

## ELECTRO LIFTING MAGNETS

# Structural Bundles



### SOME REFERENCES

**DANIELI**

KONECRANES®

posco

حديد  
haiddeed

**Duferco**

**JINDAL**  
STEEL & POWER

**NLMK**

**IVA**

**GERDAU**

**VILLACERO**

ArcelorMittal

**MARCEGAGLIA**

**MANNI SIPRE**  
STEEL ENGINEERING

**RUBIERA**  
SPECIAL STEEL

## Structural Bundles

### SAFETY

With respect to the use of slings or chains, the handling of bundles with magnets can be carried out from the crane cabin or from the ground at a safe distance from the load. In 2008, SGM supplied 14 extensible spreader beams to Aree/or Mittal in Poland for handling 6 to 24 metre long structurals in 6 ton packs thus reducing the number of operators to one - the crane driver.

Further advantages are faster loading/unloading of lorries and greater storage space in height with the possibility of also positioning the packs nearer to each other.

### PRODUCTIVITY

Magnetic systems made of only two magnets for lifting single and bundles of heavy beams from 6 up to 25 metres long weighing up to 10 tons.

In case of requirement for high duty cycles and/or high temperatures, anodized aluminium (aluminium strip chemically transformed on its outer surface into an insulation material able to withstand temperatures beyond the melting point of the aluminium itself) is used as an electrical conductor and specific resins provide the SGM magnets with an outstanding heat dissipation capacity that makes them very efficient. The continuous monitoring of magnet internal temperature by the magnet electronic control system allows operators to be informed of any critical thermal situation for the proper functioning and integrity of the magnets.

SGM takes special care in designing the proper magnet system solution that will cover the whole range of packs/bundles covering multiple possible shape, length and weight combinations. The number of magnets selected, the appropriate depth of the magnetic field and the design of the SGM spreader beams makes that the right magnets will always be in the right position to ensure that the flexing of the bundles will be minimised.

Because all handling operations are carried out from the crane cabin or from the ground by remote control, the speed of magnet(s) picking and releasing times is much faster than when operators use slings or chains. No need for wooden spacers between layers. A lorry can be loaded or unloaded in just a few minutes.

With the use of magnets, dents/scratches caused by slings or chains are eliminated resulting in no more customers



claims for quality problems.

The use of magnets results in significant gains of storage space as it is not necessary to leave additional space between stacks for forklift or personnel to pass through.

### USER FRIENDLY

Only two extra deep magnetic field SGM magnets to lift bundles of heavy beams up to 25 metres makes operations very easy.

The SGM proprietary Diapason finger pole magnet is designed to allow one magnetic system to pick up either single beams or layers of beams even when the beam is heavy. This solution is particularly productive for making up bundles by layers instead of by single beams.

Extensible spreader beam solutions permit the handling of bundles 6, 12, 18 and 24 metre lengths having the minimum footprint thus resulting in easier manoeuvres by the operator, particularly when loading/unloading lorries.

