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Using Cost Benefit Analysis for Capital Equipment Decisions

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Abstract: Engineers may be faced with marginal equipment productivity. Since 2005, a small manufacturing facility in Western North Carolina has struggled with a water jet cutting machine that adversely impacted profitability. The options are to continue with maintaining the current water jet cutter, purchase a different type and brand of water jet cutter or purchase a cutting machine with advanced technology. To determine whether or not the water jet was a benefit to the organization, data was gathered and extrapolated from January 2014 to June 2015. The analysis compared the dollar amount paid to the vendor for repair parts, service technicians and consumables to the dollar amount of receivables generated by the water jet cutter and outsourced water jet cutting. Based on the 1.3000 breakeven point, the recommendation was to discontinue water jet services and to investigate evolving cutting technologies. Thus cutting their losses and retaining their competitive advantage.

Keywords: Cost, Benefit, Ratio Analysis