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Installation of FLI Flexi Pile Tabs On Ø610 & Ø762 Steel Piles

Prepared for: General Guidance

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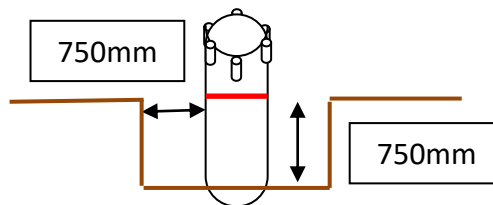
Pile Flexi Pile Tab Installation Guidance Notes

Introduction

This document contains information required for the safe installation of FLI Flexi Pile Tabs on Ø610 and Ø762 CHS Driven Steel Piles, primarily used for Rail Electrification foundations.

1. Preparatory Requirements

- Where applicable, any preinstalled connection interface plate must be removed from the top of the pile by the Main Contractor prior to start of the works, using appropriate plant.
- Clear access below the pile cut off level needs to be 750mm x 750mm to allow access for measuring, grinding and drilling – digging out by the Main Contractor may be required.



2. Templates

- OLE25 (required for OLE13 & OLE15 pile caps).
- OLE24 (required for OLE21 pile caps).
- OLE27 (required for OLE26 pile caps).
- Rotabroach plate and 2.0 mtr ratchet strap.
- 2 x small slings (for lifting pile off cut).

3. Tools and Equipment

Suitable lifting equipment to act as the securing method during cutting should the pile off cut be too heavy for manual handling (610mm piles weigh 233Kgs/Mtr & 762mm Piles weigh 287 Kgs/Mtr) 110V Die Grinder (and various cutters).

110V Rotabroach.

Rotabroach cutters / pins – 37mm for OLE13, OLE15 & OLE 26. }

Rotabroach cutters / pins – 31mm for OLE21.

110V Angle grinder / Disc Cutter – 5" recommended.

Supply of 9" cutting discs.

Cutters must be long series

Generator 110v output.
Hand tools – centre punch, spanners, torque wrench, hammer etc.
Measuring tools – tape measure, scribing tool or chalk, spirit level etc.
Cutting fluid for Rotabroach operation.
Dry Powder or CO2 fire extinguisher.
Site lighting and generators - hand torches and head torches (night time only).

4. Personal Protective Equipment

Hard hat to BS EN 397.
Hi-Viz to BS EN 471.
Safety boots to BS EN 345:1 & 2.
Eye protection to BS EN 166.
Gloves to BS EN388 (general purpose).
Tig Gloves to BS EN 407 (grinding).
Face Mask/Visor/Goggles to BS EN 166.
Hearing protection to BS EN 352-1:2002 – Part 1: Ear muffs (grinding).

5. Waste

Pile off cut is the responsibility of the Main Contractor – plant may be required for removal.

6. Documentation requirements

Pile cap drawing(s).
Method Statement.
Risk Assessment(s).
COSHH assessment for cutting fluid.
COSHH assessment for Galvanising touch up paint.
COSHH assessment for generator fuel.
Hot works permit.
PAT test records for electrical tools and generator.

7. Example Methodology

7.1 Preparation

- During all work on site the installation team shall wear PPE as identified above.
 - Should unauthorized persons venture into the working area, all operations shall cease and the trespasser will be escorted from the site.
 - The team will consist of 2 people minimum.
 - Any preinstalled connection interface plate must be removed from the top of the pile by the Main Contractor prior to start of the works, using appropriate plant.
 - Prior to starting any work, the Main Contractor shall issue a hot works permit.
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- Prior to commencement and throughout assembly and erection, reference shall be made to the template drawing e.g. OLE25 and the cutting template e.g. TBA
 - The Main Contractor shall dig a pit of 750mm around and 750mm depth below the pile cut line to allow for access to the pile, unless the cut off point is clear of the ground by at least 750mm. For example if the cut off line is 500mm above ground, a 250mm deep pit will be required.

7.2 Method Of Installation

- The top of the existing pile will be marked up to show the intended cut line at a suitable height using the template provided. The pile will then be cut using the 9" angle grinder. Installers are to ensure that the cut is level and any sharp edges are removed.
Tip: to avoid pinching the disc blade, slide used cutting discs into the cut slot to prevent seizure of the grinder as the cut proceeds
(Should the off cut be too heavy for manual handling then lifting equipment shall be used to secure the off cut during cutting and to remove it when completed).
- The installers shall use the correct pile hole position specific template to mark out and centre punch holes for drilling, ensuring that the correct orientation to the track is achieved and the template is level. The Main Contractor will confirm the marked positions are correct prior to drilling. Once confirmed, the installer should remove the template and drill new \varnothing 31mm or \varnothing 37mm holes as required at the centre punched locations using a rota-broach.
- Once cutting and drilling is complete, any remaining sharp edges should be removed using the die grinder.

- If galvanised finish is required then all cut and drilled edges to be treated in accordance with the galvanising repair procedure FLI Form 16C.
- The tabs should be bolted to the prepared pile. Bolts should be fully tightened by Hand then Checked after 1 hour to ensure the minimum torque has been achieved:
 - M30 160 Nm
 - M36 200 Nm
- The pile top should be checked for orientation, position and level by the Main Contractor.
- Complete and sign Form 18G Certificate Final Inspection Report - Screwpiling
- Tidy up the work site and remove equipment.