GENERAL VIEW OF DE MONTFORT (MARK III) INCINERATOR
Fire brick core retaining bands
RSA 40x40x3mm

Detail A

Fire brick core retaining bands
RSA 40x40x3mm

Detail B

ELEVATION
CORE RETAINING BANDS
scale 1:10

Detail B

scale 1:2

NOTES
1. All dimensions in millimeters unless otherwise indicated.
2. All notes to remain above section.

REPUBLIC OF UGANDA
MINISTRY OF HEALTH

IMPROVEMENT OF HEALTH CARE WASTE MANAGEMENT IN UGANDA

INOCRATOR (MARK 3) DESIGN DRAWINGS

FIRE BRICK CORE
CONSTRUCTION DETAILS

Scale 1:10

Drawn by: A.J.
Checked: M.B.

FEB 2015 REV 01-DRAWING.
- Foundation conc. slab 150mm thick
- Common brick lining
- Fire brick core
- Common brick lining surround to the height of core
- Foundation conc. slab 150mm thick

SECTION
COMMON BRICK SURROUND DETAIL
Top plate 2mm thick and 20mm less than brick surround
scale 1:20

Both holes in secondary combustion chamber for smoke door and chimney spigot respectively

Stiffeners fitted to the underside of top plate RSA 50x50x5mm

Sand frames RSA 40x40x3mm

Door pivot brackets

Loading door outline

Stiffener RSA 50x50x5mm

Smoke door outline

2mm MS plate

Plan

2mm MS plate

Plan

Loading door outline

Smoke door outline

Loading door scale 1:15

Smoke door scale 1:15
ELEVATION

Chimney spigot
scale 1:10

PLAN
Fire grate (40x40x3mm RSA)
scale 1:10

RSA 50x50x5mm
welded to fit outer bricks

25x3mm MS
flat bars

Top plate retaining frame
scale 1:15
DETAILED SECTION THROUGH INCINERATOR
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Material</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Concrete foundation 150mm thick (1:2:3) cement, sand &amp; ballast</td>
<td></td>
<td>0.423m³</td>
</tr>
<tr>
<td>2</td>
<td>Fire bricks 9x4.5x2.5 inches (228.6x114.3x63.5mm)</td>
<td></td>
<td>255</td>
</tr>
<tr>
<td>3</td>
<td>Fire grate (40x40x3mm RSA)</td>
<td>RSA 40x40x3mm</td>
<td>4.8m</td>
</tr>
<tr>
<td>4</td>
<td>Ash door (228x190mm) M.S. plates</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Air inlets, 3No. 60x40x3mm RHS (Area 6327mm²)</td>
<td>60x40x3mm RHS</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Air outlet 1No. 50x25x3mm RHS (Area 1034mm²)</td>
<td>50x25x3mm RHS</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Fire clay seal (around air ducts)</td>
<td></td>
<td>10Kg</td>
</tr>
<tr>
<td>8</td>
<td>Fire brick to seal voids with fire clay</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>Common brick outer skin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Top plate retaining frame 50x50x5mm RSA, 25x3mm MS flats</td>
<td>50x50x5mm RSA, 25x3mm MS flats</td>
<td>5.9m, 1.8m</td>
</tr>
<tr>
<td>11</td>
<td>Loading door hing (pivot) 20mm dia bar 75mm long</td>
<td>20mm dia bar 75mm long</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Hing support bracket 140x80 MS plate 3mm</td>
<td>140x80 MS plate 3mm</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>Loading door handle CHS 34mm dia CHS 450mm long x3mm</td>
<td>34mm dia CHS 450mm long x3mm</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>Handle stiffener 25x3mm MS flat bar</td>
<td>25x3mm MS flat bar</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Baffle plate support 13mm dia bar 35mm long</td>
<td>13mm dia bar 35mm long</td>
<td>8 (280mm)</td>
</tr>
<tr>
<td>16</td>
<td>Baffle plate 2mm MS plate (437x437)</td>
<td>2mm MS plate (437x437)</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Loading door 40x40x3mm RSA 537x537</td>
<td>40x40x3mm RSA</td>
<td>2.148m</td>
</tr>
<tr>
<td>18</td>
<td>Loading door sand frame 40x40x3mm</td>
<td>40x40x3mm</td>
<td>4.084m</td>
</tr>
<tr>
<td>19</td>
<td>RSA top plate stiffener 50x50x5mm RSA</td>
<td>50x50x5mm RSA</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>Smoke door handle 13mm dia 740mm long</td>
<td>13mm dia 740mm long</td>
<td>740mm</td>
</tr>
<tr>
<td>21</td>
<td>Smoke door 40x40x3mm RSA 457x230</td>
<td>40x40x3mm RSA</td>
<td>1.454m</td>
</tr>
<tr>
<td>22</td>
<td>Smoke door sand frame 40x40x3mm RSA</td>
<td>40x40x3mm RSA</td>
<td>1.84m</td>
</tr>
<tr>
<td>23</td>
<td>150mm dia MS chimney 4m high CHS</td>
<td>150mm dia 5mm thick CHS</td>
<td>4m</td>
</tr>
<tr>
<td>24</td>
<td>Chimney spigot 140mm dia 5mm thick CHS</td>
<td>140mm dia 5mm thick CHS</td>
<td>150mm</td>
</tr>
<tr>
<td>25</td>
<td>Sand seal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Top plate 1.789x1.104</td>
<td>1.789x1.104</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>RSA straps / retaining bands 40x40x3mm</td>
<td>40x40x3mm</td>
<td></td>
</tr>
</tbody>
</table>

**PLEASE NOTE THIS IS NOT A BOQ BUT AN ITEM DESCRIPTION**
1.8m high chainlink fence

surrounding to be of 100mm concrete on 100mm hardcore. Inside fence with 300mm projection from chainlink fence

75mmØ MS steel posts

Ash storage pit

Covered area

metal grill gate

SITE LAYOUT
CHAIN LINK FENCE
Roof pitch 15°
G28 iron sheets on 75x50 purlins on 100x50 rafters

75mmØ MS steel posts

1.8m high chainlink fence see dwg no. MK

SHADE ELEVATION AND CHAIN LINK FENCE
NB: Units are in meters

**Construction notes:**

- To avoid collapse the pit is built with corner posts and reinforced concrete beam at half depth and at surface level.
- The pit walls are built with brick or cement block (depending on availability). In the bottom part of the lining the blocks are not sealed to allow fluids to percolate.
- The upper part of the liner (last 50cm below ground) should be sealed to avoid local water infiltration.
- The bottom of the pit should be left as such without liner to facilitate infiltration.
- The top of the pit should be closed off with a concrete slab to reduce the risk of attracting vectors such as flies, mosquitoes and rodents. The top slab should be above ground level and made of water-tight concrete to prevent surface water infiltration.
- The top should be closed by a lockable hatch and a vent pipe installed to ensure that the generated gases can escape and air can get in.
- Basic skills required for construction/installation: welder, mason
- Ventilation PVC pipe (Pipe, No Pressure, Meter, Rigid, 4 in Nominal Pipe, PVC, Glue End Connection), can be either 80 mm, 100 mm or 110 mm of External Diameter according to availability of material.
- Reinforced concrete used for upper slab, including inspection hatchs (concrete 350 kg/m3).
- Concrete used for upper ring.

**Safety requirements**

- Where soil is particularly sandy, extra precautions may need to be taken to protect the water table and to prevent the pit from collapsing: the sides may be reinforced with bricks, laid with gaps between them so that the liquids can still escape.
- For worker safety during construction, avoid digging too deep holes: in unstable soil, consider use of temporary liner during construction.