

BOOK OF QUANTITIES
LAUNDRY PLANT AT AYUB TEACHING HOSPITAL
ABBOTTABAD

S.No	Description	Capacity	Qty
1	Supply, fixing, testing and commissioning of Washer extractors. Dully supported by catalogue, brochure etc for evaluation complete in all respect.	120 Kg to 150 Kg	2
2	Supply, fixing, testing and commissioning of Tumble Dryers. Dully supported by catalogue, brochure etc for evaluation complete in all respect.	50 kg to 60 kg	2
3	Supply, fixing, testing and commissioning of Flatwork Ironer. Dully supported by catalogue, brochure etc for evaluation complete in all respect.	Roller dia 500mm or above Roller length 2000mm or above	1

Issued to _____

Vide deposit receipt No. _____

Name/ Address of Firm: _____

Stamp _____

Call Deposit No _____

TECHNICAL SPECIFICATION

Specification and features

1. Washer extractor front load steam heated

- Manufactured in stainless body, drum and tub
- Easy access to all parts.
- Standard wash speed (32 rpm or above).
- Maximum spin speed (680 rpm or above).
- Large drain valves.
- Free standing type.
- Control- automatic Programmable microprocessor.
- Heating: steam heating system
- Machine should have electronic control of imbalance with frequency variator.
- Wet cleaning system
- G -factor 350 or above
- Provision to install and automatic detergent doser.
- Detergent dispenser with 4 compartments (Pre-wash, wash, bleachers and softeners.
- Preferably with automatic weighing system.

Imported, ISO, CE or equivalent

2. Tumble Dryers.

- Microprocessor / digital controller to control the complete process. Drum speed, technical menu, alarms, etc.
- Standard stainless steel drum with large diameter.
- Double air flow: Radial + axial.
- Heating type: Steam heated.
- Standard reversing drum.
- Lint filters with big drawer.
- Large door opening.
- Inbuilt cool down system.

Imported, ISO, CE or equivalent

3. Flatwork Ironer

- Compact and free standing type.
- Electronic microprocessor (Speed and temperature control)
- Automatic cool down
- Panels and stainless steel and painted steel
- Nomex feeding and ironing belts for an easy operation, top ironing quality and long-lasting belts.
- Powerful Exhaust system.
- Provided with chrome or steel polished cylinder.
- Ironing speed: 1.5-8m/min.

Imported, ISO, CE or equivalent

**BOOK OF QUANTITIES MEDICAL HOT HEARTH
INCINERATOR AT AYUB TEACHING HOSPITAL
ABBOTTABAD**

S.No	Description	Capacity	Qty
1	Supply, fixing, testing and commissioning of Medical hot hearth incinerator. Dully supported by catalogue, brochure etc for evaluation complete in all respect.	200 kg/load	1

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SPECIFICATION OF MEDICAL HOT HEARTH INCINERATOR.

Type of waste	Medical/pathological waste with high moisture, high density and low calorific values
Load Capacity	200 Kg per load
No of chamber	one combine Unit (Primary & Secondary chambers)
Temperature of Primary chamber	850°C or above
Temperature of Secondary chamber	1150°C or above
Residence time	2 seconds.
Burner type	Natural Gas Burner
Feed and Ash Removal Doors	one or two
Burner Controller	Automatic
Scrubber	included-stainless steel
Operator kit	included (fire proof)

Imported, ISO, CE or equivalent

Key Features.

- The incinerator must be imported and certified (CE or equivalent).
- Prefabricated robust mild steel casing, seam welded and suitably stiffened/braced where necessary.
- Paint finishing- The steel structures should be completely painted with high grade paint system.
- Lightweight resilient refractory fiber insulation door, providing a tight seal and gives excellent thermal efficiency.
- Primary and secondary chamber lining should be thick at least-22mm, rated at 1430c.
- Low thermal mass roof lining with removable roof and back plate for ease of maintenance.

Primary chamber

- Fully insulated internal refractory lining, Constructed from high grade refractory brick ensuring a self-supporting interlocked arrangement.
- One fully interlocked manually operated, access door
- One waste ignition burner, temperature controlled on-off complete with internal air fans
- One hot earth combustion burner, temperature controlled on-off complete with internal air fans.
- Secondary combustion burner air fans with automatically controlled distribution to their designated area.
- Two temperature sensor mounting points

Secondary chamber

- Fully insulated internal refractory lining, Constructed from high grade refractory brick and low thermal mass insulation.
- One secondary chamber burnout burner, temperature controlled on-off, complete with internal air fans.
- Integrated combustion burner air fans with automatically controlled distribution to their designated area.
- All combustion fuel pipe work.
- All electrical requirements.
- One temperature sensor mounting point at the base of the exit flue ensuring the chamber reaches the necessary temperature.

- The incinerator should be capable of burring the following waste
 - Blood, drips
 - Human organs
 - Human tissues
 - Human limbs
 - Cancer treatment wastes
 - Pharmaceuticals
 - Surgery waste
 - Syringes/needles
 - Combustion system
 - The burner system should be fully automatic package burner type which includes the following features.
 - Flame failure controls
 - Adjustable flame patterns
 - Integrated fuel pump
 - Solenoid valves
 - Integral continuous air fan
 - Fuel sensors.

Expected Emissions

The incinerator must be factory tested for emissions. The result should be based on two second residue time within secondary chamber. The result should be as following.

Carbon dioxide	5%
Water	29%
Sulpher dioxide	6%
Nitrogen	54%
Smoke	0%
Odour	0%
Volume of ash	1.3%

Combustion System.

The burner system should be fully automatic package burners with the following features.

- Flame failure controls
- Adjustable flame patterns
- Integral fuel pump
- Solenoid valves
- Integral continuous air fan
- Fuel sensors.