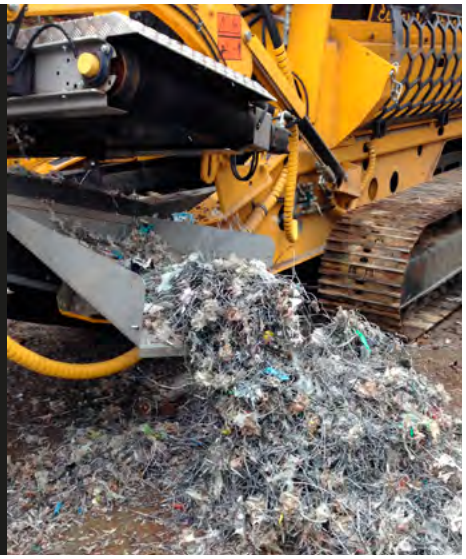
Turn landfilling cost of ragger wire to profit with TANA Shark

Recycling cardboard for use as new packaging material saves costs for the manufacturer. Unfortunately, landfilling the ragger wire that comes as a byproduct of the recycling process is costly. With the help of TANA Shark, this added cost can be turned into profit by separating the metal and selling it to be used again.

Ragger wire or pulper tail is the residue of steel wires and plastic that remains after a pulping process. A mass of recyclable paper is being processed with the help of water. The remaining mass, consisting of wires and plastics of the bales, is called ragger wire. It is often landfilled because no method or machinery can separate the material cost efficiently.

Steel is separated after shredding by the overhead magnet



Turning cost into profit

This was the scenario at our customer in the U.S. until we provided a solution with our waste shredder. This is their example calculation based on the costs and profits at the time they started using TANA Shark.

Landfills charge at least $40/ton as disposal charge and there's an added $20/ton of freight costs, a total of $60/ton of inevitable costs. This can be avoided and the metal turned into profit with a TANA Shark waste shredder.

$40/ton + $20/ton = $60/ton

Total cost of landfilling a ton of ragger wire

They had to landfill 24 tons of ragger wire per day before adopting the TANA Shark, which amounts to 8,670 tons of waste annually. TANA Shark can turn the cost of $525,600/year of landfilling ragger wire into profit, when metal wires are sold for $100-150/ton.

8,670 tons x $60/ton = $525,600

Cost of landfilling ragger wire per year

Total of 30-35 % of the wet ragger wire coming from the pulping process consists of steel wires. Rest of the material when dried is ready-to-burn RDF after shredding and metal separation.

The metal separation can be done with TANA Shark's over-band magnet, which pulls the metal out of the shredded mass, leaving only the burnable material behind. With an average shredding capacity of

Ragger wire disposed in landfill

24 tons per day
Cost $60 per ton

Total of 8760 ton disposed annually

Cost annually:
$525,000

Ragger wire shredded with TANA Shark

Profit
$150 per ton

From recovered steel:
7.5 tons of steel per day

Profit from steel:
$410,625

Calculated by processing 24 tonnes of ragger wire every day

Note! The calculations are subject to steel price on a given day. They fluctuate continuously and the outcome changes accordingly.

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8 tons per hour with this type of waste, TANA Shark produces 2.5 tons of recovered steel per hour. This steel can then be sold to metal recyclers to be used again instead of landfilling it.

7.5 tons/day = 2,710 tons/year

Amount of steel recovered

Using plastic to produce energy

Our customer is using the remaining plastic from the process as energy by burning it in their own facility. This saves them approximately $5,000 per day in reduced landfilling costs and material needed for burning. The remaining plastic has a very high burn value and is very good for burning as energy. The customer is now digging up their old ragger wire from their landfill to be shredded, recover the steel and burn the plastic.

Even if the plastic can't be burned in an own facility, TANA's process dries the remaining waste so much that a week's worth of shredded material leaves under a container's amount of plastic waste that needs to be landfilled.

Short term purchase cost quickly turns into profit

Purchasing a shredder like TANA Shark does cost, but it can be quickly covered by the profit made selling the steel and avoiding disposal fees for the ragger wire. Our US customer made calculations and quickly discovered that they can turn cost to profit with this method. Below is an example cash flow calculation for purchasing and operating TANA Shark and selling the steel recovered in the process.

Note! The calculations are subject to steel price on a given day. They fluctuate continuously and the outcome changes accordingly.

The versatility of TANA Shark provides additional opportunities

Our customer also finds new opportunities to use TANA Shark for other waste types besides ragger wire. The daily input of 24 tons of ragger wire can be processed in roughly three-hour period, TANA Shark can then be customized to shred many types of waste with different particle sizes. Our customer can either increase the amount of ragger wire processed per day or use the capacity to shred and profit from other types of waste.

Even with changes in disposal fees or the amount paid for steel by recyclers, using TANA Shark quickly breaks even its costs and with ragger wire. When it comes to avoiding the landfilling costs, just breaking even is saving hundreds of thousands in costs and the rest is pure profit.

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