

An investigational research of spray pattern for deflector flat spray nozzle using horizontal patternator

ABSTRACT

Valuation of the spray patterns and spray angle is necessary for producing nozzle applications such as in combustion process, agriculture, which is the experiment result in less liquid usage, and increased spray distribution accuracy. Therefore, this study investigate to analyze the spray distribution nozzle and consider the water consumption and spray angle using several type of deflector flat spray. First, the result should assist with spray patternator construction to determine water consumption. Then, measure of spray angle using Digital Single Lens Reflex Camera (DSLR) and image J software. The results provided support two fluid flow in the nozzle with increase of air pressure can reduce water consumption compared with single fluid flow. Effect of relationship between air pressures with water pressure in the nozzle producing the large spray angle compared water pressure only in the nozzle. Thus, fluid pressure in the nozzle is main parameter in developing on spray distribution. Spray pattern and spray angle are also an important consideration in nozzle selection and application.