



Model Curriculum

Fire Safety Technician (Oil & Gas)

SECTOR: HYDROCARBON SUB-SECTOR: MIDSTREAM, DOWNSTREAM OCCUPATION: MANAGEMENT OF HEALTH, SAFETY AND ENVIRONMENT (HSE) REF ID: HYC/Q3601, V1.0 NSQF LEVEL: 4











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Fire Safety Technician (Oil & Gas)

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a "Fire Safety Technician (Oil & Gas)", in the "<u>Hydrocarbon</u>" Sector/Industry and aims at building the following key competencies amongst the learner.

| Program Name | Fire Safety Technici | an (Oil & Gas) | |
|---|--|--|---|
| Qualification Pack Name & Reference ID | HYC/Q3601, v1.0 | | |
| Version No. | 1.0 | Version Update Date | 14-08-2019 |
| Pre-requisites to Training | aining Class X / ITI (two years after class 8 th) | | |
| Training Outcomes | Carry out safe procedures spe demonstration Perform firefig measures to surrounding the Work effectively | program, participants will b ty procedural checks as cific to oil and gas installat hting operations and ensure safety of work oil and gas installation are with colleagues, superiors in other work groups | per safety rules and ions and conduct safety undertake fire safety ers and communities ea s, members of own work |





This course encompasses <u>3</u> out of <u>3</u> National Occupational Standards (NOS) of "Fire Safety Technician (Oil & Gas)" Qualification Pack issued by "<u>Hydrocarbon Sector Skill Council</u>".

| Sr. No. | Module | Key Learning Outcomes | Equipment Required |
|------------|--|---|---|
| 1 | Introduction to Hydrocarbon Sector Theory Duration (hh:mm) 08:00 Practical Duration (hh:mm) 00:00 Corresponding NOS Code Bridge Module | Describe oil and gas sector and its subsectors List the three major segments in the hydrocarbon sector State the functions of upstream, midstream and downstream segments List the roles and responsibilities of a fire safety technician | |
| 2 | Prepare workplace in line with fire safety rules Theory Duration (hh:mm) 50:00 Practical Duration (hh:mm) 100:00 Corresponding NOS Code HYC/N3601 | Describe the Oil Industry Safety Directorate (OISD) standards related to firefighting equipment and appliances in oil and gas industry Describe the policies related to occupational health and safety Describe how to prepare the checklist for monitoring safety regulations specific to oil and gas installations Describe the effects of oil spills or gas leakage Explain impact on environment due to fire incidents caused by oil spills or gas leakage List fire safety equipment and safety signage and their usage Demonstrate how to install and maintain fire safety equipment Describe how to coordinate with operation and maintenance team for conducting fire safety awareness programs and safety drills Demonstrate how to respond promptly and appropriately during fire incident Demonstrate fire safety equipment usage in emergency situations Demonstrate how to administer first aid to victims in case of emergencies Demonstrate how to ensure readiness of fire safety equipment for any type of emergency situations List issues concerning fire safety at work | Fire safety equipment Portable fire pump Sprinkler systems Smoke control systems Fire Alarm Fire trays Various types of fire extinguisher Fire hose Safety shirt Safety trouser Safety jacket |







| Sr. No. | Module | Key Learning Outcomes | Equipment Required |
|------------|---|--|---|
| | | Describe how to prepare and maintain the daily inspection and incident's reports and the importance of maintaining all records efficiently Explain how to prepare record of all nearmiss incidents and their proper reporting | |
| 3 | Perform fire safety operation at workplace Theory Duration (hh:mm) 40:00 Practical Duration (hh:mm) 110:00 Corresponding NOS Code HYC/N3602 | Describe how to attend a fire-related emergency situation List fire safety tools and equipment used in firefighting and describe how to use them in case of fire Explain the hazards associated in handling various firefighting equipment Demonstrate the proper use of PPE in firefighting Explain the different classes of fires and their ignition sources Describe the various fire extinguishing agents and systems Identify the types of fire extinguisher i.e. Fire water system, foam system, carbon dioxide system, dry chemical extinguishing system and mobile firefighting equipment Demonstrate selection of proper fire extinguisher in accordance with the type of fire Demonstrate how to operate fire extinguish fire Describe how to report authorities in case of emergency situations Explain various safety practices needs to be followed during firefighting operations Demonstrate fire safety measures in case of fire incident due to oil spills or gas leakage Demonstrate how to check various type of safety valves in case of fire incidents in oil and gas installations Explain how to prepare records of all fire related incidents | Firefighting equipment Breathing apparatus (Negative & Gas cylinders Water fire extinguisher Stored pressure fire extinguisher Chemical foam type fire extinguisher Mechanical foam type fire extinguisher BC type ABC type Extension ladder All type of branches and nozzles Fire Hoses PPE First aid box Safety shoe Safety helmet Safety jacket |
| 4 | Work effectively in a team Theory Duration (hh:mm) 17:00 Practical Duration | Describe methods to communicate clearly with the supervisor and reporting authorities Explain how to work with colleagues and other members of the organisations Explain how to share information in line with organisational requirements Identify issues of interpersonal conflict at workplace and describe ways/methods to avoid them | Communication equipment like mobile and walkie talkie |
| | (hh:mm) 25:00 | Explain the organisation's policies and procedures | |





| Sr. No. | Module | Key Learning Outcomes | Equipment Required |
|------------|---|---|---|
| | Corresponding NOS Code HYC/N9301 | | |
| | Total Duration Theory Duration 115:00 Practical Duration 235:00 | Unique Equipment Required: Fire safety equipment, Water fire extinguisher type fire extinguisher; Chemical foam type Mechanical foam type fire extinguisher; BC type; ABC type; Extension la branches and Nozzles; Fire hoses; First aid small gears; Breathing apparatus (Negative a cylinders; Steel back plates; Face mas pump/TFP; All types of coupling; Hydrant – Fire trays; Manual call point; Entry suit / Prorreel system; Hose box; Suction hose; Suction strainer; Ropes 100 ft.; PPE; Safety shirt; Safe jacket; Cooling vest; Gum boost, mobile/ communication | fire extinguisher; CO ₂ type fire adder; All types of box; All types of nd Positive); Gas k; Portable fire Stand pipe type; oximity suit; Hose on wrench; Metal ety trouser; Safety |

Grand Total Course Duration: **350 Hours, 0 Minutes** (*This syllabus/ curriculum has been approved by* <u>*Hydrocarbon Sector Skill Council*</u>)





Trainer Prerequisites for Job role: "Fire Safety Technician (Oil & Gas)" mapped to Qualification Pack: "HYC/Q3601, v1.0"

| Sr. No. | Area | Details |
|------------|--|--|
| 1 | Description | To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack "HYC/Q3601, v1.0". |
| 2 | Personal Attributes | The individual needs to have a good moral character and a pleasing personality. He also needs to be physically fit, mentally robust, intelligent, committed, proficient, calm and confident. |
| 3 | Minimum Educational Qualifications | ITI (two years after class 10 th) |
| 4a | Domain Certification | Certified for Job Role: "Fire Safety Technician (Oil & Gas)" mapped to QP: "HYC/Q3601, v1.0". Minimum accepted score is 80% |
| 4b | Platform Certification | Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack: "MEP/Q2601". Minimum accepted score is 80%. |
| 5 | Experience | Minimum 3-years of total experience in relevant job role Minimum of 1-year training experience. |





Note: For the assessment criteria please refer to the Qualification Pack of "HYC/Q3601, v.1.0".