

ELECTRO PERMANENT MAGNETS

Eye Vertical Coils



SOME REFERENCES



## Eye Vertical Coils



### SAFETY

Resulting from the combination of the SGM electropermanent technology and the SGM safety monitoring device FMD.

The lifting force of the Electro-permanent magnets is independent from external energy sources = no accidental drops of the load as a result of power failure or cable interruption.

The lifting force of the Electro-permanent magnets is constant in time = no accidental drops of the load as a result of a reduction on magnet lifting force.

Prior to every lift, the SGM patented Flux Measuring Device FMD checks the lifting safety conditions under which the electro-permanent magnet is working (contact conditions between surface of the load and magnet polarities).

No need for operator to get in contact with or stay by the coil. Magnet system can be operated from a safe distance using radio control or from crane cabin.

Technology of the electro-permanent magnet controllers facilitates the creation of safety redundancy.

Special recommendations for the use of electro-permanent magnets is made for locations where sudden interruptions of main electrical power may happen inadvertently.

### PRODUCTIVITY

No need for changing lifting device in that the same electro-permanent magnet is used for handling the coils, the convector plates and the bay bells.

Approach and contact with coil can be controlled a lot better than with mechanical tongs allowing for a drastic diminution of typical damages to coils provoked by tongs. Customers receive the exact coil lengths they request and magnet user saves on scrapping damaged coil turn. Before changing to electro-permanent magnets, Posco had to throw away up to 10 turns of the coil.

The electro-permanent magnets requires just a few seconds are necessary to grip and release a coil.

### USER FRIENDLY

Operation is typically through radio control or from the crane cabin.

Unlike mechanical tongs, electro-permanent magnets are maintenance free as there is no heat generation inside the magnet and no moving mechanical parts.

Compactness of the electro-permanent magnet results in a stable approach to the coil and an easy centering of the magnet on the coil.

The electronic controllers for electro-permanent magnets are technologically less sophisticated than the ones for electro-magnets.

This, combined with the fact that unlike electro-magnets, electro-permanents magnets do not generate heat when energised, makes the electro-permanent magnet technology easier to maintain.

No need for battery back-up.

