

Machine Processing Trials January 2017

Machine. Terex Ecotec TDS 820 Twin shaft shredder unit.

Site BHRC Facility Stanley road Australind

Present on Site. Jonathan Gilmore (Terex) Kieran Hawkes (OPS EE)

Mattress Trial

Located on site were various combination of bed Mattresses to be processed. There were made up of all different sizes and in some cases bed bases were also mixed in with the goods to be processed.

An initial trial was done processing of the mattresses to determine how to set up the HMI programme. This was important so as to allow the operator to have capacity to constantly feed the machine whilst the machine could engage in Automatic cleaning cycles.

The Mattress programme was loaded into the HMI after a trial period of about 20 minutes.

The unit was then run up for the remainder of the day and for several more days for monitoring.

Processing times.

It was found that the mattresses could be processed at a rate of one unit every 45 seconds.

This was determined by the number of units processed and allowing for cycle times with the FEL that was feeding the unit. The mattresses were fed in indiscriminately and in no order.

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Volume reduction.

To determine the volume reduction there are two considerations.

- 1) Actual volume reduction per unit
- 2) Actual volume reduction of stockpiled units

The actual volume reduction per unit can be determined by the numbers of units processed vs the skip bins filled following processing.

The observations were

- i) Average Volume per mattress
- ii) No of units processed
- iii) Number of skip bins filled with foam waste
- iv) Number of skip bins filled with steel waste

- 1) Volume reduction per units was measured at 55%.
- 2) Volume reduction of stockpiled units was determined to be 80%. This is by virtue of the way the mattresses were stockpile at site.



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Wood waste Trial.

The wood waste stockpile consisted of clean wood. The pile was found to be a mixture of solid wood timbers , pallets, wooden furniture and all manner of doors and fixings.

Volume reduction.

Due to the size of the FEL it was found that the shredder unit could not be kept with a full chamber at all times. As a result we set out to determine reduction in volume.

Volume reduction was determined to be 60 % by Volume.

Green waste Trial

The green waste trial was held in a similar manner to the wood waste trial. The green waste consisted of all manner of green waste from bushes, tree branches to Palm log stumps.

Volume reduction

Volume reduction was determined to be 48% by Volume.



OPS Group
 Road, Jandakot
 Western Australia 6164
T: +61 8 9359 0333
F: +61 8 9359 0444
E: info@opsaust.com.au
www.opsaust.com.au

The OPS Group of companies includes:



Further Information & Contact Details

For any further information relating to this proposal, please contact;

Kieran Hawkes
Sales Manager
OPS Environmental Equipment

Office: 08 9359 0333
Mobile: 0429 555 711
Email: kieran@opsaust.com.au

The OPS Group of companies includes:



OPS Group
15 Cutler Road, Jandakot
Western Australia 6164
T: +61 8 9359 0333
F: +61 8 9359 0444
E: info@opsaust.com.au
www.opsaust.com.au