**Title:** Numerical analysis of size and shape distributions of shredded municipal solid waste (MSW)

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Size and shape of shredded municipal solid waste (MSW) have not been fully analyzed except a means of sieving. This analysis of size and shape is important for quantifying how much pre-shredding the MSW enhances the productivity of combustion process in Waste-to-energy (WTE) combustion chambers. In this research, image and cluster analyses were carried out in order to create a particle size distribution (PSiD) and particle shape distribution (PShD) of shredded MSW. These distributions can be applied to a mathematical model for developing a new combustion chamber.