



# REVOLUTIONIZING COIL STEEL

ARCANUM'S TECHNOLOGY: SPATIALLY OPTIMIZED DIFFUSION ALLOYS (SODA)<sup>TM</sup>

## REVOLUTIONIZING COIL STEEL THROUGH ALCHEMY

- Arcanum's Spatially Optimized Diffusion Alloy (SODA) technology combines the best attributes of individual alloys into a new composite material
- Arcanum's products eliminate the need to choose between characteristics of one material over another – you can now have the best of both
- Additionally, Arcanum's products can also produce alloy compositions and gauges that cannot be manufactured by casting and rolling in the traditional sense
- SODA can be performed on sheet, wire, formed parts, and many other form factors
- The surface alloy is diffused into a prescribed depth during annealing to meet the exacting specification of the application
- The SODA process uses current steel coil manufacturing processes and equipment making it easily scalable
- Arcanum has the ability to develop a surface alloy using 100% of the important steel alloying elements used today to fit your specifications



**OPTIFORM<sup>®</sup>**

- **Low carbon steel core with stainless steel surface alloy**
- **Perfect where stainless steel requires improved formability**
- Formability of low carbon steel with the surface properties of stainless
- Our material is weldable - MIG, TIG, ERW
- Good corrosion and high temperature oxidation resistance
- Surface alloy layer extremely resistant to scratches and gouges



**OPTICORE<sup>™</sup>**

- **High performance, light gauge, non-oriented electrical steel**
- **Ideal for high frequency electric motors, generators, and transformers**
- Provides better induction AND lower core loss than competitors of the same gauge
- Eliminates the brittleness of 6.5% silicon electrical steels
- Improved performance leads to higher power density, a longer battery life, less energy lost due to heat, higher torque, and higher efficiency