



Kindred Spirits in stainless steel

Almost 200 years ago, two tragedies on opposite sides of the Atlantic Ocean gave way to an unforgettable act of kindness. A stainless steel sculpture in Midleton, Ireland, now pays homage to that kindness. Nine eagle feathers, reaching over six meters high, celebrate a gift from the Choctaw Nation of the southeastern United States to the Irish during the Great Potato Famine. The sculpture is a reminder that compassion flourishes in even the darkest hours of history. The corrosion resistance of molybdenum-containing stainless steel helps the sculpture and the legacy it represents endure.



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Following the 1830 Indian Removal Act, several Native American groups living in the southeastern United States were relocated forcibly to make way for agricultural production. In 1831 the Choctaw, native residents of Mississippi, became the first people to walk to designated lands in Oklahoma, over 800 kilometers away. Thousands died along this harrowing march, known as the “Trail of Tears”. Nevertheless, when the Choctaw learned that a potato blight hit Ireland during the 1840s, causing one million people to die of famine and another 600,000 to emigrate, they decided to help. Though poverty-stricken and fleeing persecution, the Choctaw collected approximately 170 U.S. dollars, the equivalent of around 5,000 dollars today, and donated it to starving Irish families. At a time when rail travel and telegraphs were bewildering new technologies, these suffering peoples, divided by language, culture, and thousands of kilometers, made a contact that inspires generosity in the 21st century.

Solidarity in stainless steel

A sculpture of eagle feathers in Bailic Park, Midleton, Ireland, celebrates that gift from the Choctaw to the Irish people. Created by artist Alex Pentek, the feathers form a ring representing an empty food bowl, calling to mind the souls lost in the famine. Molybdenum-containing Type 316L stainless steel provides the corrosion resistance necessary for this demanding coastal environment. The stainless steel also provides the structural strength required for the complex high wind-loads associated with its location and Kindred Spirits' delicate design.

Ireland has one of the highest coastal sea salt deposition rates in Europe, with salts traveling far inland and high sulfur deposition levels. Both factors affect corrosion rates. Bailic park adjoins the brackish marsh section of the River Ballynacorra, about six kilometers from Cork Harbour and 12 kilometers from the coast, so at least moderate sea salt exposure must be assumed. Sea salts and higher sulfur levels can lead to corrosion, frequent maintenance, structural failure, and premature replacement of many construction materials. But the two percent molybdenum content in Type 316L stainless steel gives it the necessary corrosion resistance, making it an ideal choice for this location, which, although not subjected to salt spray, is corrosive but receives regular rain-cleaning.

Stainless steel and feathers might seem like total opposites. But the sculpture achieves a delicate effect without compromising durability. The individual veins of the feathers are so thin, they look light enough to keep a bird in flight. The hand-applied, brushed matte surface finish gives the stainless steel a soft glow that contributes to the airiness of the feathers, while avoiding glare and enhancing corrosion resistance by facilitating natural rain-cleaning. With this graceful design, the sculpture has an almost quantum effect; like a ghost that appears only when observed. And as such, Kindred Spirits serves as a modest, though poignant reminder of past losses and overcoming those losses.

Formidable feathers

Although it feels weightless, Kindred Spirits was actually assembled on site because it was too large to put together in the studio. The artist formed over 2700 feather veins individually from 10-millimeter square Type 316L stainless steel bar. Using a lever to grip the bar, he cold-bent each vein by hand. The veins were then cut to measure and welded to each feather's central stem, a piece of 150-millimeter diameter stainless steel pipe. The artist gradually removed sections of the pipe and welded them shut while adding the vein to create the tapered effect of a real eagle's feather. Up close, it is apparent that the feathers are creased, imperfect, and organic. Each feather has over 300 veins. Their close

10-millimeter spacing prevents climbing from street level, and the 50% permeability of the sculpture's surface reduces wind loading. In total, there are more than 20,000 welds.

Working at this meticulous level of detail, Kindred Spirits took nearly a year to complete. Once the veins and stems were finished, each feather was cut into three pieces, rolled into shape, and then the sections were welded back together. Finally, the feathers were transported to their final location, bolted down, and concrete was poured over their foundation. In high winds, locals note that the sculpture makes a gentle keening sound, which seems appropriate for this memorial, but the high energy absorption characteristics of stainless steel and its welds help ensure that it will safely weather any storm.



- ▶ Artist Alex Pentek posing with the nearly-complete sculpture in his studio at the National Sculpture Factory, Cork, Ireland.

Repaying the favor

Almost two centuries later, the Irish have returned the Choctaw's kindness in several ways. In 2018, the Irish Taoiseach created a scholarship program for Choctaw students to study in Ireland. More recently, the Irish people donated more than 1.8 million U.S. dollars to aid two Native American tribes, the Navajo Nation and Hopi Reservations, providing access to healthcare and essential supplies for the Covid-19 pandemic. During the spring of 2020, the Navajo Nation had one of the most severe outbreaks of Covid-19 in the United States. Choctaw tribe leadership expressed gratitude that the Irish have expanded their circle of friendship to others in need. Considering this recent interchange, the Kindred Spirits sculpture nods at enduring and expanding bonds, formed in the face of adversity. These cross-Atlantic ties, like the stunning eagle feathers near the Irish coast, won't be carried away with the wind. (Karlee Williston)