

## ABSTRACT

BOTTOM DEAD CENTER CORRECTION DEVICE  
FOR SERVO PRESS MACHINE

A bottom dead center correction device for a servo press machine which can correct the bottom dead center with a high precision not achieved by a bottom dead center correction by a slide position detection device provided on a frame includes a bottom dead center sensor 11 and a temperature sensor 12 on a lower mold 10B of a die 10. The bottom dead center of a set slide motion of slide 3 is corrected by the bottom dead center measurement value of bottom dead center detection sensor 11 and by the temperature drift of bottom dead center detection sensor 11 resulting from the temperature rise of die 10 due to molding and detected by temperature sensor 12. A bottom dead center correction of one micron unit not previously achieved becomes possible. The bottom dead center correction device also can be provided as one which corrects for the fluctuations in the bottom dead center resulting from deformations in all of the construction parts and the die of the servo press. It includes a current detection device 8 which detects the current value supplied to a servo motor 5 to a screw shaft 4 which joins with a slide 3. A scale detection device 9 detects the position of slide 3. There is feedback of outputs from a current detection device 8 and a scale detection device 9 to a NC control device 6. When one or the other of either the load value calculated from the current value or the slide position reaches a set value, a correction value is obtained corresponding to the difference between the other value and its set value. The bottom dead center precision can be improved to the range of 1-few microns.

Figure 1