

CASE STUDY

First Pit

Texas

HISTORY

Steel forging is a manufacturing process that uses force to shape the steel. Forging is often classified according to the temperature at which it is performed: cold forging, warm forging, or hot forging. Forging has been a process used for centuries, initially for kitchenware, jewelry, and tools. With the coming of the Industrial Revolution, forged parts are widely used in engines and machines where high strength is required. Today, forging is a major worldwide industry. Most manufacturing facilities have multiple large presses, including closed-die and extrusion presses, as well as high-capacity hearth furnaces to heat the steel prior to pressing.

PROBLEM

A cooling pit was needed under the warehouse for the forged steel. A pre-existing building on site with limited headroom and a very tight schedule were some of the problems to be faced on this project. The team found many challenges with the design and locations of the pits in constant flux.

Initially located adjacent to existing piers, which would require underpinning, the pit locations were moved to alleviate this need. Three pits 30'x105', 30'x38', and 21'x25' were dug. Each pit was 14' deep. The pits were used to quench steel that had been forged on premises.

SOLUTION

Hayward Baker was brought in to design the pits and build them. They then called upon Nucor Skyline to supply 120 tons of SKZ 20 and SKZ 24 sheet pile for the job. The 4-week timeframe on this project was incredibly tight.



“Time was the critical component of this project and the responsive coordination of materials from Nucor Skyline enabled us to complete this project ahead of schedule.”

– Alex Clavette, Project Manager, Hayward Baker

Hayward Baker knew that Nucor Skyline would be able to supply the high-quality steel sheet piling needed within the timeframe.

The minimal headroom required a smaller drill and for Hayward Baker to pre-drill every location prior to installing the sheets. An ABI rig was brought in to handle the job.

Even with a design change, Nucor Skyline was able to get the products needed onsite within a week, thus allowing Hayward Baker to finish the project two weeks ahead of schedule.

PROJECT PARTNERS

General Contractor & Designer
Hayward Baker – Houston, TX

PRODUCTS

Sheet Pile: SKZ 22 and SKZ 24 / ASTM
A572 GR 50 (120 tons)