

## GLOSSARY OF **MAGNETIC EQUIPMENT** TERMS

### **TYPE 'A' MAGNET CIRCUIT**

**A** magnet circuit used in magnetic separators that utilizes a number of closely spaced north & south magnetic "poles" to create a powerful magnetic field to capture and retain small to medium sized tramp metal contaminants. Type 'A' magnet circuits are ideally suited for applications such as final inspection of high quality consumer food products.

### **TYPE 'B' MAGNET CIRCUIT**

**A** magnet circuit used in magnetic separators that utilizes a north & south magnetic "pole" with large spacing between poles to create a powerful magnetic field to capture and retain medium to large sized tramp metal contaminants. Type 'B' magnets are ideally suited for applications that include high product volume stream flows and the need to capture and retain large volumes of tramp metal between magnet cleaning cycles.

### **TYPE 'C' MAGNET CIRCUIT**

**A** magnet circuit used in magnetic separators that utilizes a number of north & south magnetic "poles" with large spacing between poles to create a powerful magnetic field to capture and retain small, medium and large sized tramp metal contaminants. Type 'C' magnets are ideally suited for applications that include high product volume stream flows, the need to capture, retain or automatically remove large volumes of tramp metal between magnet cleaning or inspection cycles and high quality metal removal performance is needed.

### **PRIMARY MAGNETIC SEPARATOR**

**A** magnet installed at the initial receiving area(s) of a total magnetic protection process system. These magnets are designed with 2 fundamental performance features that include being able to process high volume product stream flows and the ability to capture and retain large volumes of collected tramp iron between cleaning cycles.

### **SECONDARY MAGNETIC SEPARATOR**

**A** magnet installed directly ahead of or behind Critical Control Point (CCP) process equipment area(s) in a total magnetic protection process system. These magnets are designed to protect CCP equipment and/or detect CCP equipment malfunctions or failures.

### **FINISHING MAGNETIC SEPARATOR**

**A** magnet installed at the final load out area(s) of a total magnetic protection process system. These magnets are designed to ensure products being processed meet or exceed established quality standards.

### **SALEINT MAGNETIC CIRCUIT**

**A** magnet circuit using a number of north & south magnetic poles located around the circumference of a magnetic device and spaced along its length. Mild steel "poles" are used within the magnet's design at each magnetic north or south polarity area to provide a highly concentrated magnetic field near the magnet's contact surface at each pole.

### **RADIAL MAGNETIC CIRCUIT**

**A** magnet circuit using a number of north & south magnetic poles located around the circumference of a magnetic device and spaced along its length. Magnetic materials are placed within the magnet's design at each north or south polarity area to project a powerful magnetic field into the gap area of the magnet's working surface.

### **AXIAL MAGNETIC CIRCUIT**

A magnet circuit using a number of north & south magnetic poles located along the length of a magnetic device and spaced around its circumference. Magnetic materials are placed within the magnet's design at each north or south polarity area to project a powerful magnetic field into the gap area of the magnet's working surface.

### **1 POLE/1 FACE MAGNETIC CIRCUIT**

A magnet having one north or south polarity on the working surface of the magnetic device.

### **2 POLE/1 FACE MAGNETIC CIRCUIT**

A magnet having a north and south polarity on the working surface of the magnetic device.

### **3 POLE/1 FACE MAGNETIC CIRCUIT**

A magnet having at least one north or south polarity but with a total of three on the working surface of the magnetic device.

### **MAGNETIC POLE**

The area defined as the north or south polarity point on a magnet's working surface.

### **MAGNETIC POLE PIECE**

The area defined as the north or south polarity point on a magnet's working surface when mild steel materials are used in the magnet's construction to create the magnetic pole area.

### **MAGNETIC BACKPLATE**

The area of a magnetic device where mild steel is used in the magnet's construction to concentrate and/or direct the magnetic polarity outside of the working area of the magnetic device.

### **MAGNET PULL STRENGTH**

The value typically measured in pounds and/or ounces when a defined shape & size ferrous metal object releases from a magnet's holding force when pulled away at a right angle from the magnet's working surface at a pre-determined contact or gap point.

### **MAGNET REACH OUT**

The gap distance from a magnet's working surface that a defined shape & size ferrous metal object can be effectively influenced the magnet's field strength.

### **MAGNET GRADIENT**

This term defines the change in magnetic field strength from one point to another within a magnet's working gap area. A magnet's "magnetic attractive force" is increased as the gradient is increased.

### **MAGNETIC ATTRACTIVE FORCE**

The speed at which ferrous and weakly magnetic non-ferrous metal objects are attracted to a magnet's working surface.

### **CROSS GAP POLARITY**

The relationship of attracting and/or repelling north & south polarity's aligned opposite one another within a magnet's working surface area(s).

### **COMPOSITE MATERIALS OF CONSTRUCTION**

The various materials used to manufacture a magnetic device.