

RESIDUAL MAGNETISM

Electromagnetic chucks are powered by a DC source which continuously feeds. While connected, the generated magnetic flux passes through the workpiece and it is distributed in terms of power and duration of the magnetic field, the contact area and the geometry and material composition, concentrating on edges, edges of holes, slots and occasionally in places away from the contact zone. When disconnecting the chuck, the magnetic flux we have generated disappears, leaving in the piece what we call "residual magnetism" (magnetic flux retained in the material).

This remanence is determined by the characteristics of the material, the more alloyed steels and heat treated are, more is the retention of the residual magnetism (coercivity).

Electronic controls SELTER carry out the demagnetisation process of the workpiece (max. 30 sec.). This process consists of a series of polarity reversions and voltage reductions (varying voltage and reversion time parameters).

Thus a perfect demagnetisation of the piece in contact with the chuck is guaranteed and in most cases a total demagnetization of the workpiece. But when the piece is highly alloyed, or it is irregularly shaped, some parts can retain a certain magnetism, specially in remote areas of the contact zone, which must be subsequently removed.

To check this remanence it must be used an electronic gaussometer with hall probe.