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"Solid Waste Treatment"**

SOLID WASTE GENERATION IN KRAFT PULP MILLS

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Abstract

The kraft pulp mill generates various quantities of solid wastes, depending on technological level, pulp grade and wood quality. These wastes are generated in all stages of pulp manufacturing: wood processing, pulping, pulp washing and screening, chemical recovery. The minimizing of solid waste generation and the ways of their processing are important problems for the pulp producers. These problems are in strong connection with both the economical and environmental aspects.

Aims of this paper are to identify the sources of solid wastes in the kraft pulp mill and to discuss the best ways of their processing. The woodroom represents the major area of wood wastes that are very different regarding their shapes, dimensions and properties. Bark is the most common wood waste and its volume ranged between 0.4-0.6 m³/t o.d. pulp. Besides bark, other wood residues appear in the woodroom: fines, pins, large chips. Their quantities are very different depending on the wood quality, debarking method, and chipper performance. The most common way for is their valorization by firing for energy using fluidized bed furnace boilers. Wood-waste burning allows to obtain 0.8-1.2 t steam (1.2 MPa) /t of o.d. pulp, depending of the wood losses at pulpwood preparation. Another source of solid waste is the pulp screening stage where results 2-8 % knots and fine-screen rejects.

The third major source of solid wastes in the kraft pulp mill is the recovery plant, generating sodium salts enriched with NaCl and KCl from recovery boiler, dregs from green liquor clarifier/filter, and grit separated at slaker.

Landfilling is the way of dregs and grit disposal. Waste materials for landfill consist of ash, (10-25 Kg/t of pulp), dregs and grit, (15-40 Kg/t of pulp). The volume of waste materials for landfilling represents 9.7-25 m³/day, depending on fiber line capacity.

A good waste management in pulp manufacturing will lead to enhancing of economical performance as well as to an environmental sound process

Keywords: pulp, environment, solid wastes, air emissions, landfilling
