Method Statement for the Installation of Fire Fighting Pumps Set

SCOPE:

This Method Statement describes/defines the procedures involved in the installation of Fire Fighting System such as Equipment Pumps & Accessories in order to confirm proper operation.

PURPOSE:

The Purpose of this method statement is to ensure that Installation of Fire Fighting Equipment & Accessories and related activities are executed safely and in accordance with the contract requirements and that all quality assurance/ control activities required for the same are conducted in a systematic manner, works are inspected and conformance is verified and documented.

REFERENCES:

Mechanical Approved Materials & Equipment (Data sheet/Submittal)

Approved Project Drawing (Plumbing)

Project Specifications, UAE Standards, NFPA

DEFINITION:

NFPA - National Fire Protection Association

FHC - Fire Hose Cabinet

FHR - Fire Hose Reel

LV - Landing Valve

RESPONSIBILITIES:

Project Manager will be responsible for the following:

Overall responsible for the implementation of this method statement.

Responsible for ensuring that the work is performed in accordance with the specification and with the time & constraints.

Coordinate with MEP Coordinator (Contractor) for obtaining the necessary resources for the project deployed as required.

Submit progress report as per contractual requirements to Main Contractor.

Ensure that all required submittal are made in timely manner.

Coordination with the Contractor, Company, Engineers, Safety personnel and subcontractor for the safety and quality during the execution of the project.

Site Mechanical Engineer will be responsible for the following:

Ensure that the activities are carried out according to the Specification, drawing and approved Method Statement.

Ensuring Submittals and Company approval on relevant MEP drawing/ Material/ Suppliers/ Subcontractors/ Method Statement and Quality/HSE Documentation.

Arrange all materials and tools required for installation as per agreed project schedule.

Coordinate to MEP Coordinator & Construction Manager for obtaining the necessary resources for the project & deploy as required.

Provide all necessary information and distribute the responsibilities to his construction team.

Monitor that a; in process tests are carried out and obtained approval from Client/ Main Contractor/ Consultant.

Monitoring & ensuring that the works is performed in accordance within the time and cost constraints.

Coordinate with the Safety Engineer to ensure that the works are carried out in a safe working practice.

Pass all the revised information to the site General foreman and ensure that it's being carried out properly for entire MEP System.

Ensure all Mechanical work activities are in conformance with approved shop drawings, contract requirements/ specification, and Method Statement.

Ensure that relevant and required Materials are requested on time in correct quantities.

Provide Approved Shop drawings to site Engineer for proper site Installation.

Advising Site Engineer on all Technical aspects regarding work methods, sequence of installation, testing and commissioning.

Follow up site activities and ensure all relevant non-conformance issues (if any) are resolved and cleared out. Communication with QA/QC Engineer and HSE Engineer for preventive and corrective actions.

Coordinate the progress of main contractor works to ensure installations of MEP works are considering preventive and corrective actions.

Coordination with other Contractors/ Company to provide solutions affecting design development / Coordination matters.

Responsible for the coordination of all electromechanical activities, coordination with other discipline and between various subcontractors on sits.

Reviewing of MEP daily, Weekly & Monthly progress reports.

Ensuring MEP subcontractor Payment Certificates are reviewed and approved for payment.

Responsible for all related activities prior to completion of the project.

Charge-hand will be Responsible for the following:

Carrying out the works and the proper distribution of all the available resources in coordination with the Site Engineer on a daily basis.

Continuous coordination and following Site Engineers instruction to meet quality requirements during the job execution.

Incorporate all the QC & Safety requirements as requested by the company's representative.

Report to Site Engineer the accomplishment and problem encountered on daily basis.

QA/QC Department will be responsible for the following:

Ensure all Inspections are raised and conducted as per the Contract Specifications, PQP, & ITPs.

Ensure all Inspections, proper tools & tackles and manpower are used at all stages of work.

Ensure Call current issues of procedures, approved material and shop drawing and standards are available at the point of use.

Ensure the works comply with the contract requirements/ approved shop drawings to serve the purpose.

Ensure the Total quality for Installation work. He shall liaise with Company for Inspection of Installation works.

Inspect for any damages during handling, & Storage.

Monitor the quality of work and ensure that fulfillment of specified requirement and that all quality records related to work are completed.

Ensure the work is completed as per quality requirements. Contractor shall inspect the same work to initiate ITR for company approval.

Maintain comprehensive inspection and test records for any further references.

Safety Officer/ Engineer will be responsible for the following:

Tool Box talk has to be conducted and all the hazards have to be identified before starting the work.

To make sure that the Personnel Protective Equipment (PPE) are used by the Task Force during executions of work at site.

Risks related to the activity shall be assessed and addressed as required.

To provide training for the work force in order to execute the activity safely.

Carry out regular and random inspection on site and record observations.

METHOD OF WORK:

Materials:

Fire Pumps, FHC, FHR, Landing Valves

Fire Pumps Controller (Control Panel)

Fire Extinguisher

FHR (Fire Hose Reels), LV (Landing Valves)

Siamese Connections

Sprinkler System

Equipment/ Tools:

Lifting Equipment

Chain Blocks/ Slings

Drilling Machine

Cutting Machine

Grinding Machine

Hand Tools (Pipe wrench, spanner, screw driver, cutting saw and etc.)

Special Tools for Firefighting Pipe erection as per manufacturer's instructions.

Installation of Fire Pumps:

Prior to start of installation it shall be ensured that the shop drawings including coordination with drawings of the respective area are approved.

Ensure the area is released by Main Contractor to proceed with MEP installations.

Ensure that the firefighting pumps are as per the approved material submittal and have been inspected and approved.

Ensure that the pump foundation is according to manufacturer's recommendations and NFPA standards.

After inspecting the work area/ foundation and ensuring that it is totally ready for installation, the required pumps will be moved to the place of installation.

Proper marking will be done on the foundation for drilling & fixing the required fasteners to fix the pumps in position.

The pumps will then be placed in the foundation & will be fitted in position directly on the foundation.

It will be ensured that the fasteners are tight enough to hold the pump in position during operation.

After installation and approval of the pumps the firefighting piping system shall be connected to the inlet & outlet of the pumps.

It will be ensured that the piping is properly supported using hanger supports. Flexible connections shall be installed at pump inlet and outlet to permit movement due to vibrations, expansion and contraction.

The pump set shall be mounted on a common base plate of steel and directly connected to motor through a flexible coupling. The base shall conform to NFPA standards.

It will be ensured that the pumps and motors are properly installed with flexible connectors without pipe strain transmitted to the pump casing.

A flow meter shall be installed to measure and indicate flow through the piping system. The meter will be UL Listed/ FM approved & the location will be shown on the shop drawing.

The Pump control Panels will be installed as per the approved shop drawings and manufacturer's recommendations.

The required power and control wiring will be carried out as per the specifications and manufacturer's recommendations.

While installation of cable trays & trunking, it will be ensured that the routing does not hinder the access to various parts of the pump.

Valve tags and sign identifications will be provided as per requirements.

The alarm control valve drain for the sprinkler system will be connected to the sump pit/sewage pit further the wet riser drain will also be connected to the sump pit/ sewage pit.

Installation of Surface Mounted Fire Hose Cabinets:

Prior to start of installation, it will be ensured that the wall is painted and released to proceed with the installation.

The location of the fire hose cabinet will be marked as per the approved shop drawings.

The height of installation of the cabinets will be in line with the approved Civil Defense approved shop drawing.

The fire hose cabinets will be installed in place using four 10mm approved anchors and bolts ensuring the doors will open 180° without blocking any valves.

Installation of Landing Valves / Fire Hose Reel:

The landing valve and hose reel shall be installed inside the fire cabinet utilizing the existing brackets in the cabinet. Hose reel shall open fully & easily in all directions by just pulling the hose nozzle without even touching the reel.

The piping connection to the hose reel shall be as per Civil defense approval Shop drawings.

Installation of Fire Extinguishers for Surface Mounted Cabinets:

Two approved fire extinguishers will be placed inside the Fire hose cabinets as per approved shop drawings & material submittal.

Installation of Recessed Fire Hose Cabinets:

Prior to start of installation it will be ensured that the wall around the cabinet has been painted & released to proceed with the installation.

Ensure that the blockwork opening for the fire hose cabinet is as per the approved shop drawings prior to start of installation.

The height and location of the installation of the cabinets shall be in line with the Civil Defense Approved Drawings.

The Fire cabinet will then be placed in the opening with the outer flange flush with the wall and will be fitted to the block wall using 10 mm approved fasteners (8-10 nos. as per the size of the cabinet). The door of cabinets shall open 180° to Civil Defense Approval.

Labelling and identification will be provided to the Equipment in English.

Installation of Hose Reel for Recessed Fire Hose Cabinets:

The hose reel shall be installed inside the fire cabinet utilizing the existing brackets in the cabinet. Hose reel shall open fully & easily in all directions by just pulling the hose nozzle without even touching the reel.

The piping connection to the hopes reel will be as per Civil defense approved shop drawing.

Installation of Fire Extinguishers for Recessed Fire Hose Cabinet:

Two approved Fire Extinguishers shall be placed inside the hose cabinets as per approved shop drawings.

Electrical Wirings for Controllers:

Electrical wiring will be installed using conduits, trunking, cable tray and boxes either cast in concrete slabs/wall or surface mounted in accordance with the requirements of the contract documents

After casting slabs/walls, all embedded items will be checked and cleaned. Conduit drops to wall trunking will be installed properly.

Control panel will be installed surface mounted, free standing or flush mounted secured to walls with approved fittings in accordance with the requirements of contract documents.

All wirings of control panel and firefighting equipment will be provided with reference tag numbers.

Testing of firefighting equipment will be in accordance with manufacturer's recommendation and to the satisfaction of the Client.

ATTACHMENT:

Quality Control Procedures

Inspection & Test Plan

Installation Checklist

Risk Assessment