Flux coating using ultrasonic spray system

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Flux coating is the process intended to make convenient soldering of electronic parts by reducing the tension on PCB surface. However existing process such as form fluxing or wave fluxing has the problem of causing the surroundings to significantly contaminated because of excessive use of flux liquid. In ultrasonic spray process, a micro adjustment of spray is achievable using liquid drop generated in micron so that such shortcoming of existing process will be solved by optimizing the use of flux.
In this study, monitoring of coating width and shape depending on variation of input flux flow, ultrasonic output, nozzle height, air pressure and conveying speed using spray method was carried out. In line with increase in flux liquid flow to 5~40ml/min, coating width of flux liquid was increased to 10~23cm. As ultrasonic out was changed to 45~85W, coating width was alos changed to 25~32cm and as nozzle height was varied within a range of 15~35cm, coating width was also increased to 20~30cm. On the other hand, within a range of air pressure 500~900㎜H2O, coating width was 25cm and with conveying speed of 0.05~0.38cm/s, coating width was about 30cm, indicating insignificant variation.