EMBASSY OFFICE PARK BLOCK

Method of Statement

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MALLIKARJUN ASSOCIATES BANGLORE
BANGLORE

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Preface

This document outlines the essential guidelines, specifications, and procedures for the design, fabrication, and installation of mild steel staircases. Mild steel, known for its strength, malleability, and cost-effectiveness, is widely used in structural applications, making it a popular choice for both residential and commercial staircase projects.

The construction of mild steel staircases involves careful planning and adherence to safety standards to ensure durability and aesthetic appeal. This preface serves to highlight the importance of precision and quality in the fabrication process, as well as the need for a deep understanding of engineering principles. Attention to detail in the design and installation phases ensures that the final product meets the required load-bearing capacities and aligns with architectural intent.

The guidelines contained herein are intended for engineers, architects, fabricators, and construction professionals who are engaged in mild steel staircase projects. It is expected that this document will serve as a valuable reference for achieving high standards in craftsmanship and functionality, contributing to the safe and efficient execution of staircase installations.

By following the best practices and specifications outlined in this document, we aim to provide durable, safe, and visually appealing staircases that meet both client expectations and regulatory requirements.

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Introduction

A **mild steel staircase** is a type of staircase made using **mild steel**, which is known for its strength, ductility, and ease of fabrication. Mild steel contains a low percentage of carbon (typically 0.05% to 0.25%), making it more malleable and weldable compared to higher-carbon steels. This characteristic makes it ideal for structural applications like staircases.

Key Features of Mild Steel Staircase Work:

1. **Durability and Strength**: Mild steel is robust, providing a long-lasting structure that can support significant weight, making it suitable for both residential and commercial buildings.

2. **Customization**: It can be shaped, welded, and cut into various designs, allowing for custom configurations like spiral, straight, or helical staircases.

3. **Cost-Effective**: It is more affordable compared to other metals like stainless steel, making it a popular choice in construction.

4. **Finishing Options**: Mild steel staircases can be finished with **powder coating, painting, or galvanizing** to enhance corrosion resistance and provide a sleek appearance.

5. **Installation Flexibility**: Mild steel staircases can be pre-fabricated and assembled on-site, offering easier installation, and reducing construction time.

Applications:

- **Residential Buildings**: Used for internal and external staircases due to its ability to be designed in compact forms.
- **Commercial and Industrial Buildings**: Preferred for fire escapes, mezzanine floors, and utility areas due to its strength and fire resistance.
- **Outdoor Staircases**: Often treated with coatings to resist weather conditions and provide durability in outdoor environments.

Mild steel's versatility and structural strength make it a practical choice for various staircase designs, providing a balance of functionality and aesthetics.

1. PURPOSE

The purpose of this method statement is to describe the method of works and detailed sequences for Embassy Manyata business park- L4 MS staircase.

2.SCOPE

This procedure covers the activity of Embassy Manyata business park- L4 MS staircase work.

This method statement is applicable for the whole project at specified levels.

3.PROCESS REQUIREMENTS

3.1Material and Members.

SHS 220*220*8

ISMC100

ISMB 300

ISMC250

ISA 75*75*6

ISA65*65*6

6MM THK CHQ PL

8MM THK PL

10MM THK PL

12MM THK PL

16MM THK PL

20MM THK PL

3.1.1Manpower:

Construction Engineer	: 01
Construction Supervisor	: 01
Welders/ Fitters	04
Unskilled Labor	: 02

3.1.2 Machinery / Equipment /tools:

Drilling machine.

Welding machines.

Grinding m/c, Hydraulic Trolley.

Cutting Set.

Hydra F15/20, Staging and Scaffolds, Derrik.

Others as per requirement to the related works.

4.METHOD OF WORKS

4.1 Approval of Shop Drawings

The approved shop drawing (Good for Construction) in detail shall be received and studied before executing works and the same shall be educated to our site team.

4.2 4.1.1 Transportation of Material (Unloading at Site)

Figure 1 Plates

The required quantity of all steel members like stringers, columns, MS plate etc., shall be procured as per drawing requirement at our fabrication yard by means of Vehicle {such as: Lorry, tailor}.

Arrived structural steel sections will be unloading using Mobile crane HydraF15/20.

Safe lifting method must be followed.

The fabricated members as per shop drawing brought to site, lead, and lifts, unloading shall be done at the designated area inside the Work site.

4.3 4.1.2Procurement

Material inspection will be given to the concerned departments for confirming the technical requirements of the materials received at site.

Before proceeding to erection process all the prior approvals will be taken from the concerned engineers (PMC) or section in charge.

4.4 4.1.3Fabrication Process

As per the shop drawing, fabrication of material will be done at our fabrication unit at dabaspet unit and in site also. File attached.

RTItraffic.docx

Figure 2 Grinding

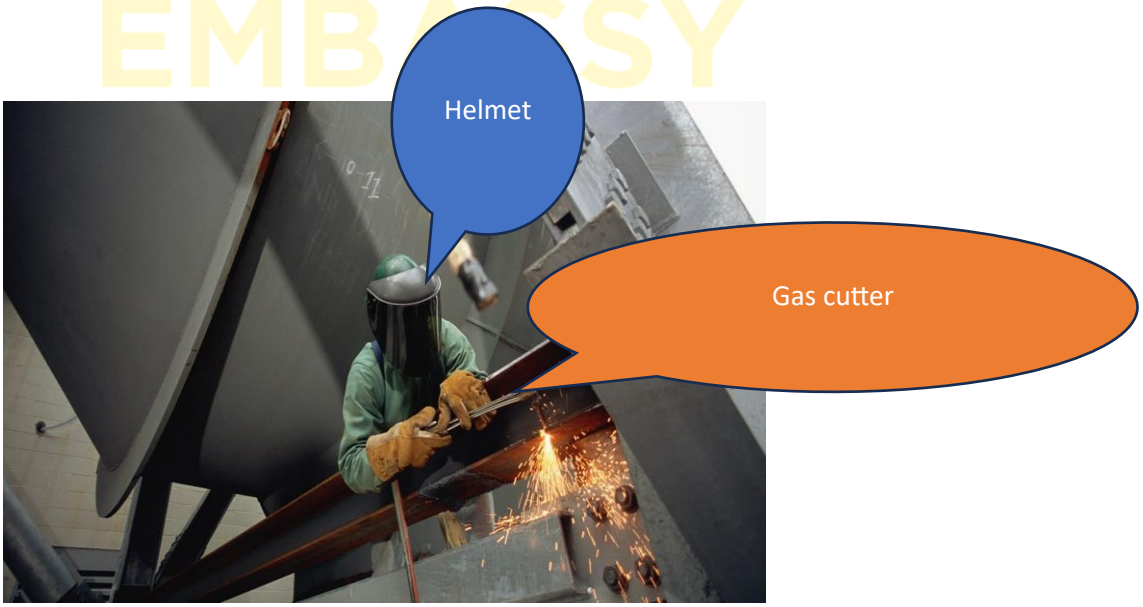

Figure 3 Gas Cutting

5 Welding Process

All joints shall be welded using ARC welding methods with specified ESAB 6013 / 7018 welding electrodes. Safety precaution shall be taken while work in progress.

Members should be prepared in such a way that the sharp edge, rusting of cutting edges, notches, irregularities, and fissures due to faculty cutting shall be chipped and ground.

Before welding ensures the members are in dry condition and all the members should be free from oils, dust, grease and other foreign mattered.

Welding shall be done in accordance with IS 823 and protect the welded parts, electrodes against wind and rain.

Note: Welding shall be followed by manual material arc (MMA) welding method. Which are the most flexible and one of the most widely used arc welding process.

Size and type of the weld should be followed as per the approved GFC drawings and thickness of the weld will be measured by weld measure gauge.

Welding seems shall be cooled slowly and not by any other quick methods.

All the weld seems shall be free from cracks, fusion, undercuts, and blowholes and in complete penetration and irregularities etc...

Figure 4 welding

6.Erection Process and complete activity.

Once the fabrication process is completed all the members shall be pre-checked as per shop drawing.

Total members erection to be done manually/Derik.

Obtain necessary permits and approvals for the project.

Clear the construction site from debris, vegetation, and obstacles.

Erect safety barriers around the site to prevent unauthorized access.

Materials to be shift to terrace by a pickup vehicle through the ramp way.

Foundation bolts to be fixed after the reinforcement work completion of pedestal OR Base plate to be fixed with anchor bolts with mother slab.

After completion of all base plate fixing activity, base plate center will be checked by client/PMC

Mark a point on the base plate, to fix the columns in the positions and erecting manually/derrick with arc welding.

Columns will be free standing.

Strings to be erected with steps as per the shop drawing.

Same procedure for other floors.

Note: After erection of all members, members surface to be check, if any requirement like refinishing the surface, the same shall be done. After completion of all erection activity, it will be checked by the client (PMC).

Figure 5 Steel Erection

6.EHS {Safety}:

All the people involved in Work will be provided with appropriate PPE's as per their Job activity.

Proper Permit Implementation

Area Barricading.

Sign boards.

Safe assemble points.

Make sure workmen wear necessary personal protection before starting welding works.

Ensure work areas are clearly marked to restrict access to authorized personnel only

Maintain cleanliness and orderly stocking of materials &tools.

Store tools, equipment, and unused materials properly at the end of the workday.

Regular inspection shall include determining if supports, scaffolds and ladders are appropriately installed and/or use, and if the job site is cleaned up after the day's work.

Regular inspection of tools & tackles before start of work.

Providing Fire Extinguishers of Type with Class ABC at Hot work area {DCP&CO2}.

Implementation of safety precautions at hot work, & lifting & Shifting of Materials.

Ensuring safe work procedure for lifting operation is observed.

All the points will be ensured before start of work itself.

This will end of all activity of drop off area (beam strengthening works).

7.Hyperlinks

Click here for safety website.

Click here to refer METHOD OF WORKS.

Click here to search GFC.

8.Index