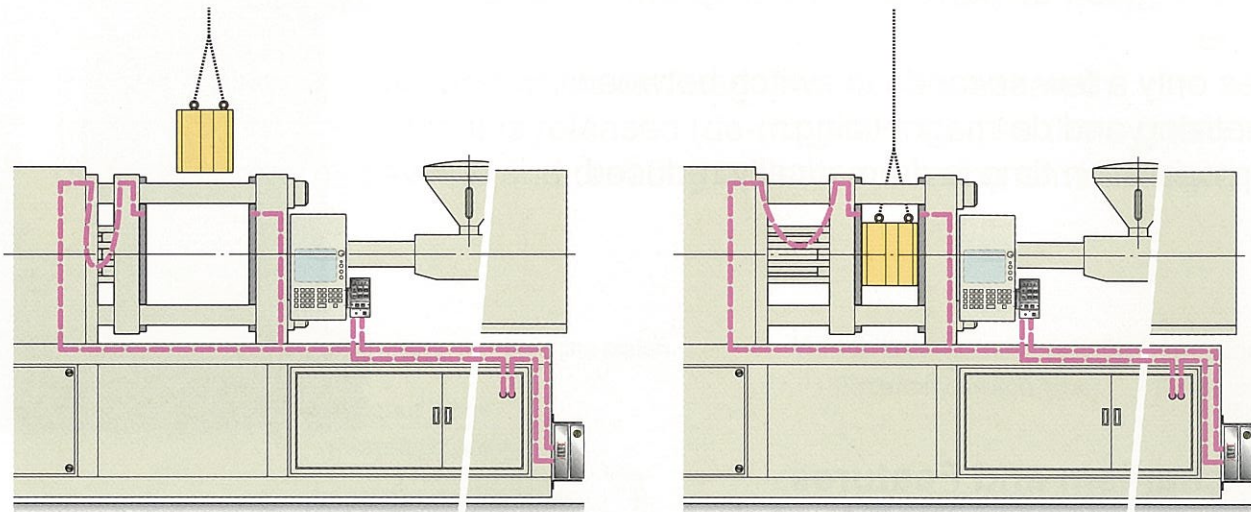


Explanation of Operation (Safety Measures)



① Mold delivery (initial de-magnetizing)

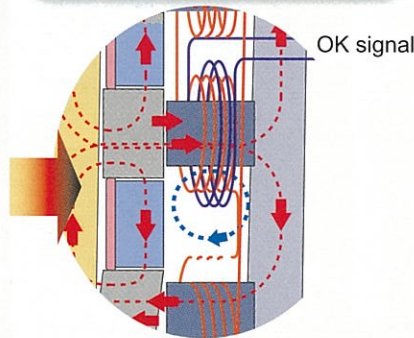
The magnetic force is balanced within the plate and is non-existent on the surface.

② Start magnetization after closing mold

The polarity of the Alnico magnet wrapped around the coil is reversed when the electric current is supplied, shifting the magnetic flux. This operation generates magnetic force on the surface of the magnet block. The magnetic force becomes permanent.

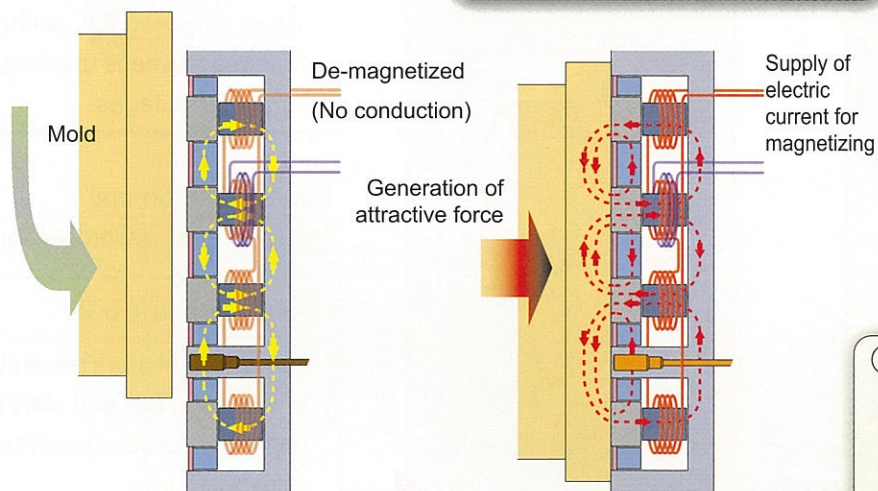
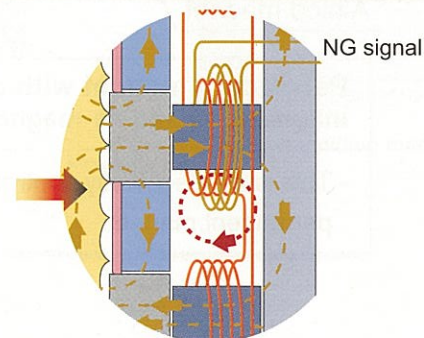
②' Normal magnetizing

At the same time, when the magnetic flux penetrates properly (producing an attractive force), the magnetic force detection coil returns an OK signal to the control panel.

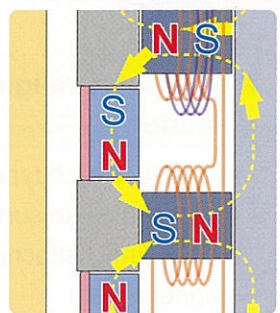


②'' Abnormal magnetizing (insufficient penetration)

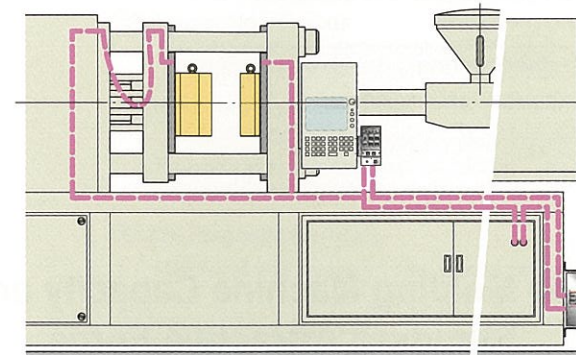
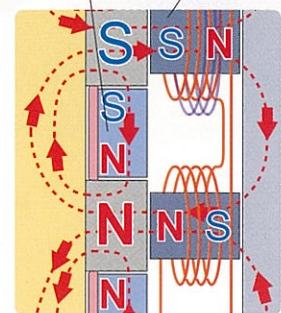
If there is clearance between the surface of the mold and the magnet caused by rust or some other intrusion, the magnetic force detection coil will return an NG signal to the control panel to alert the operator to insufficient penetration of the magnetic flux.



Enlarged drawing of magnetic flux shift principle

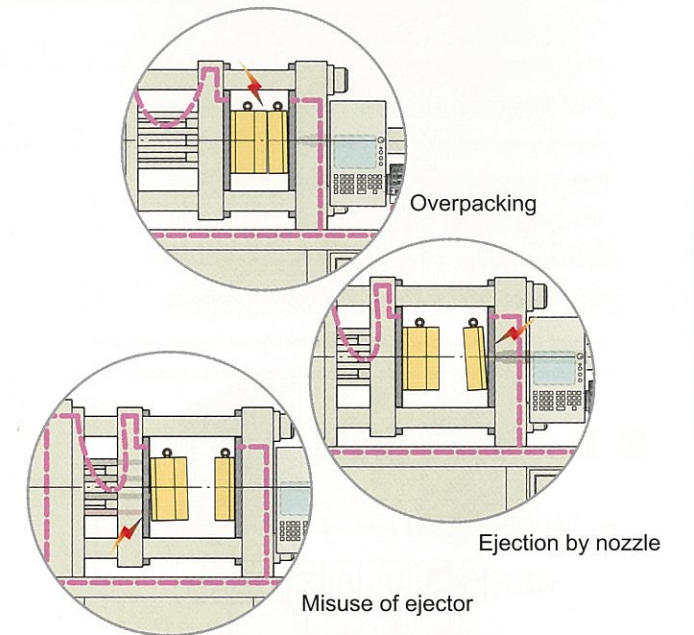
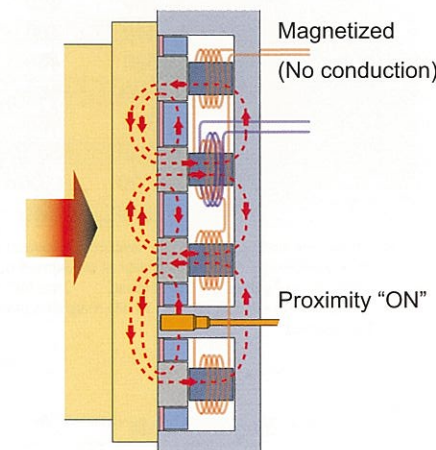


Neodymium magnet Alnico magnet



③ During molding production (normal)

The magnetic flux will be permanently maintained unless an electric current is supplied. During production, power is supplied only to the proximity switch, so there is almost no energy consumption.



③' During molding production (abnormal)

If a clearance of 0.2 mm is produced between the surfaces due to an excessive load during the forming process, an emergency stop signal will be sent.

