

TECHNICAL NOTE NUMBER 190

FOREST PRODUCTS LABORATORY - U. S. FOREST SERVICE - MADISON, WISCONSIN

FUEL VALUE OF WOOD WASTE OVERESTIMATED

Manufacturers of wooden products are apt to overestimate the fuel value of the lumber wasted in cutting-up operations. The argument is frequently advanced that a supply of waste on hand at all times permits large savings in coal, and that the purchase of ready-cut wood stock would not be economical because it would leave the manufacturer no waste to use as fuel for operating the power or heating plant.

The false logic of such an argument is apparent when consideration is given to the fact that the material which is thus being used for fuel is high-grade lumber which is worth pound for pound from three to ten times as much as coal. The heating value of this material is considerably lower than that of coal. It is estimated, and the figure is high enough to be conservative, that pound for pound the fuel value of the waste from lumber is not more than 62 per cent of that of coal.

A thousand board feet, or approximately 3800 pounds, of waste from oak lumber will have a fuel value equivalent to that of 2360 pounds of coal. If coal is worth \$6.50 a ton, the fuel value of a thousand board feet of oak would be \$7.66. But the oak lumber from which the waste cuttings came probably cost the manufacturer \$62.50 per thousand board feet. The cost of the oak waste as fuel, then, is about eight times that of coal, and the handling charge in the furnace room is greater for wood waste than for coal.

The fuel value of waste is not usually great enough to offset the freight charges on it from mill to factory. It would seem a logical practice, then, on this

ground alone, for a manufacturer to use dimension stock and try to reduce his cutting-up waste. The unavoidable waste which always occurs in the manufacture of wooden products usually can be utilized to best advantage as fuel.