

SCOPE OF WORK

DESCRIPTION: THE SUPPLY, INSTALLATION AND COMMISSIONING OF BOOM GATES AND ROAD SPIKES FOR TRANSNET PORT TERMINALS, OPERATING DIVISION OF TRANSNET SOC Ltd (Reg. 1990/000900/30).

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1. Background

Maydon Wharf Agri Terminal specializes in the import and export of agricultural grain products such as wheat, maize, and soya. The MPT terminal handles an array of raw bulk cargo such as Chrome Manganese and Metcoke and on occasion also facilitates the movement, storage and dispatch of Break Bulk Cargo. The terminals operate on a 24-hour basis and as such have a number of personnel that visit the terminal on a daily basis. To regulate and closely monitor access to the terminals and egress from the terminals, security officers are deployed at the various entry and exit points. To enforce access control boom gates are required as a tool and barrier to assist security personnel in facilitating proper access control to the terminals.

2. Objective

The Objective is to maintain compliance to the ISPS code and national key point access control requirements by procuring boom gates and their attached accessories and installation.

3. Scope of Work

The service provider will be required to supply, deliver, install and commission the boom gates as per the scope requirement at the terminals including their accessories and hand over a fully functional automated solution. The scope will include all required civils work, underground piping and cabling that will constitute a fully working solution.

3.1. The supply items required are as follows:

- 3.1.1. Hardware
- 3.1.2. Civils
- 3.1.3. Cabling
- 3.1.4. Software support
- 3.1.5. OEM Certification
- 3.1.6. Training

3.2. Notes

Boom gates to be supplied with all required third party hardware, civils included and any other requirement that will constitute a fully working solution.

3.3. Specifications and equipment Required:

7 x Fixed Boom Gates

Entrance 1

2 x 6-meter booms

2 x 4.5m road spike barriers

2 meters by 6-meter by 200m high center island to be built in between booms.

Island to be barricaded with durable guard barriers including reflective signage.

Entrance 2

2 x 6-meter booms

2 x 4.5m road spike barriers

Entrance 3

2 x 4.5-meter booms

2 x 4.5m road spikes

Entrance 4

1 x 6-meter Boom

1 x 4.5m road spike

1 x Mobile Boom Gate to be supplied and delivered

- Should have its own wheels and support.
- The trailer must be able to be towed on a public road and comply to the prescripts of the National Road Traffic Act, 1996 (Act 93 of 1996)
- Towable with an LDV or maneuver by hand to a point required. Total weight of the mobile boom with equipment not to exceed 750kg
- Towable or pushable to a point required.
- Totally standalone and should have a five (5) hour battery backup. A suitable charger for the battery to be supplied for the battery.
- Connectable to 220V power, if required. An electrical extension cable of 100m to be supplied with RSA standard 3-point plug.
- Manual operational capability in the event of no power being available.

Special notes, all booms to have the following features

- Indicator lights, Robot or LED strip (red to stop, green to go)
- Boom arms are octagonal Aluminum
- Boom arms manufactured from extruded aluminum with reflective tape
- Boom heights to cater for visibility from both Trucks and light motor vehicles
- Ground loops for vehicle detection
- Manual overrides in case of power failure or operational requirement for boom to remain open for extended period.
- Remotes
- Access control capability (should have facility to be linked to access control system)
- Manual override for road spikes
- Danger signage indicating presence of spike barriers.

Technical Data

- Electromechanical designed for extreme conditions.
- Designed for reliability and long-lasting high impact continuous use.
- Designed to disassemble in small manageable size.
- The spikes lower before the boom arm opens. This ensures a safe passage for the vehicle to pass through. Electrically interlocked to prevent forced tampering.
- 2 Ultra long-lasting rubber buffers are used for spike dampening to eliminate bouncing.
- Heavy duty industrial bearings.
- Adjustable counter-weight spring system.
- Spikes will stay up when boom arm is forced open.
- Spike barrier can be used for reversible lanes.
- High security lock – tamper proof door.
- Return spring to lower spike on power failure.
- The spike barrier can be interfaced with single or multiple remote triggering devices.
- The spike barrier framework is designed to handle vehicles weighing up to 100 tons.
- Ideal entrances with high cross volume traffic
- The spikes protrude 90mm above the road surface and offer protection from both directions.
- The boom arm is joined to the boom adaptor with nylon nuts, which will sheer in case of accidental collision with the boom arm and prevent damage to the barrier and the boom arm.

Speed is adjustable:

1.5 second motor, speed can be adjusted from 1.5 seconds to

3 seconds. 3 second motor, speed can be adjusted from 3 seconds to 6 seconds.

Open & close speed can be different.

Collision detection:

Built-in sensor can detect when boom arm hits an obstacle and will return to the open position.

Auto slow down function:

Barrier arm will automatically slow down before it is fully closed or open.

Intelligent open close limit

Limit sensor will detect open & close position automatically.

No manual adjustment needed.

Position memory function:

The motor can remember limit position, so the boom arm will move back to right position even if the motor is cranked manually with a handle.

Operating temperature:

Motor operates with lower working temperature.

High duty cycle:

Estimated at 3 million open and closing cycles without failure.

Power:

220V AC $\pm$ 5%

System Integration:

Can integrate seamlessly with all current access control systems in use by TPT by means of N/O contact that closes and opens again.

Power Consumption:

150W (excluding robots)

75W (incandescent with Robots)

4. Warranty and Defect

The supplier should provide warranty and defection support for the equipment supplied. Warranty periods to be clearly specified for applicable equipment.

5. Health and safety compliance

All equipment supplied should be approved and quality checked to ensure a safe working environment for users.

6. Acceptance of testing

The supplier to provide quality certificates for equipment confirming that the equipment is quality checked and tested.

7. Technical support after delivery

The supplier to ensure that technical support is readily available for both repair and calibration purposes up to the warranty period.

8. Training and Certification

Users to be certified and calibration certificates for equipment to be supplied.

9. General

All Equipment, Components and hardware shall be new.

All equipment is to be supplied of the highest standard.

All equipment to be delivered to and installed at the address that will be specified.