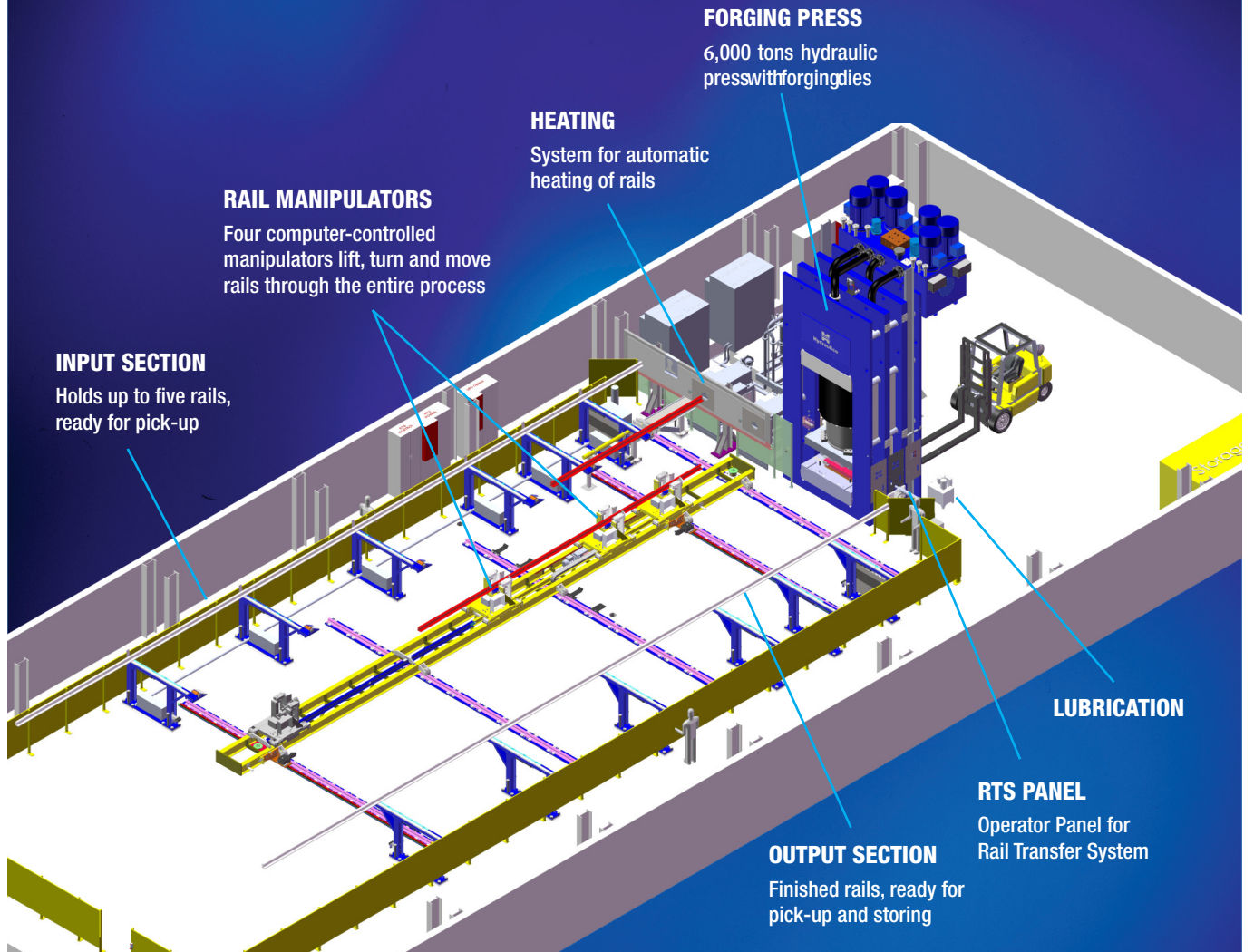
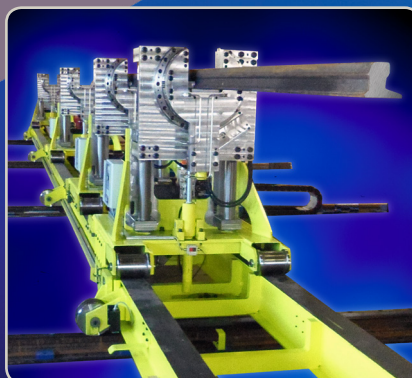


Rail Forging Line

Forging to Net Shape



ADVANCED DIES AND PRESS
Highly specialized forging equipment



MANIPULATOR FOR RAIL HANDLING
5-axis manipulator with servo

State of the Art

- High capacity: 4-8 rails/hour
- Save 75% of manpower
- Save 65% on milling
- Save more than 50% energy
- Save post heat treatment
- Hardness of rail head same or better than the input rail
- Machining only on rail head and under foot
- Reduced Hazard Zone (HAZ)
- Decarburization reduced to a minimum

A Complete Solution: Rail Forging

The system includes a 5,000 ton press with specially developed dies, heating and an advanced computer-controlled Rail Transfer System – this can boost productivity significantly!

Challenge of rail forging

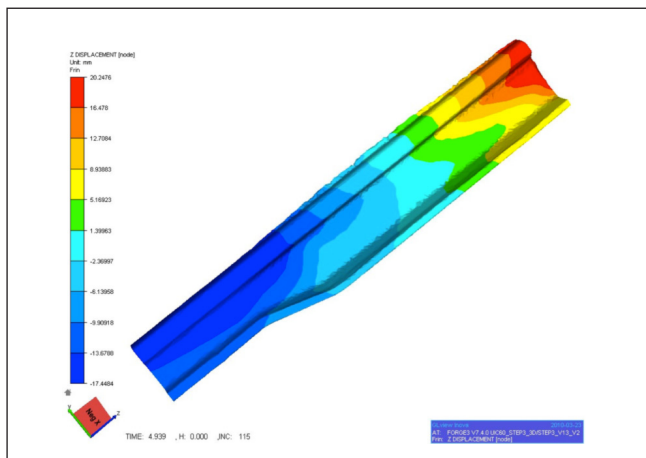
Forging of train rail ends is vital for ensuring a durable, smooth and safe shifting of rails in railway crossings. However, forging – i.e. forming of pre-heated objects – poses several challenges to both press and die technologies.

For several years, Hydraulico has been working intensely on refining the technologies involved in transition forgings from assymetric thick web rails to the symmetric rail section.

Controlling the final shape of forged rails

The design of the dies is an important parameter to perfect the final shape of the forged rail.

Hydraulico benefits from advanced simulation that has been specially developed to define the die design for optimum shape and minimize cost from die wear.



Computer simulations Detailed analysis of forging process simulations has produced many important data for the design of forging dies.

Fast production cycles

The Rail Forging System has four manipulators that operate in perfect coordination, and the system completes 5-8 rails per hour. Each rail is only heated once, saving considerable amounts of time and energy in the complete process.

All forging operations are conducted within 90 seconds, eliminating the need for an extra heating.

Built-in flexibility

Process surveillance and control is obtained via customized computer software. Every functional detail in the Rail Forging System is programmable, and may be changed in order to adapt to different tasks, or alternative productions.

Other benefits

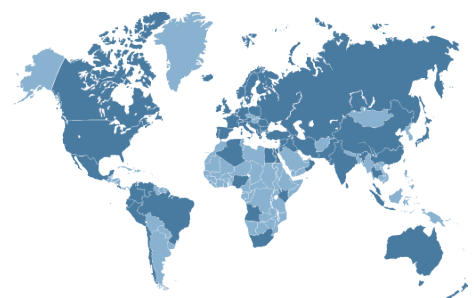
- Fully integrated handling of rail, rail heating, die heating, lubrication, forging and flash removal
- The system can handle rail lengths from 3 meters up to 24 meters or more
- Documented process parameters: Temperature, press force, and cycle time
- Quick die change
- Programs with all parameters are stored for re-use

Reference

Hydraulico has manufactured Rail Forging Systems to manufacturers in China, India, EU and CIS.



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▶ Watch video documentation and find more information at www.hydraulico.com

Hydraulico presses and production lines are at work around the globe.
You will find local representatives in more than 16 major countries worldwide.