), Train The Trainer (HRDF), Certified Lifting Director, Specialised Transportation (ITI, accredited by LEEA & ASME), American Society of Safety Engineers, Society of Automotive Engineers USA, PUWER & LOLER (UK) certifications.

He has more than 35 years of training & practical experience and has served as speaker and trainer at NIOSH, ABM, CIDB, many MNCs, GLCs, PLCs, SMEs, Local and International Conferences.

### METHODOLOGY

- ✓ Lectures with Q&A,
- ✓ Accident Pictures & Videos Discussion
- ✓ Sample Comprehensive Lifting Plan
- ✓ Individual Assignment on Load Rigging Sketch
- ✓ Use of Crane 3-dimension Lifting Plan Software
- ✓ Schematic Method Statement
- ✓ Hazard Identification, Risk Assessment & Risk Control Activities
- ✓ Post Theory Test Via Online LMS
- ✓ Practical Assignment for Various Lifting Environments

**CEP POINTS  
AVAILABLE**

### COURSE OBJECTIVE

- Provide candidates with underpinning knowledge and skills for them to understand the role and responsibility of the Lift Planner/Appointed Person
- Understand relevant legislation and best practices to lifting operations
- Identify common unsafe practices and probable consequences
- Calculate angles, tensions and Centre of Gravity
- Prepare comprehensive Crane Lifting Plan with:
  - Risk Assessment for non-routine operations
  - Schematic Drawings using T-Square & / or Crane 3-Dimension Lifting Software
  - Systematic Method Statement
- Gain a worldwide recognized qualification for Crane Lifting Planning

### WHO SHOULD ATTEND?

**This training is important for whoever is involved in Crane Lifting Planning and Supervision of Crane Lifting Operation and particularly to those who plans to become a Competent Person:**

- Lifting Supervisor • Crane Operator • Rigger • Rigging Supervisor • Structural Engineer • Maintenance Supervisor • Lifting Engineer • HSE Engineer / Manager • Operation Manager • Transport & Lifting Supervisor • Construction Engineer/Manager • Project Manager & Planner • Cargo Superintendent • LOLER Focal Point

### In the following industries:

- Transport & Lifting contractor • Refineries • Power Plant • Civil Construction Industry • Crane Rental Company • Engineering Contractor

### AWARD CERTIFICATION

Certificate of Achievement (Sijil Pencapaian) in all Theory & Practical Assessments from the Akademi Binaan Malaysia (ABM of CIDB)

Certificate of Successful Achievement in Crane Lifting Planning from the American Petroleum Institute, USA



## COURSE OUTLINE

### 1. LEGISLATIVE AND REGULATIVE

- Legislation, regulations, codes of practice, guidance and good practice documentation that relate to all types of lifting duties
- Duties and responsibilities of those involved in a lifting operation including: an appointed person, a lifting operations supervisor, a lift coordinator, a machine operator, a slinger, a signaler, a lifting equipment installer/erector and maintenance personnel
- Requirements for basic, standard and complex lifts
- Lighting requirements for in and out of service conditions for lifting equipment
- Requirements to be followed when planning the lifting of persons

### 2. LIFTING EQUIPMENT

- Different types of lifting equipment, and explain capabilities and limitations of each for given lifting operations
- Pre-use checks requirements for lifting equipment and accessories
- Maintenance inspection, thorough examination and testing requirements for lifting equipment and accessories
- Setting up, erection, levelling and dismantling requirements for different types of lifting equipment and lifting operations
- Calculating lifting equipment point loadings/outrigger loadings, spreader mat types and sizes from given information
- Ground pressure and support loadings from given information
- Function and use of, and use information provided by, RCIs and safety devices applicable to a range of lifting equipment
- Selection of the correct lifting equipment for specified lifts
- Extracting information from manufacturer's technical specifications, duties charts, range diagrams and other information sources
- Lifting equipment configurations for specific types of lifting operations
- Attachments and ancillaries to lifting equipment.
- Out of service procedures for lifting equipment including locations, configurations, and markings

### 3. LIFTING ACCESSORIES

- Different types of lifting accessories and explain typical applications
- Relevant information relating to different types of lifting accessories e.g., markings, certificates and thorough examination reports
- Calculating sling capacities, lengths and angles
- Slinging techniques for given loads including balanced, unbalanced and loose
- Appropriate lifting accessories for given types of loads
- Weights and centers of gravity for different types of loads

### 4. COMMUNICATION

- Communicating lift plan information to others involved in a lifting operation i.e., lifting supervisor, machine operator, slinger etc.
- Different types of communication methods for lifting purposes
- Factors that determine types of communication methods, the limitations of each and the effects of poor communication
- Completing a reflective report following a typical lifting operation

### 5. PLANNING

- Potential proximity and underground hazards from given plans and drawings
- Plan an area, with exclusion zones for different, given lifting operations incorporating safe access/egress routes for before, during and after the lift
- Requirements that allow safe site access and egress for typical lifting equipment
- Security requirements for specific lifting operations
- Safe system of work by producing risk assessments, method statements and lift plans, including drawings, using given information
- Additional requirements for pick and carry duties
- Positioning of lifting equipment, loads in relation to fixed objects and other limiting factors
- Definition, requirements and factors for temporary works management and the effects on typical lifting operations
- Effects of fatigue on the lifting team can affect a lifting operation and how it should be managed
- Weather, other environmental factors and the surrounding area external to the lift zone affecting the planned lifting operation
- Wind loadings and sail-affect areas are calculated
- Notification, liaising and reporting procedures to statutory, authority, and utility bodies when affected by the lifting operation, i.e., works, railways, highways, airfields, etc.
- Requirements to be followed when lifting loads from height



### WHY MUST YOU ATTEND THIS EVENT?

Crane lifting accidents can and must be avoided. Such accidents are caused by inexperienced lifting team members, no lifting plan, failure to inspect the crane and rigging, not setting up the crane properly, improper rigging of load, etc. Preparing a comprehensive crane lifting plan ensure a safe lifting operation and enhance jobsite efficiency.

### Some of our satisfied clients:

Abx Express, A-Sonic Customs Broker Services, Aerodarat, Agility, Airbus, Airod, Air Products, Aker Solutions, Akzo Nobel, Amsteel, Ancom, Ann Joo, APM, Armstrong, Avery Dennison, B. Braun, Bahru Stainless, Baker Hughes, BAT, BNM, Bauer, Blue Scope, Bofi, Boston Scientific, Bradken, British High Comm., BSG, CAE Kuala Lumpur, CAMPBELL Cheong Wan, CARRIER International, Carsem, CEL Logistics, Cenviro, CHEC Construction, Chevron, China Const. Co., Celestica, Cement Industries, Cenviro, CIBA VISION, CIDB, Citylink, City Piling, CJ Century, Coffee Bean, Concept Design, Daikin, Dell, DHL, Dialog, Digi, DRB-Hicom, Dutch Lady, Ecologis, EEW, Elektrisola, Entegris, Equator Engineering, Essential Logistics, ETOPS, Eurocare, Everly Hotel, Federal Fujikura, FedEx, FELDA, FGV Kernel Products, Fibertex, Flextronics, Flowfuel, FM Global Logistics, Fonterra, Foresight, Fueller Logistics, Gading Kencana, GAMUDA GEO, Gardenia, Gas Malaysia, GD Express, GE, Genesis Curis, German Automotive Lighting, Giada Trading & Transport, Giant, Gold Coin, Govt. Hospitals, Greencon Resources, GREENTECH Constructions, Halfen Moment, Halliburton, Hartalega, Hartrodt Air Services, Hitachi, Honda, Hume Cement, IJUM, IJM, IKEA, IOI, Istana Budaya, Isuzu, Jebesen & Jessen, JB Cocoa, Johnson, Johor Port, Jupiter Logistics, Keller, Kerthi Airport, Kintetsu World Express, KLCC, Kobe, Komatsu Ltd, Konsortium PD, Kontena Nasional, KRAIBURG TPE Technology, K&N, Lafarge-Holcim, Laubros, Legoland, Liebherr, Linocraft, Lotte-Titan, LS Prisma, MAB, Macfood, Majlis Perbandaran Manjung, Malakoff, Malaya Glass, Malaysia Transformer (MFS), Mammoet, MAPA Gloves, MASKargo, Masterpave, Maxis, MBF Printers, MEC Forwarding System, Menard, Merlin Entertainment, MISC, MMC-Gamuda, MMHE, MML, Mondi, Monier, Motorola, MRCC, Muda Paper, Mudajaya, Mujur Minat, Mydin, Nestle, Nilai Medical, NITTSU, Newwin Engineering, North Oil, Northport, NPK Fertilizer, Orica-CCM, Panasonic, Parrots Enterprise, PCA Group, Pengerang Gas Solution, Percetakan Nasional, Perodua, Petrofac, PETRONAS, PHILI-ORIENT Logistics, Philip Morris, PKT Logistics, PLUS, Prifaria, PROTON, PTP, Public Crane Heavy Equipment, Red Crescent, RLDE, RK Lorry Transports, Rohde & Schwarz, Rokonma, Samsung, Sapura, Sarawak Timber, Schenker Logistics, Segi, Senal Airport, Sentiasa Hebat, SGL, Shell, Shimano, Shin-Etsu, Shopee, Sime Darby, Skynet, SODEXO Malaysia, Song Transport, Southern Steel Mesh, St John, Sumitomo, SunPower, Sunway, Tatsuno Engineering &amp; Service Malaysia, Swift Integrated Logistics, Syngenta, TCIM, Technip-FMC, Teleflex, TLIT Hardware Machinery, TNB, TNT Express, TESCO, TNLS, TNO Project Management, TOMCARE Resources, Top Glove, Trans Elite, Triangle Worldwide, Tune Insurance, Tung Shin, UAC, UDA Holdings, UEM Edgenta, UITM, UKM, UMP, Unisteel, UPB, UPM, V.S Industry, Venture, Vesuvius, VISION World Construction, Viva Haulage, Volvo, VOLVO Car Manufacturing, Vopak, Watson, WCT, WD, World Asia Logistics, World Express, World Kitchen.

### Winner of Winner of 12 International & Local Awards

MOF Registration #357-02124992

5 I-Ray Eyes Technique Patent Owner

5 Star Rating Training Provider of HRDF

Training Provider: FELDA/ NESTLE/ PETRONAS/ SHELL/ TNB

Training Partner: ABM, APM, BSR, HRDF(M), GF(ASIA), FedUni(Aust), API(USA)

Training, Curriculum & Content Developer: HRDF, DSD, CIDB

The Malaysia Book of Records 2019 Winner (with APM)

### Behavior-Based Safety (BBS) Operations Training

Forklift / Reach Truck / PP Stack / VNA

Reach Stacker / ECL / Excavator Crawler / Telehandler

MEWP (Scissors Lift / Boom Lift / Vertical Lift / Sky Lift)

OTC, Lorry Crane, Rigger, Signaller, Lifting Supervisor & Planner

Defensive Driving: Ambulance / Fire Eng. / Car / Bus / Van / Lorry

Crane & Plant Inspection, LOLER, PUWER, LOTO, 5S+



### THE ISO GROUP

(operated by In-Source Options Sdn Bhd)

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