

Briquetting the fines generated during the handling of wood pellets reduces the risk of fires while adding value to a waste stream

A fine example

Wood pellets have a tendency to break up when they are handled.

Friction, caused during transportation, leads to the creation of a very fine wood powder and this represents a significant risk for fires and explosions. It must therefore be dealt with and removed.

The increasing number of wood pellet shipments from North America to Europe means this phenomenon is today very relevant at port facilities where this renewable fuel is being handed. Many pellets are shipped in bulk of around 30,000-40,000, where between 10 and 20% of fines could be generated.

Creating value

A possible solution to solve this problem of fines, and also increase the value of this waste stream, is to process them through heavy-duty mechanical briquetting presses, therefore transforming this dangerous leftover material into new fuel 'pucks'.

Thanks to the high pressures exerted in the compression chamber (more than 2,000 kg/cm²), mechanical briquetting presses produce high-density briquettes or pucks.

These are heavy-duty machines that compress the biomass by means of a ram impacting on a small amount of material at a very high speed into a die that has the shape of a mild cone. The ram strikes the material at rates between 220 and 260 strokes per minute. The newly compressed material moves the forming briquette out of the die into a tight adjustable bushing that creates enough backpressure to allow the compression.

The ram is driven by a crankshaft moved by major flywheels. The drive system is very efficient and 98% of the energy from the main motor is used in the compression. This energy turns entirely into heat, raising the temperature of the compressed biomass and contributing to a strong binding.

One of the suppliers in this market, with more than 35 years of experience

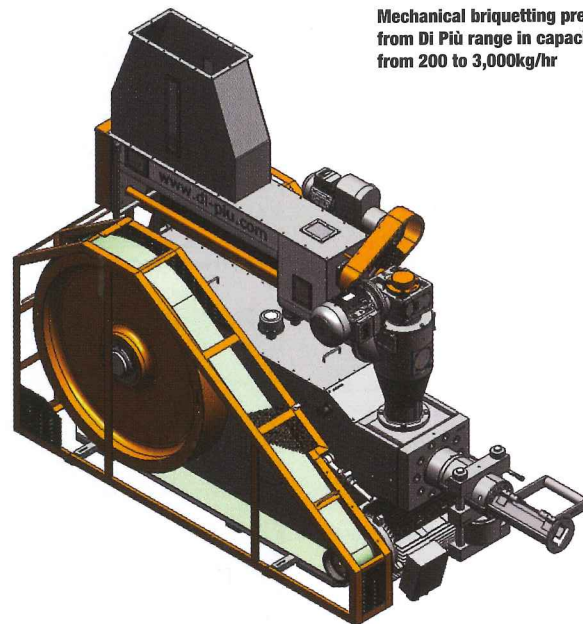
on these particular kinds of machines, is Di Più Briquetting Systems. Di Più offers eight different models of mechanical briquetting presses with capacities from 200kg/hr to 3,000kg/hr.

The superior ratio between the hourly output/kW used and the low running costs of the mechanical Di Più briquetting machines are particularly advantageous compared with other technologies available

on the market to turn waste materials into renewable fuels.

Fuel pucks that are generated by processing waste fines represent a very good source of heat to be fed into industrial boilers and power plants, especially because of their higher burning efficiency and reduced powder emissions in the plant chimneys. ●

For more information:
Visit: www.di-piu.com



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Wood pellet fines can be produced into briquettes or pucks