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PALISADE SECURITY FENCING

SPECIFICATION FOR INDUSTRIAL TYPE CONCRETE PALISADE FENCE

1. PRE-FABRICATED CONCRETE ELEMENTS.

1.1. WORKMANSHIP AND FINISH IN GENERAL:

All concrete elements shall be manufactured from sound concrete, free of structural defects, complying with any sample if previously submitted. All elements shall have off-shutter finish on three sides, with the fourth side having a wood floated finish.

1.2. SHAPE & DIMENSION:

All elements shall retain the required shape and be true to the respective and specified dimensions as indicated in 2.1, 3.1 and 4.1.

1.3. PERFORMANCE REQUIREMENTS (STRENGTH):

The required concrete compressive strength in all pre-fabricated pre-stressed elements shall be a minimum of 30 Mpa at 28 days, determined in accordance with SABS method 863.

1.4. CURING:

All concrete elements shall be cured in accordance with the recommendations given in SABS method 863

1.5. REINFORCEMENT:

All steel used for reinforcements in pre-fabricated elements shall be high yield steel with a minimum characteristic strength of 410 Mpa, and shall be free of rust, loose scale, flux, grease or oil substances and shall in general comply with SABS 920 and BS 4482.

1.6. PRE-STRESSING STEEL:

All wires shall be of the crimped variety and shall be free of rust, loose scale, flux, grease or oil substances and shall in general comply with BS 5896.

2. POST:

- 2.1.** The post shall be 3.0m long and slotted, as per drawing, to take the horizontal load bearing rails. The front edge shall be curved.

The back section shall be 140mm wide tapering to the front to 80mm.
The thickness of the post shall be 225mm.
Posts shall be spaced at 2.0m centre.

- 2.2.** The posts shall be pre-stressed with 4 x 4mm wire graded 1550 / 1700 Mpa, stressed to 75% of the U.T.S. (Ultimate Tensile Strength).
Pre-stressed wires shall be cut at the surface level and sealed
The top of the post shall be angled at 45°.

3. PALES:

- 3.1.** The pales shall be 2.4m long with two 10mm holes to take 8mm carriage type bolts.
The front edges shall be curved.
The back section shall be 100mm wide tapering to the front to 80mm.
The thickness of the pales shall be 75mm.
Pales are spaced at +/- 190mm centres.
- 3.2.** The pales shall be pre-stressed with four 3mm wires grade 1550 / 1700 Mpa, stressed to 75% of the U.T.S. (Ultimate Tensile Strength).
Pre-stressed wires shall be cut at surface level and sealed.
The top and bottom of the pales shall be angled at 45°.

4. RAILS

- 4.1.** The rails shall be 1.98m long with nine x 10mm holes to take carriage 8mm type bolts.
The rails shall be 150mm wide and 80mm deep.
All rails are to be grouted into posts.
- 4.2.** The rails shall be pre-stressed with four 4mm wires graded 1550 / 1700 Mpa, stressed to 75% of the U.T.S. (Ultimate Tensile Strength).
Pre-stressed wired shall be cut at surface level.

5. BOLTS:

- 5.1.** All bolts used for the erection of the fence shall have their ends burred over.
The holes shall be filled with cement mortar.
- 5.2.** All nuts, bolts and washers used for the erection of the fence shall be electro-galvanised (zinc and chrome passivated).

6. ERECTION:

- 6.1.** Each post shall be embedded to full depth in concrete in a foundation hole of at least 460mm x 460mm and a depth of 600mm.
- 6.2.** The sizes specified in par. 6.1 are for firm soils and it may be necessary to increase these sizes for softer yielding soils.
- 6.3.** Foundation shall be a minimum of 10Mpa at 28 days.