

A close-up photograph of a large industrial pipe with several yellow spray nozzles. Water is being sprayed from the nozzles, creating a misty, high-speed spray. The pipe is dark and shows signs of wear. The background is a blurred industrial setting.

SYSTEMS
SPRAY-COOLED

SYSTEMS

50
YEARS

A large industrial machine, possibly a metalworking or casting system, is shown in operation. The machine is dark grey or black with several rectangular panels and pipes. A bright orange and yellow fire or intense heat is visible in the center, with a large spray of sparks emanating from it. The scene is dimly lit, with the primary light source being the fire and sparks. The machine has the word "SYSTEMES" and the number "0207748" on one panel, and "SYSTEMES" and "0207730" on another panel.

**STAYING COOL
IN A
HOT BUSINESS**

**20 Countries
Over 90 Installations
Worldwide**

Spray-Cooled™ Equipment is protected by over 90 patents worldwide.

Spray-Cooled™ furnace roofs exhibit excellent slag retention improving heat retention and efficiency of the furnace; this permits the furnace to perform at peak efficiency for longer periods. There is less than a 1% energy increase compared to refractory roofs. The Spray-Cooled™ sidewalls increase furnace volume by eliminating conventional internal tubular panels.

Perfected in the harshest steelmaking environments, the benefits and adaptability of Systems Spray-Cooled™ Equipment has been proven in melt shops, BOF shops and smelting operations around the world. Roofs, sidewalls, elbows, ducts, hoods, drop-out chambers and ladle furnace roofs are just the beginning.



Quick weld repairs from the cold side lowers maintenance costs and reduces downtime.



The one-piece construction eliminates individual panel joints reducing flame leakage and air infiltration and exfiltration, which also keeps the outer surface cooler.

Spray-Cooled Mobile Repair Team

STAYING COOL IN A HOT BUSINESS

- Scheduled Rebuilds
- Emergency Repair
- Spray-Bar/Nozzle PM
- Rebuilt to OEM Specifications
- Domestic & International Support

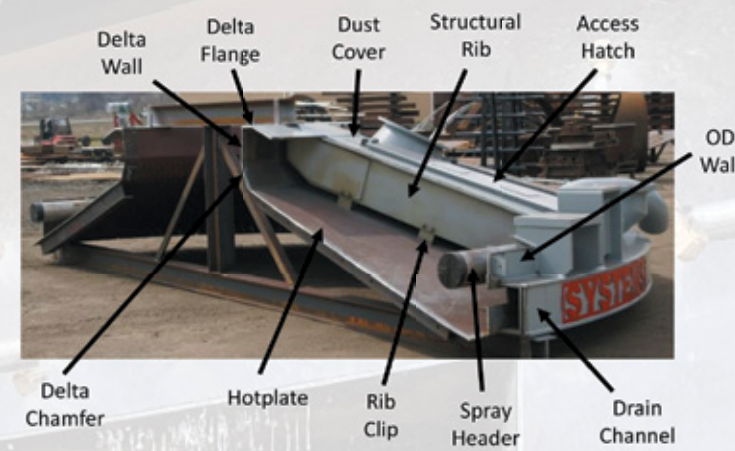


Cam-lock "quick disconnects" allow for rapid removal, inspection and reinstallation of individual spray bars.



WE COME IN.
WE FIX IT.
WE GET OUT.

YOUR BEST OPTION FOR KEEPING FURNACES SAFELY COOLED



Spray-Cooled™ equipment is covered by multiple patents worldwide that optimize cooling efficiency and long life.

Spray-Cooled's™ first customers from 1986 are still using Spray-Cooled™ equipment!

SAFETY
FLEXIBILITY
INCREASED UP-TIME
LOWER MAINTENANCE COSTS

Adding, removing or moving burner openings, alloy holes, fume holes, etc. is relatively easy and does not require equipment replacement.

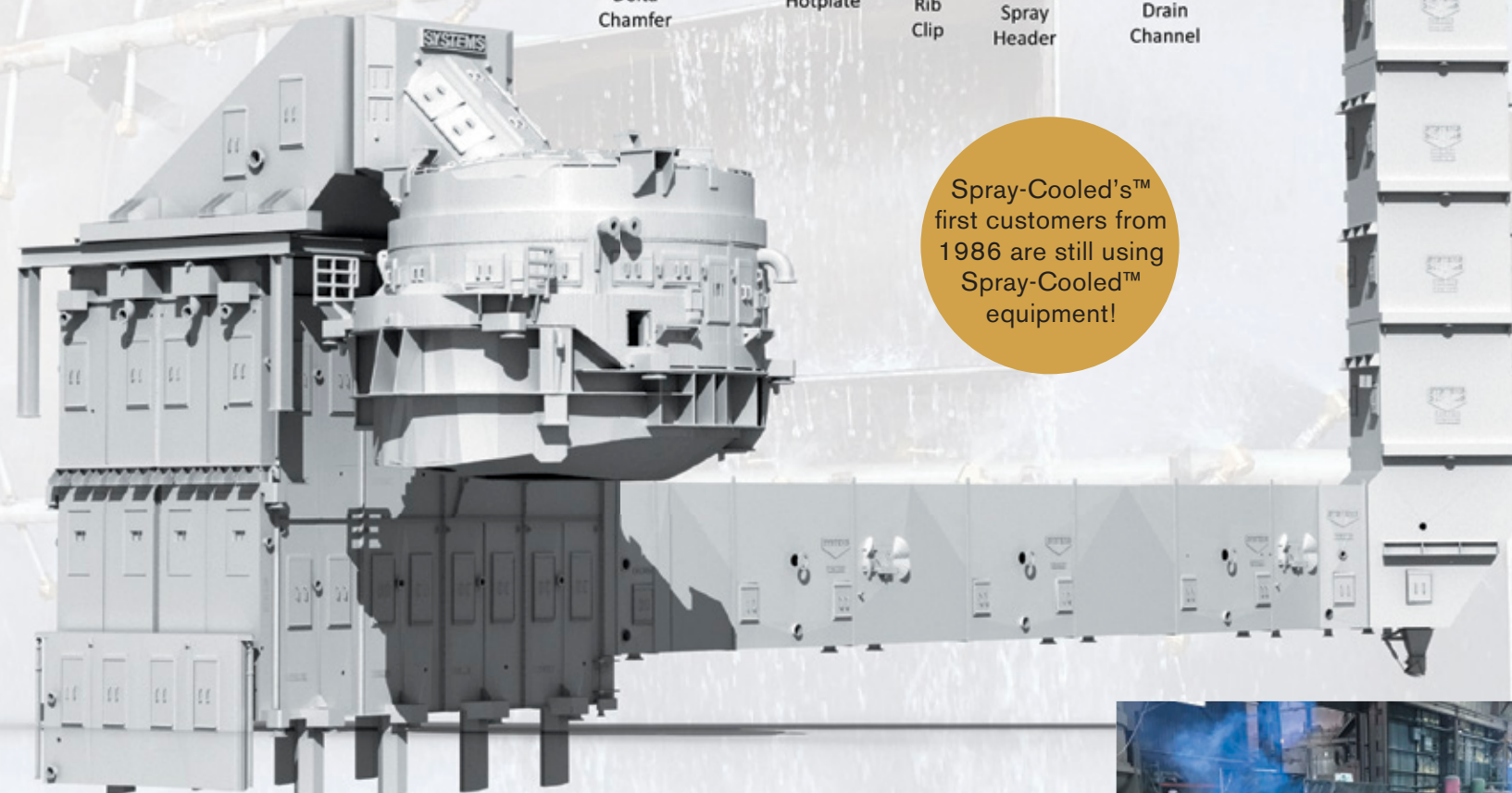
Eliminates high pressure, high volume water leaks.

The normal causes of failure for water-cooled equipment are fatigue cracking, erosion or corrosion.

With tubular equipment, this normally results in down time and equipment replacement.

With Systems' non-pressurized spray-cooling, down time is drastically reduced.

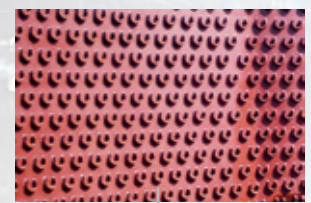
Spray-Cooled™ equipment has a very long life and is repairable – eliminating the need to continually buy replacement panels and equipment.



SCAN TO LEARN MORE ABOUT SYSTEMS SPRAY-COOLED™



SLAG CUPS INSIDE OF SPRAY COOLED ELECTRIC ARC FURNACE (EAF)



MAINTENANCE EDUCATION

Understanding how to operate, maintain, and rebuild Spray-Cooled equipment. For information go to www.tsg.bz/tech-conf



Curious to see what your equipment will look like, or have a design change in mind? See it 3D printed!



"We installed a Spray-Cooled™ Sidewall in May 2017 as part of an EAF upgrade. We are looking to rebuild the 1st sidewall that has over 25,000 heats. We have done little to no maintenance on the Spray-Cooled™ equipment thus far. I have been in the industry for over 30 years and have worked with various water cooled equipment. SDI Columbia City made the right decision installing Spray-Cooled™ equipment!"

CLAY GROSS
MELTING MANAGER

COMPARE THE DIFFERENCE



PRESSURIZED TUBULAR COOLING:

A two square inch hole in a tubular panel results in over 16,000 gallons of water spilled into the furnace in one hour, equal to a typical backyard swimming pool!



SPRAY COOLED:

The same two square inch hole in our hot face results in less than five gallons of water spilled into the furnace in the same one hour!





SYSTEMS

SPRAY-COOLED

Serving the global metals and minerals industries, Systems' patented Spray-Cooled™ Technology provides a safer, greener alternative to conventional pressurized water-cooled, exotic alloy, and refractory equipment for extreme heat load applications.